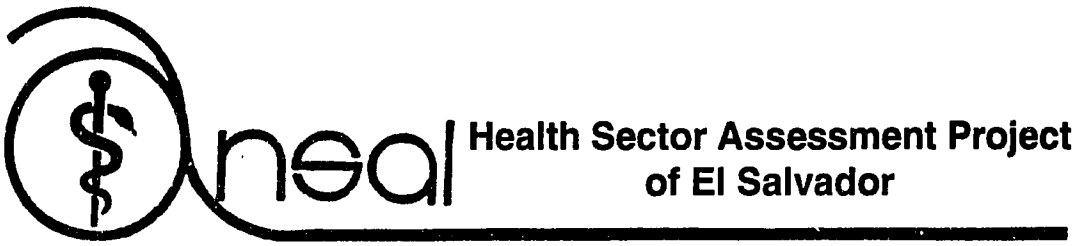
PN-ABW-171



FINAL REPORT

Edited and produced by the
Health Sector Assessmtent of El Salvador Project
Funded by USAID, PAHO/WHO ,World Bank, and the IDB.

May, 1994

Susan K. Kolodin & Masako Ii

COMMUUNITY PERCEPTIONS AND THE DEMAND FOR HEALTH SERVICES

El Salvador

Health Sector Assessment

May, 1994

INDICE

ACRONYMS i
ACKNOWLEDGEMENTS ii
INTRODUCTION v
EXECUTIVE SUMMARY vii

Chapter I *Community perceptions of health care services* 1

1 Community perceptions of health, sickness, and treatment/1
1.1 definitions of health and illness/1
2 Preventive health care/3
3 Access to health services/6
3.1 Health behavior and processes/6
3.2 Features of access to health services/8
3.2.1 Geography/11
3.2.2 Socio-cultural/13
3.2.3 Social distance/14
3.2.4 Medical/14
3.2.5 Economic/financial/14
3.3 Quality/18
3.3.1 Level of provider/18
3.3.2 Time spent at facility/19
3.3.3 Treatment by personnel/19
3.3.4 Availability of perssonnel, meddications, and supplies/20
3.3.5 Overall satisfaction/20
3.4 Client perceptions of different health facilities/20
4 The Role of Health Promoters/21
4.1 Health promotor training/23

Chapter *II* *The demand for health care services* 27

1 Empirical specification/28
2 Empirical results/29
  2.1 Descriptive statistics/29
    2.1.1 The urban market of ISSS beneficiaries/29
    2.1.2 The urban market of non-ISSS beneficiaries/30
    2.1.3 The rural market/30
3 Econometric results/31
  3.1 Structure of the presentation of the results/31
  3.2 Choice of provider/31
    3.2.1 The urban, ISSS beneficiary market segment/31
    3.2.2 The urban, non-ISSS market segnment/33
    3.2.3 The rural market segment/36
4 Total MOH price elasticity of demand /38

Chapter *III* *Findings and recommendations* 41

1 Summary of findings//41
  1.1 Key findings/42
2 Main issues and recomendations - *community perceptions* /43
3 Key findings an recommnendations - *demand for health services*/46

ANNEXES

51

I Partial list of home remedies collected november 1993/54
II Census on perception of health-care services/55
III A more detailed discussion of economic issues and the methodological approach/63
IV Comments received/67

ACRONYMS

AGAPE	Asociación AGAPE de El Salvador.
CPAS	Centro Coordinador de Programas Alternativos de Salud.
IDB	Inter-american Develpoment Bank.
ISSS	Social Security System.
MIPLAN	Ministry of Planning.
MOH	Ministry of Health.
NGO	Non-Government Organization.
OPRODE	Organización Profesional de Desarrollo.
PADECOMS	Patronato de Comunidades de Morazán.
PHC	Primary Health Care
USAID	United States Agency for International Development.
WHO	World Health Organization.

ACKNOWLEDGEMENTS

The research for this paper was undertaken for the ANSAL program under sponsorship from the Inter-American Development Bank (IDB) and we wish to thank them for their generous support. We would like, also, to thank the United States Agency for International Development, both in El Salvador and in Washington, for coordinating the ANSAL program, and for assisting with many of the logistical and technical components of this and other reports.

Many people have been extremely helpful throughout the process of this research. Numerous representatives from the Ministry of Health in El Salvador, in particular the Office of Community Health, and a large number of people in health centers throughout the country responded to our many questions and requests for data. We gratefully acknowledge and thank you for
your patience and time.

We would like to thank various NGOs for providing excellent logistical and technical support to myself and my research assistants on our visits to communities in El Salvador. The following organizations were particularly helpful: Fundación Knapp, Asociación de Mujeres Campesinas, Organización Profesional de Desarrollo (OPRODE), Diocesis de Zacatecoluca, Asociación AGAPE de El Salvador (AGAPE), Centro Coordinador de Programas Alternativas de Salud (CPAS), and Patronato de Comunidades de Morazán (PADECOMSM). Thanks also to Dra. Elizabeth Burleigh and her excellent staff at PROSAMI for all kinds of advice and support. Special thanks go to Dr. Jack Fiedler for friendship and technical support, Sra. Joyce Fowler, for her tireless help especially when we needed her most,, to Sra. Noemi Anaya, for her companionship, assistance and insight during the research process, and to Dr. Alfredo Solari, for his helpful advice, comments, leadership and friendship throughout the past many months. Above all, sincere thanks to the Salvadoran people who opened their homes to me, endured my many questions, and gave me their time.

INTRODUCTION

Community perceptions of health care services
When considering how best to improve the health of a population through the delivery of preventive and curative health services, policy makers tend to focus on the supply side of the health system, e.g. health care providers, facililties, equipment and supplies, pharmaceuticals, etc. However, it is important to keep in mind that health systems are defined as much by the demand for health services (what the consumer wants, believes and does) as by the supply of these services. Through much trial and error, we have learned that the value of modern health services is not necessarily self-evident to the client. The "if we build it, they will come" model does not necessarily apply to the provision and consumption of community health services. Indeed, a number of features interact to influence the demand for health care services in a given population. This paper will analyze the factors that shape demand for health services in El Salvador: those features of the consumers and the providers of health care that influence peoples' use of health care services.

OBJECTIVES

The objective of the community perceptions portion of this paper is to add a human face to the profile of the health sector emerging from the El Salvador Health Sector Assessment of 1994. While the other reports associated with the Health Sector Assessment focus on the institutions and systems that produce and supply health care, this paper attempts to describe the health sector from the point of view of the users. In particular, this paper will describe the socio-cultural context in which people from the more marginalized levels of society -- the rural poor and inhabitants of marginal urban communities -- make their health-related decisions.

The second part of this paper analyzes, using national statistical samples, actual client demand for and use of health services. This section will focus in particular on three different market segments and their use of health services: people who reside in urban areas and are beneficiaries of the Social Security Institute (ISSS); people who reside in urban areas and are not beneficiaries of ISSS; and people who reside in rural areas. In this section, we will model demand structures and make projections based on changes in two key features of the health system -- price of consultation and waiting time -- to measure related changes in use of health services.

METHODOLOGY

A variety of methodologies and data sources have been employed in the analysis for this report. Data from three surveys, the USAID financed Household Health Survey conducted by the REACH project in 1989-90, from the Ministry of Planning (MIPLAN) survey conducted October 1990 - February 1991 and October 1991 - March 1992, and the MIPLAN Survey of Communities, conducted in March 1993, contributed to the economic analysis that form the basis for this report. These data were re-analyzed for this report by John Fiedler, PhD, a health economist with a wealth of experience working in El Salvador, and Masako Ii, PhD, a health economist from the University of Wisconsin, Madison. A more detailed discussion of the methods of analysis can be found in chapter VII and annex 3.

The community perceptions section of this report is intended to provide a socio-cultural context for the health care seeking behavior of Salvadorans. Mixing descriptive data with data from the above-mentioned national surveys, and relying on structured and unstructured anthropological interviews and observations with a variety of informants, the community perceptions section provides primary and secondary data from a range of urban and rural areas. Interviews and observations were conducted in the departments of San Salvador, Sonsonate, La Libertad, Usulutan, La Paz, Ahuachapan, Chalatenango, and Morazán over a three week period (15

November - 9 December). We have attempted to combine these data sources in such a way as to provide not only an image of how people perceive the health care system, but also to demonstrate how these perceptions relate to national statistics pertaining to actual service utilization.

For the community perceptions portion of the study, communities to be visited were selected on the basis of relative proximity to both Ministry of Health and NGO facilities, in an effort to assess peoples' perceptions of the range of health services that might be available to them. In general, the NGOs and MOH facilities do not operate in exactly the same *canton*, in an intentional effort to avoid duplication. However, many *municipios* do have at least one facility from the MOH and an NGO. Both rural and urban populations, of primarily lower income levels, were included in the sample.

In each of the selected communities, 10-12 interviews were conducted with women of child-bearing age and included questions about a variety of preventive and curative health practices (see ANNEX 2 for the complete survey instrument). A total of 120 households were selected on the basis of whether a woman of child-bearing age was at home in the first of the households selected. After the first interview in a *caserio,* depending on the population density of the *caserio*, every fourth household was selected for interview, if there was a woman of child-bearing age at home. If there was not a woman of child-bearing age at home at the time that the interviewers arrived, the interviewers either went on to the next house (if the settlement was fairly densly populated) or made an appointment to come back when the woman would be home.

Forty-five of the interviews were conducted by a professional medical anthropologist, and were supplemented by questions outside of the survey instrument covering attitudes and practices about pregnancy, pre-natal care and delivieries, knowledge and application of traditional remedies, and other preventive practices such as nutrition, personal hygiene, and family planning. The anthropologist also conducted observations in communities and at MOH and NGO facilities, and informal, unstructured interviews with other informants, health center personnel, and officials of the health community of El Salvador. The remaining 75 interviews were conducted by experienced Salvadoran interviewers using the same standard survey instrument, but without the series of informal follow-up questions. These interviewers had participated in other survey activities and had much knowledge of interviewing strategies. The primary data from these interviews and observations will provide a local, community-based perspective that sets the context for and contributes to the interpretation of the statistical data.

The qualitative data for the community perceptions section of this report were collected and analyzed in a systematic way, using anthropological techniques of participant observation and in-depth interviews with key informants. The results are not intended to represent a scientifically or statistically valid sample. However, these observations and comments have stood up to the scrutiny of community members themselves, and through this process have been proven to be accurate and representative.

EXECUTIVE SUMMARY

This report analyzes the demand for health care services in El Salvador. Included in the discussion are a qualitative analysis of the community perceptions of illness and treatment based on local definitions of health and illness. The report will discuss local perceptions and practices related to preventive health care, and the very important role of health promotors in the provision of community based health care. We will discuss aspects of health promotor training and supervision, and how to improve these systems to assure adequate provision of a mix of basic health care services in the communities of El Salvador.

In the Community Perceptions part of the report, we discuss the concept of access to health services in the Salvadoran context, with particular attention to how various components of access affect peoples' selection of health care treatments.

We will discuss the process through which people assess the severity of their symptoms, and weigh this perception of severity against their perception of the availability of appropriate treatments for addressing the problem.

We found that, for the average Salvadoran health care consumer, access to services includes the following issues: geography, socio-cultural aspects, medical appropriateness, and economic/financial accessibility. These factors combine to make health care fairly in-accessible to most poor people, both rural and urban, in El Salvador; middle-income and well-off people have relatively good access to both public and private health care services.

We found that the perception of the quality of the health service also influences perceptions of access to and utilization of health services. Features of quality of services include the level of provider; the amount of time spent at the facility; treatment by personnel; availability of personnel, medications and supplies; and overall satisfaction. For example, a client will consider inaccessible a service that requires him/her to wait all day to be treated, even if that service is around the corner from his/her home.

In this study we were interested in how clients perceive the different health services available to them. Not surprisingly, we found that clients did not really differentiate between the various lower-end health services. In their estimation it is either a hospital, a clinic (which could be a public sector or NGO puesto, unidad or centro) or a commercial private provider. Of importance to clients is whether the facility is relatively nearby, regularly staffed by qualified personnel who are able to treat their problems with effective, available, reasonably priced medications.

The important findings from this study include the lack of access that poor people (both urban and rural) have to high quality, affordable basic (preventive and curative) health services in El Salvador. A related finding is that public sector health services tend to be utilized primarily by middle income people who are employed in the formal sector, and could afford a co-payment or user fee to cover the costs of the services, but currently pay only the small 3-5 colones charged as a token payment.

NGOs provide a large amount of community-based health care in rural El Salvador. Unfortunately, their actual contribution is not well documented, as consumers tend to report only that they received health care at the *clinica,* without particular regard for who the sponsor of the health facility may be, rendering current data on these services questionable.

The second part of this report, the Demand for Health Services, analyzed current use patterns of various health facilities based on data from the USAID financed Household Health Survey, carried out by the REACH project in 1989, and two household surveys that included health components conducted by the Ministry of Planning (MIPLAN). We found that the MOH system is being used as a pyramidal, referral system with "front-line" facilities (units and posts) being used to resolve relatively minor ailments, and persons going to MOH hospitals for treatment of more severe problems.

We also modeled utilization of health services with changes in consultation fees, in order to project the impact on use of an increased fee. When the price of MOH units/posts increases these facilities are less likely to be choosen for care and the probability of using an MOH hospital also falls; i.e., MOH hospitals are complements of units/posts. This suggests that persons using MOH units/posts also use hospitals. This finding, coupled with the fact that the probability of using the hospitals falls less than the probability of using the unit/post as the latter's price increases, implies that the hospitals are being used as intended, as the source of care which is turned to when the "front-line" facilities prove to have inadequate ability to resolve the problem (or when the person has a more serious problem).

In urban areas, but not in rural areas, MOH units/posts are inferior goods; i.e., as the average per capita household income of an individual increases, the individual is less likely to choose to visit a unit/post and turns either to an MOH hospital or the private sector. In this instance, higher income does not increase the probability that the individual will choose the unit/post by virtue of being relatively less constrained by income. Rather, the individual opts to purchase higher quality care.

Hospital price elasticities of probability of selection are greater than unit and post elasticities, and units and posts are a substitute for hospitals. Thus if there are equal price increases in MOH hospitals, units and posts, it will result in the decreased probability that people will go to MOH hospitals, and the increased probability that people will go to units and posts. Setting equal or relatively higher prices in all MOH facilities, therefore, will discourage the by-pass phenomenon.

Ruralites' elasticities are generally greater than urbanites', and ruralites are more likely to self-treat illness. Equal increases in the prices of MOH care in rural and urban areas will result in proportionately more ruralites relative to urbanites changing their selection of provider type, and proportionately more ruralites relative to urbanites being pushed out of the formal care market (i.e., self- treating). This would suggest that to have the same impact on the probability of entering the formal care market and on the selection of a particular type of provider, that urban price levels (or changes therein) should be relatively higher than rural price levels.

The principle impact of a change in the monetary price on the quantity of services demanded is on changes in the decision of provider type, and not on the quantity of services demanded given that the person has decided to enter the formal market. The choice of provider accounts for more than 90 percent of the change in the demand for services.

Finally, the community health programs currently in place have achieved a fairly broad coverage for some basic health services. In order to build on the well-established base, it will be important to strengthen and institute some changes in the health promotor system. First, the distribution of health promotor time spent on various activities should adjust to the extreme need for maternal and child health programs at the community level. Promotors should spend more time than they currently do on maternal and child health activities in the communities. Promotors should also be well trained in how to differentiate between mild and severe symptoms, and should be able to teach community members how to make these distinctions. The Ministry of Health and the NGO community should improve and systematically apply norms, objectives and systems for training of

trainers, and supervision of health promotors. Community health programs should include un- and under-served marginal urban communities as well as rural communities. Finally, a community health program is only as good as its clients perceive it to be. It will be important to ensure that community health services are "user friendly", responsive to community needs, and that community members are well aware of the services that are available at the community based facility. This can be achieved through a variety of education, information and marketing activities.

I *COMMUNITY PERCEPTIONS OF HEALTH CARE SERVICES*

1 Community perceptions of health, sickness, and treatment

A number of factors influence the demand for health services at the community and family level. This section will identify and analyze the principal themes that emerged during three weeks of interviewing families in both rural and peri-urban areas of El Salvador. The main themes to be explored in this section include:

1) perceptions of health and sickness, including prevention, severity and etiology;
2) the process through which consumers diagnose their illnesses and seek treatment;
3) perceptions and use of health services, both traditional and modern;
4) issues relating to accessibility of health services;
5) the role of health promoters and midwives in the provision of basic health services within the communities.

1.1 Definitions of health and illness

Before analyzing what people do to prevent and treat illness, it will be useful to define what is meant by the terms "health" and "sickness" in the Salvadoran context. The World Health Organization (WHO) defines health as "a complete state of physical, mental, and social well-being, not simply the absence of disease or illness." According to Salvadoran anthropologist Clará de Guevara, Salvadoran campesinos define good health similarly, as:

> to feel good; to have physical and spiritual strength, the will to work, good appetite, good humor, good appearance, beauty, and goodness; to sleep well. To be ill is to feel worthless, without the zest to perform one's daily activities (as quoted in Harrison, P. 1976; p.27)[1].

The concepts of healthy and ill can generally be portrayed as a simple dichotomy: either one is sick or one is well. However, within that dichotomy, there is also a range of aches and pains, signs and symptoms which, when present in predictable or regular levels, are tolerable and become a part of daily life. People generally learn to make adjustments for these problems in order to not aggravate them, or to compensate for them. For example, someone who regularly suffers from gastritis may change his/her dietary habits so as not to aggravate the problem. When the usual symptoms occur, indigestion and stomach pain, it is unlikely that this person would consider herself sick or seek medical care, since the gastritis is merely a part of his/her existence. These "normal" pains are not considered "illness." It is only when these aches and pains reach unpredictable or intolerable levels, preventing a person from going about his/her usual routines, that people generally begin to call themselves or their family members "ill." It is usually at this point that people begin to reach into their healing repertoire to seek remedies for their symptoms.

It should not surprise us that Salvadorans, and particularly campesinos, have their own set of predictable symptoms that have become part of their everyday lives. They feel no great need to seek professional treatment for certain common health problems, preferring home remedies, or some kind of convenient medicine

---

[1] "sentirse bien; tener fuerza física y espiritual, buena disposicion para el trabajo, buen apetito. buen sueño, buen humor, buena apariencia, belleza, y bondad". Concepción Clará de Guevara. *Creencias y Practicas en la Medicina Tradicional de El Salvador*, paper presented in the 16th Central American Medical Congress; San Salvador, 1975.

purchased at a pharmacy or local shop (*tienda*). Among the symptoms that commonly are considered mild (*leve*) when they first appear, and not necessarily requiring immediate professional care are: headache, runny nose, "mild diarrhea", indigestion, most forms of *gripe* (a syndrom of flu-like symptoms including any combination of aches, fever, cough, runny nose, chills). They also do not consider most of these symptoms worth reporting when a health worker or inverviewer comes along asking "has anyone in your household been ill lately?" For example, during interviews for this study, people generally began their responses insisting that nobody in their household is ever sick. We followed up the initial question with more detailed questions that ask "has anyone had diarrhea, or a fever or cold or flu?" which led people to realize that what they consider to be everyday occurrences, symptoms that they consider to be just a regular part of life, might constitute "illness" worth reporting.[2] Mild symptoms are frequently treated with a variety of home-grown herbs, usually boiled and ingested as tea or applied as a salve, sometimes in combination with some sort of analgesic purchased at a nearby pharmacy or *tienda*. People often treat more severe symptoms with a traditional remedy first, but will quickly seek care from the highest level of locally available health professional if the problem persists.

Table 1

TYPOLOGY OF SYMPTOMS AND CARE REQUIREMENTS

Symptoms NOT Requiring Professional Care	Symptoms Requiring Professional Care
headache	high fever -- sudden onset (especially in children)
runny nose; scratchy throat	sharp pain; unfamiliar pain in stomach, chest, head, back
mild diarrhea (mild = watery or loose stool; no pain; 1-2 days duration)	acute diarrhea (acute = watery stool; pain and/or fever; 2 or more days duration) [adults and children]
indigestion; gas; *empacho*	indigestion; vomiting; stomach cramps
chronic pain -- arthritis	accidents; trauma; fractures
mild flu [*gripe*] (mild = slight fever; body aches; headache; stuffy head; 1-3 days duration)	Severe flu [*gripe*] (severe = high fever; chills; chest pain; congestion; pain in body, bones and joints; convulsions; headache; cough; 2 or more days duration; children and adults
mild muscle strain; aches; insomnia	loss of appetite or energy; loss of will to live

Understanding the process of how people identify and classify symptoms, and then how that classification leads to decisions about appropriate treatment helps to explain the finding from other studies showing that approximately 50 percent of people who reported feeling ill did not seek professional treatment. Of the roughly 50 percent who did not seek formal treatment, 32 percent cited financial reasons, while the remaining 68 percent cited a variety of reasons including a lack of trust in modern medical care and the feeling that the symptoms were not important enough to merit seeking treatment.

[2] This is particularly worth noting because common perceptions of what constitutes an illness may influence responses in the large household surveys. We do not know what kind of follow-up questions were asked to the general "question of has anyone been ill during the past two weeks?".

Table 2

UTILIZATION OF HEALTH SERVICES (NATIONAL)

	Self-Treatment %	Public Sector Services %	Private Sector Services %
Men	52.94	22.72	13.53
Women	49.86	24.38	14.52
Total	51.25	23.63	14.08

Source: MIPLAN.

In this study, respondents described a variety of symptoms and illnesses that had occurred recently in their families. In general, respondents reported the predictable range of illnesses, over 50% being gastro-intestinal and respiratory. Other illnesses reported included eye and skin infections, a miscarriage, broken bones, general malaise, and the like. It was observed that Salvadorans, both rural and urban, have a tendency to mix traditional and modern treatments during the course of a single illness episode. For example, it is very common for a treatment pattern to include home preparation of an herbal remedy[3], purchase of pills or an injection from the *tienda*, pharmacy, or health promoter, and eventually, if symptoms persist, a visit to a doctor at a health unit.

This kind of medical syncretism is not peculiar to Salvadorans; indeed, all cultures have their traditional home remedies (chicken soup, té de manzanilla, cool baths, prayer ceremonies, etc.) that frequently serve as the point of first resort during a healing process. Traditional home remedies should not be seen as incompatible with modern healing practices, nor as part of a parallel "traditional" health system that can not intersect with the "modern" system. Rather, each set of practices should be viewed as having its particular utility, each as a sub-set of healing instruments within an overall healing repertoire. In El Salvador, as elsewhere, it is very common for people to use an herbal tea or salve in order to soothe and calm the ill person, while waiting to see how the illness progresses. The traditional, home remedy frequently serves as a sort of interim treatment prior to deciding what else, if anything, should be done.

2 Preventive health care

It is often assumed that poor, undeducated people do not know how to treat or prevent illness themselves. This is based on the assumption that only western or modern conceptions of prevention and treatment are valid. In

[3] Surprisingly few respondents said that they had consulted any form of *curandero*. Even when asked specifically whether they had consulted *alguien que soba, un huesero, alguien que hace tratamientos de yerbas*, (someone who rubs, or a bone setter, or someone who makes herbal treatments) very few acknowledged using any traditional healers. Most said that they or a family member knew how to do most of these treatments themselves, and so they did not consult someone else. A number of factors may be at work here. It is possible that the respondents think that the interviewers from the city are not interested in traditional medicine, or that we do not respect it, and therefore, they do not discuss it with us, even after we express great interest and ask a lot of questions. However, it is also possible that the competition for scarce resources is forcing curanderos out of the market. When consumers have to choose between paying for a curandero or paying a physician, they tend to go with the physician. This does not bode well for curanderos or for many traditional healing rituals, which often can have great socio-cultural as well as medicinal value to individuals and communities. In addition, many herbal treatments are medically efficacious, inexpensive and easier on the body than many of their chemical derivatives.

general, people everywhere make rational decisions when it comes to their or their childrens' health. Most decisions derive from established belief systems and practices based on personal and collective experience. For example, most Salvadoran campesions adhere to elaborate preventive practices, including wearing amulets, particular dietary habits including the hot/cold dichotomy for the prevention and treatment of various illness syndroms[4], and a wide pharmacopeia of herbal remedies for treating everything from stomach aches to skin eruptions[5]. These traditional practices are not seen as incompatible with "modern" practices and concepts such as improved sanitation, nutrition, vaccination and medical consultations. As noted above, a sort of syncretism clearly exists, in which people seek treatment from any and all sources considered to be effective. Vaccination is widely accepted as an important "treatment" for children, regardless of whether people actually understand the concepts of germs, antibodies, and the like. In the current sample of 120 families, 97.5% of all respondents said they had vaccinated their children. People consistently displalyed their basic understanding of preventive health when they responded to the question "what do you think is needed to improve peoples' health in your community?" with some variation of "potable water," "better personal hygiene," as well as "clinics and doctors."

Not all modern preventive health measures are as widely accepted and used as childrens' vaccinations. In this sample, 48.7 % of all women questioned had never had a pap smear, and of those who had ever received this test, few did it regularly. Only 16.7 % used any kind of family planning, and nearly all of them were sterilizations[6] (as compared with a national contraceptive prevalence rate of 53.3% in 1993). Forty-one percent of women questioned had never had any pre-natal care, and of the 59% who had received some prenatal care, most had only had one or two visits, and for only one pregnancy, even though all had more than one child.

Family planning remains a practice that is widely believed, among rural poor and uneducated people, to be wrong, dangerous, or is simply not considered. When asked if they use family planning, several women in this sample responded that family planning, and particularly sterilization, make a person weak or sickly; other methods (pills, condoms, IUD) do not seem to have made it into peoples' vocabulary. Unlike family planning, pre-natal care and attended deliveries are less likely to come up against serious socio-cultural hurdles. Instead, it is more likely that low use of pre-natal care and trained birth attendants is caused more by lack of information and/or unavailability of services. The most common explanations for not using an attendant during deliveries were "I don't know any", "when the time came there was no time to call anyone and have them come here", and "it is too expensive." Other studies of traditional birth practices and the role of midwives in the pregnancy and delivery process indicate that as many as 53% of all deliveries in El Salvador are attended by a midwife, either trained or untrained.[7]

---

[4] For a detailed explanation and analysis of the application of the hot/cold dichotomy and other aspects of preventive health in the Salvadoran context, see Harrison, Polly "The Social and Cultural Context of Health Delivery in Rural El Salvador: Implications for Programming" Agency for Internatinal Development contract 519-127; project number 51 0014900; 1976.

[5] For a list of some herbal remedies *and the symptoms they treat,* commonly used by Salvadorans in both rural and urban areas, see Annex I.

[6] We recognize that this figure is substantially lower than the national rates of contraceptive use. The figure cited here is taken from a very small sample and is not meant to be taken as representative. However, the attitudes and fears expressed by the women interviewed are very powerful and prevalent.

[7] Mendez-Dominguez, Alfredo, Dr. "Avaluacion del Rol de la Partera Emperica en El Salvador; USAID/El Salvador" for USAID Contract # 519-0178-C-00-9625-00; Development Associates, Arlington VA; 1990.

The most important impediment observed to womens' use of prenatal care is clearly the absence of, or the lack of information about those services easily available in the community. Of the women interviewed for this small sample, most had to walk for more than one hour to obtain basic health services at some kind of formal sector health unit. It does not seem reasonable to expect that pregnant women will either want to or be able to make that kind of trek late in a pregnancy, especially assuming that she feels more or less fine, or has not been taught to recognize the signs of risk, and still has all of her other usual child care and household duties to attend to. A 1990 study evaluating the role of midwives in El Salvador found that women prefer using the services of midwives for a variety of reasons, including that they trust midwives more than medical personnel. "Trust" is comprised of a number of factors, including familiarity, absence of fear, and easier communication, based in the fact that the midwife is usually a member of the same community and often of the same socio-cultural milieu, and therefore speaks the same language in both a literal and figurative sense (midwives, as members of the same community, will be familiar with common colloquial terms, as well as will use body language and gestures that are familiar to the women they are treating). The most common reasons cited for seeking the services of a midwife for a delivery (much less frequently for pre-natal care) are as follows:

Table 3

REASONS CITED FOR SEEKING CARE FROM A MIDWIFE

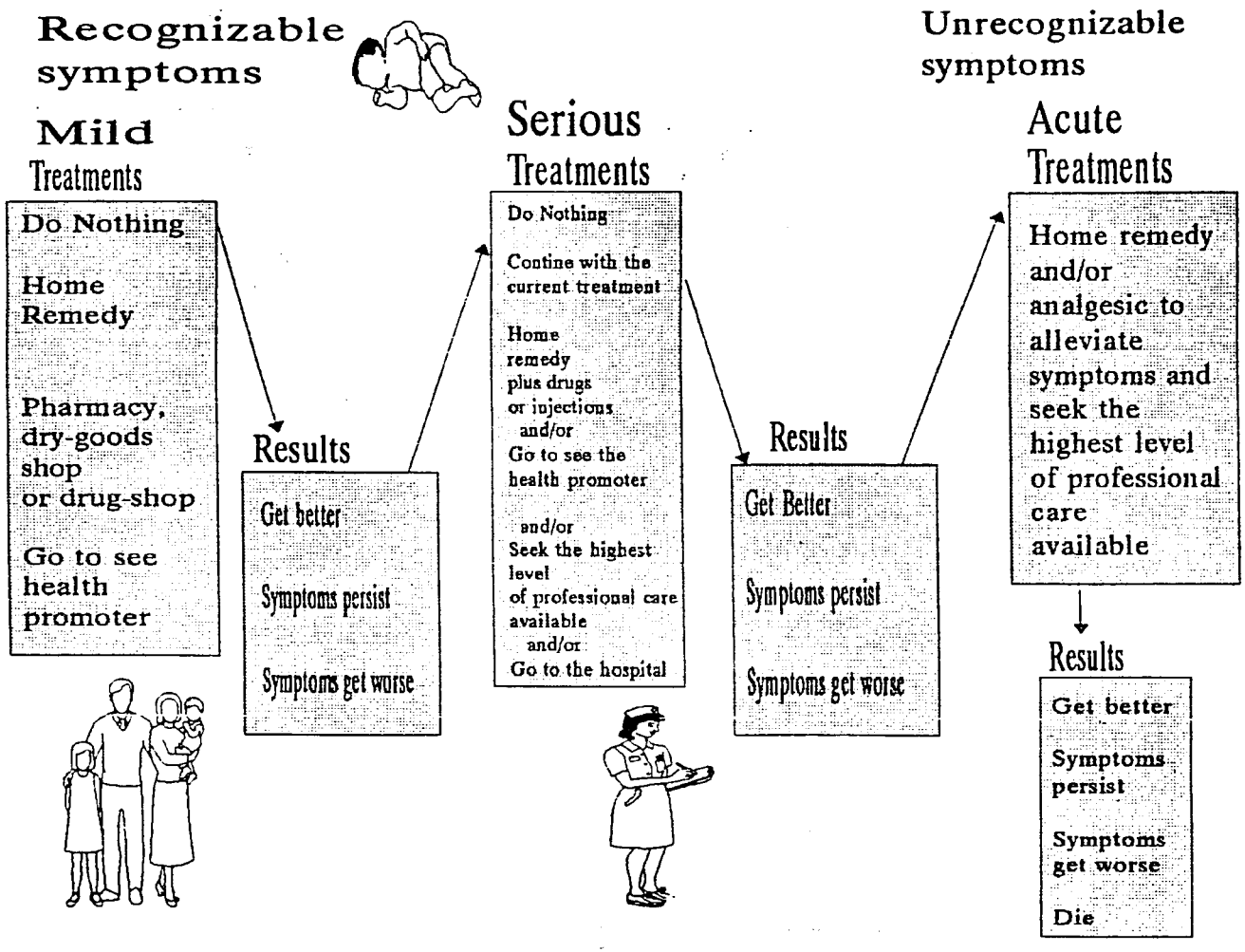
Reason	Number of women citing reason
This is the custom	343
Midwife lives nearby	320
She has sufficient experience	318
She attends in my home	317
We know each other	309
Midwife accompanies the woman during the entire delivery	289
Midwife knows what to do when the baby is going to come	288
The midwife visits after the delivery	270
There is no doctor nearby	240
There is no medical establishment nearby	233
Midwives are women	201
Midwives charge less than doctors	166

Two women interviewed for the current study had given birth recently in a hospital, and had not had any pre-natal care. They had their babies in the hospital because they lived in a nearby canton, had fairly easy access to transportation, and "in the hospital you don't have to pay".

3 Access to health services

3.1 Health behavior and processes

Health care seeking decisions are not isolated events. Instead, they represent a system of trial and error, based on the family's past experience, the information, technology and materials available, and custom. Health care treatment seeking behavior is part of a process within which the ill person and his/her family members actively or passively analyze a number of features of the symptom(s). The severity of the symptoms, their duration, familiarity, speed of onset, and speed with which the symptoms worsen or abate all contribute to the household care provider's initial assessment of what to do in the presence of symptoms. As the following flow chart represents, when it is determined that the symptoms are mild, the corresponding treatments tend to be convenient and inexpensive. If symptoms persist or worsen, people will seek other treatment alternatives of higher perceived efficacy. As will be shown in the chapter on elasticity of demand for services, people who perceive their illness to be very serious are most likely to seek care directly from a private sector provider, considered to be the highest quality provider available. In each case, an assessment is made as to the severity of the symptoms, their progression, and what should be done about it.


Recognizable symptoms
Mild
Treatments
Do Nothing
Home Remedy
Pharmacy, dry-goods shop or drug-shop
Go to see health promoter
Results
Get better
Symptoms persist
Symptoms get worse
Serious
Treatments
Do Nothing
Contine with the current treatment
Home remedy plus drugs or injections and/or Go to see the health promoter and/or Seek the highest level of professional care available and/or Go to the hospital
Results
Get Better
Symptoms persist
Symptoms get worse
Unrecognizable symptoms
Acute
Treatments
Home remedy and/or analgesic to alleviate symptoms and seek the highest level of professional care available
Results
Get better
Symptoms persist
Symptoms get worse
Die

Other factors such as material and financial resources available to the family, distance, time and mode of travel to receive care, and the expectation that effective care will be provided (or not) at the treatment center all contribute to the process of deciding what to do during an illness episode. The age of the sick person also influences decisions, with small children (under 5), and older people often perceived as requiring more professional attention than older children and adults. The following table shows that small children and older people were the least likely to receive self-treatment, and the most likely to receive care at a private facility.

Table 4

TREATMENT SELECTION, BY AGE OF PATIENT, NATIONAL AS %

Age	Self-Treat	Public	Private
Under 5 Years	44.39	31.86	15.86
5-14 Years	60.33	17.87	10.98
15-24 Years	59.82	17.21	10.49
25-44 Years	49.27	25.13	13.25
Older than 44 Years	45.87	24.02	17.95

Source: MIPLAN.

Two important implications arise from understanding the process through which people assess, diagnose and make treatment decisions. Knowing that Salvadorans have fairly well established (however informally created and documented) typologies within which they apply their knowledge and analysis of each illness episode allows us to identify points at which educational interventions are appropriate. It would be very useful, for example, to design community health education programs that build on the already existing understanding of mild, serious and acute/severe with respect to symptoms. This sort of education program could emphasize classification categories that people already know how to identify, while adding specific information about certain risk factors that would change a diagnosis from mild to serious, and cause the individual or family to seek treatment where they may not have previously. The second implication relates to the need for easily available treatment for symptoms identified as serious. If people are taught to identify certain risk factors, such as rapid, shallow breathing in a child with a respiratory infection, they need to also have quick access to effective treatment of those symptoms. Health promoters should be trained not only to identify symptoms that indicate serious illness, and to teach community members to do the same; they should also be equipped to treat, during their home visits, or out of their own home, some of the most common symptoms that they have been trained to identify.

3.2 Features of access to health services

Once the symptoms have been identified and people have decided to seek (or not seek) treatment, the next set of decisions relates to which services to select. From the client's point of view, selection of health treatments depends on a variety of issues that can be broadly categorized as *access* and *quality*. Access can be defined as the clients' perception of whether or not a particular treatment or service is geographically, socio-culturally, medically, and economically within their grasp. Policy makers tend to draw a pre-defined radius from each

health facility and consider that all people who fall within that radius have equal access to services. This practice is expedient, but it assumes that geographical distance is the only feature of "access" to health services. One need look no further than urban San Salvador to see tremendous inequality of access, for reasons other than geographic. In a city in which the Ministry of Health has concentrated 42% of its resources, the Social Security 73%, the "quasi-public" sector 79%[8], and the private sector 70%, more than 50% of all poor people self-treat their illnesses because they do not believe that they have "access" to health services.[9] (For specific figures relating to use of health services in urban San Salvador according to income level, see Table 12 below).

Nationally, the percentage of people self-treating is similar to the rates in urban San Salvador, as can be seen in Table 5, with some regions having slightly higher rates than others. People give a variety of reasons for not seeking formal health care[10], among them "lack of financial resources" (32.5%); "too far to travel" (7.75%); "too long to wait" (3%); "lack of confidence in physicians" (8.3%); and "other reasons" that were not specified, (40%). It is interesting to note that the figures comparing war-affected and war-not-affected areas show very little difference.

Table 5

TREATMENT SELECTION BY REGION (IN %)[11]

Department	Self-Treat	Public Facility	Private Facility
Occidental	54.72	17.88	13.59
Para-Central	54.75	22.34	13.56
San Salvador	46.02	26.94	17.88
Central	55.30	24.41	10.42
Oriental	47.77	26.99	13.15
Urban	45.01	26.86	19.19
Rural	56.88	20.72	9.47
War-not-affected	50.87	23.46	14.60
War-affected	52.85	24.37	11.91

Source: REACH Household Survey.

[8] "Quasi-public" is a term used by Dr. Jack Fiedler, author of the ANSAL report on Health Financing in El Salvador, to describe the the para-statal-like institutions of ANTEL, CEL, and Bienestar Magisterial.

[9] The data for these figures came from the 1989 USAID "Encuesta de Hogares" and the MIPLAN "Multi-purpose Household Survey", 1990 - 1991.

[10] These data were taken from the MIPLAN study of 1991-1992.

[11] Unfortunately, this data source did not differentiate between "private-for-profit" and "private-not-for-profit" so we do not have good dis-aggregated data on the use of NGO facilities.

For people living in marginal communities within metropolitan San Salvador and Santa Tecla, use of health services is not a function of geographic access to a facility. Instead, for these people, access is more a question of socio-cultural, financial, and logistical difficulty. For example, the community of Iberia, located well within metropolitan San Salvador, is a very densely populated community of between 15,000 and 20,000 poor and very poor people. Housing and sanitation facilities vary between adequate and non-existent. The only road connecting the community to the rest of the city is unpaved, and very deeply rutted, making it difficult for vehicles to pass. The only health facility located directly in the community is a small *Cruz Verde* post staffed by two very dedicated workers whose only materials are some cotton bails and iodine and a radio with which to call an ambulance if necessary.

The people of Iberia and the dozens of other similar communities live within relatively close proximity to health care services, and using only a geographic measure, they would be considered to have good access to health services. However, the people who live in these "marginal" communities themselves do not perceive many of these services as particularly accessible. A number of other factors contribute to whether or not a client perceives that s/he has access to health services. These incuclude: economic/financial; medical; socio-cultural; geographical; and perception of social distance at some of the facilities.

Table 6 defines the factors that contribute to Access (next page)

Table 6

ACCESS TO HEALTH SERVICES

Geography	• distance to travel • mode of transportation • quality of road • travel time • difficulty of travel and logistics[12]
Socio-Cultural	• perceived etiology of disease • perceived appropriateness and effectiveness of service • educational differences between providers and consumers • "social distance" -- cultural differences between providers and consumers, and different kinds of consumers • perceived status of health care professional • convenience -- hours of operation
Medical	• perceived appropriateness of service relative to perceived severity of illness • perception of effectiveness of treatment, likelihood of cure • expectation that upon arrival at the facility, someone will be available who can treat the problem • perception of effectiveness of treatment vis a vis other available treatments
Economic/ Financial	• cost of service (in terms of time, money and opportunity costs) • perceived value of service relative to cost • cost of transportation (in terms of time and money) • cost of service relative to household disposable income • cost of service relative to other consumer goods regularly consumed

3.2.1 Geography

Geography includes not only the distance, as the crow flies, between a client's home and the health facility. Other factors also influence a client's perception of the distance between home and facility. The mode of transportation, quality of the road, time it takes to travel, and the ease or difficulty of actually making the journey all figure into the issue of geographical location of the health facility vis a vis the client. The actual distance to travel may be 5 km, which would take about 10-15 minutes in a good car on a good road. However, the same distance could take up to an hour and half if the journey is made using a combination of walking and bus or truck (assuming good connections), and up to 2.5 hours only on foot. For someone who is sick, pregnant, elderly, or carrying small children, these distances are significant.

[12] In urban areas: walk to the road; wait for the bus; get on the correct bus; get off the bus at the correct stop; get on another bus; get off the other bus at the correct stop; walk to the health facility; wait to be treated; get treated; get prescription; go to the pharmacy to get perscription filled; walk to bus stop... In rural areas: look for some money; walk (sometimes an hour or more) to a road, wait (an undefinable length of time) for a bus or camioneta;; get on the bus; pay for the bus; get off the bus at the correct stop; walk to the health center; hope the health center is open...

Table 7

TRAVEL TIME BY REGION - URBAN
(IN MINUTES)

Region	Average Travel Time
Occidental	34
Para-Central	48
San Salvador	38
Central	38
Oriental	46

Source: REACH Survey.

Table 8

TRAVEL TIME BY REGION - RURAL
(IN MINUTES)

Region	Average Travel Time
Occidental	84
Para-Central	59
San Salvador	59
Central	71
Oriental	57

Source: REACH survey.

The travel times presented here represent the average time that it takes a person to get from his/her home to the health center. While averages will tell us the mid range of time required to travel to reach health services, it is also important to know that many people spend more than two times the average amount of time travelling to obtain the same services.

Travel time varies according to the kind of facility, with people spending the most time travelling to MOH hospitals, and, appropriately, the least amount of time travelling to helath units and posts.

Table 9

TRAVEL TIME TO DIFFERENT HEALTH FACILITIES, NATIONAL
(IN MINUTES)

Facility	Average travel time
MOH Hospital	62
MOH Unit or Post	40
Commercial Private Provider	52
ISSS	52
Pharmacy	45
NGO	46

Source: REACH survey.

For people in rural areas, geography represents a large part of the access equation, because of the great distances they have to travel, but even so, geography is only one factor. The actual number of kilometers is less important to rural people than the mode of transportation, time needed to travel, cost of transportation, and likelihood that there will be someone on hand to treat them when they arrive. Representative of common experiences among campesinos, when asked what he did to treat a recent illness, one respondent in rural Ahuachapan replied: "We went to the health unit in Tacuba, but we had bad luck. By the time we arrived, they had already closed." They had arrived mid-morning, after a 2 hour walk on a dusty mountain road. The family went to a pharmacy and bought some medicine and walked 2 hours home.

3.2.2 Socio-cultural

In addition to geographical barriers to access, socio-cultural aspects also contribute to clients' perceptions of appropriate health services. For example, some symptoms are associated with traditional disease syndroms such as *ojo* or *susto,* and are perceived to require particular traditional treatment from a curandero. A physician would generally not be considered appropriate for treatment of such illnesses. Differences in educational attainment also play a crucial role in how a client feels about health services. Clients sometimes feel intimidated by physicians, who treat them brusquely and use words that are incomprehensible to relatively uneducated campesinos. Because most physicians are middle or upper class, educated in cities, live in nice houses with all the usual amenities, and trained in very high-tech medicine, there are great cultural differences between them and their clients, especially when the clients are poor, uneducated and live in the campo.

People with more education tend to seek formal care more frequently than do those with little or no schooling. Educational attainment is negatively correlated to self-treatment. About 54% of those who had no formal schooling or fewer than 6 years treated themselves. Those who had more than 13 years of education had the lowest percentage of self-treatment (39.53%) and the highest percentage of receiving care at private facilities (29.94%). Schooling itself certainly plays a role in providing both information and a sense of self-efficacy about deciding when it is necessary to seek health treatment, thereby influencing people to use formal health care. Formal schooling is also highly correllated to socio-economic status. People with higher educational attainment usually have a higher socio-economic status, and therefore have more disposable income for the purchase of services such as formal health care.

Table 10

TREATMENT SELECTION BY EDUCATIONAL ATTAINMENT, NATIONAL, in %

Educational Attainment	Self-Treat	Public Facility	Private Facility
No Formal Education	54.16	20.12	11.64
1-3 Years	54.02	21.42	12.54
4-6 Years	53.69	21.73	14.37
7-9 Years	52.36	22.46	14.88
10-12 Years	46.34	25.95	19.12
13 Years or More	39.53	24.30	29.94

Source: MIPLAN.

3.2.3 Social distance

Relates to the sense of not belonging in a place. A poor person with worn out clothing, travelling by truck, bus and/or foot, does not pass by a private clinic filled with well dressed, well groomed people who arrived in private cars and feel equally welcome.

Finally, convenience relates to the hours that the service is open and attention provided. If the facility is located just down the block, and provides very inexpensive services, but it is only open on Thursdays from 10:00 a.m. to 1:00 p.m., it is not terribly convenient, particularly if you happen to be sick on Saturday.

3.2.4 Medical

Clients also assess whether or not the services available are appropriate to the medical problem that they face. For example, a client with a broken bone is unlikely to consult with the health promoter; likewise, a client with very severe symptoms such as acute fever, chills, aches, diarrhea is more likely to go directly to a hospital or health unit, where s/he can be reasonably certain that s/he will encounter someone who can treat the illness. Finally, clients develop their own ideas of the effectiveness of different treatments and providers. A provider who prescribes medicines or gives injections is likely to be considered more effective than one who does not. Through experience with different kinds of treatments and providers, clients develop their own sense of which treatments work best for which kinds of problems. A treatment that is nearby, but not considered to be medically appropriate or effective is, for all practical purposes, not accessible.

3.2.5 Economic/financial

Although most consumers of health care services are neither economists nor trained in sophisiticated analytic techniques, most do in fact conduct a sort of cost-benefit analysis of any health services they consider purchasing. Naturally, people assess the severity of their symptoms, consider whether or not the situation seems to be very serious, and consider what it will take, in terms of cash, time, and effort to obtain health services, prior to deciding what to do. They look for the greatest value for whatever they will have to spend for treatment. Cost of services range from free (many home treatments, herbs, etc.) to 2-5 colones for

treatments in *puestos* and *unidades de salud* to 50-60 colones or more for a consultation with a private physician, not including the cost of medication. Including the costs of medicine and transport, total costs for seeking health care more than double.

Table 11

TOTAL COST[13] OF SEEKING HEALTH SERVICES, BY TYPE OF PROVIDER (IN COLONES)

Type of Provider	Total Cost of Seeking Treatment
MOH Hospital	52.29
MOH Units and Posts	25.27
Private Sector	86.13
ISSS	21.20
Pharmacy	21.22
NGO	26.11

When the illness is considered to be very serious, people tend to seek the highest level of care available, regardless of the cost. In other cases, a more measured response usually takes place, with people carefully calculating the cost of seeking health care against their household resources, and against other things that they may need to purchase with their scarce resources. When asked whether she felt that the cost of the consultation and medicine charged at the *unidad de salud* was expensive, one respondent expressed very elegantly what so many people feel: "when you are poor, everything is expensive."

In the context of the preceding analysis of "access" to health care services, it becomes clear that distance to travel, in terms of direct kilometers or miles, serves as only one small component of how clients assess whether or not a service is accessible. As mentioned earlier, if geographical distance were the only measure of access, residents of San Salvador should feel that they have tremendous access to services. However, as table 12 illustrates, poor people in San Salvador tend to consume health services in a pattern that is more like their poor compadres in other departments, despite their alleged better "access" to services. This demonstrates, perhaps more clearly than any other example, that a variety of other factors contribute more to client perceptions of which services are available/accessible than to geographic proximity.

The lowest 20% income group in urban San Salvador behaves more like their rural counterparts than like their higher income urban counterparts. The poorest people living in the metropolitan area tend to self-treat at the same rates as people in rural areas, despite their better geographical access to health services. This finding confirms that physical/geographical proximity to health services is only one factor in the access to services question. In general people in urban San Salvador utilized both public and private facilites more often than do people in other regions, but these averages reflect the higher usage rates of the middle and upper income groups.

[13] Consultation + Medicine received not at place of consultation + Transport.

Table 12

TREATMENT SELECTION BY INCOME LEVEL IN METROPOLITAN SAN SALVADOR (IN %)

Income Level (by percentile)	Self-Treat	Public Facilities	Private Facilities	Other
Lowest 20%	51.56	28.55	9.14	10.74
20-40%	47.84	28.03	15.12	9.02
40-60%	43.94	26.75	20.70	8.61
60-80%	40.60	27.57	24.32	7.51
highest 20%	35.48	21.18	35.62	7.72

Source: REACH Household Survey.

In the USAID/REACH Household Survey, people were asked how much they spent on health services during the last 15 days. The cost of a consultation, while significant to people at the lowest end of the income spectrum, represents only a very small percentage of what people spend on procuring health services.

Table 13

AVERAGE COST OF CONSULTATION BY HEALTH SERVICE PROVIDER
(IN COLONES)

Facility	Average Cost of Consultation
Ministry of Health Hospital	2.45
Ministry of Health Post or Unit	1.79
Commercial Private Sector	17.38
Social Security Institute	0
Pharmacy	4.2
NGO	3.12

Source: REACH Household Survey

The purchase of medicine cost the client more than twice as much as the cost of the consulation, when the medicine was procured at the place of consultation. When the medicine was procured at a place other than the place of consultation, the cost of the medicine was often ten times more than the cost of the consultation.

Table 14

AVERAGE COST OF MEDICINE OBTAINED AT PLACE OF CONSULTATION (IN COLONES)

Place of Consultation	Average Cost of Medicine
Ministry of Health Hospital	5.66
Ministry of Health Post and Unit	5.68
Commercial Private Provider	55.74
Social Security Institute	15.27
Pharmacy	29.36
NGO	25.45

Source: REACH Survey.

Table 15

COST OF MEDICINE PURCHASED NOT AT THE PLACE OF CONSULTATION (IN COLONES)

Place of Consultation	Average Cost of Medicine Purchased Elsewhere
Ministry of Health Hospital	40.59
Ministry of Health Post or Unit	21.86
Commercial Private Sector	62.13
Social Security Institute	19.03
Pharmacy	14.47
NGO	21.73

Source: REACH Survey.

It is clear that when people have to purchase medication at a place other than the site of consultation, they spend significantly more money than when they can get the medication at the site of consultation. However, clients frequently complain that when they went for a consultation, they were only given a prescription and told to purchase the medication at a pharmacy. This fact probably contributes in large part to the high rates of self-medication, in which the patient goes directly to the pharmacy or *tienda*, and thereby saves the cost of the consultation (which itself is minimal) and also the time spent travelling and waiting at the place of consultation, both of which have been demonstrated to be significant. As we will see in the next chapter, where we model the eslasticity of demand for health services, consumers are most sensitive to waiting time. When waiting time was reduced, comsumption of particular service increased.

3.3 Quality

Broadly defined, the concept of "quality" includes both the level of medical attention received and client satisfaction with regard to that attention. Included in clients' perceptions of quality are the level of the provider, time spent at the facility, treatment by health care personnel, availability of personnel, and overall client satisfaction. For each illness episode, consumers (consciously or unconsciously) conduct an analysis of these various factors that lead them to their eventual treatment paths.
Table 16 describes the factors that contribute to a client's assessment of the quality of an institution.

Table 16

FACTORS THAT CONTRIBUTE TO CLIENT PERCEPTIONS OF QUALITY

Level of Provider	· what credentials does the provider have? · what is the level of the institution? · what kind of diagnostic and treatment capabilities and equipment are available? · is the level of care available appropriate to the severity of the illness?
Time Spent at the Facility	· how much time is spent waiting? · how much time is spent in consultation? · how much time elapses between when the client arrives at the facility and when s/he leaves? · proportion of time spent in facility to time spent in consultation
Treatment by Personnel	· are personnel friendly, sympathetic and helpful? · do personnel treat the client in a respectful, kind and personal way? · do personnel explain the diagnoses and treatments in terms the client can understand?
Availability of Personnel, Medications and Supplies	· is there usually someone at the facility who can treat most or all problems presented? · does the facility usually have the prescribed medicines on hand? · does the client have to go to another facility (tienda, botica or farmacia) to get a prescription filled?
Overall Satisfaction	· Cost-Utility: is the service worth the effort it takes (time, money, opportunity cost, hassle)?

3.3.1 Level of provider

The perceived quality of health care services also influences clients' decisions whether to use health services, and which services to use. Clients assess the level of provider available to them in terms of the providers' credentials, the kind of facility in which the provider works, whether or not there is equipment available for diagnosis and treatment of a variety of illnesses. Most importantly, clients analyze whether or not the facility and provider are appropriate to their own perception of the severity of their illness. These personal assessments explain why most people seek care in either of the two extreme levels of facilities, and less in the middle-range services. In cases that they consider to be mild (*leve*) people tend to use the services that are most convenient, nearby, and inexpensive (home remedies, buying medicines at the *tienda*, or to seek care from a *puesto* or

unidad de salud). For problems that they consider to be more serious, people tend to go straight to the hospital. Explanations for by-passing the Centros and Unidades de Salud tended to emphasize that at the hospital the clients felt certain that they would encounter someone with the skills and equipment necessary to identify and treat any problem. As long as they are going to make an investment of time, energy, and money to travel to obtain treatment, people want to be relatively certain that they will receive a treatment that will work.

3.3.2 Time spent at facility

The amount of time people spend at a facility also influences a decision to seek or not seek treatment. Most campesinos can not afford to lose an entire days' wage or time for household duties due to illness, and so will weigh carefully the value of spending their time waiting for health care against their expectation of a cure.[14] Consequently, people are tolerant of spending their time waiting at the hospital, where they are fairly confident of being cured. They would be less tolerant of such a wait to see the health promoter. People say that they go to the pharmacy or *tienda* because these are places where they do not have to wait, and they are certain to obtain useful medicine there.

Tabel 17

WAITING TIME BY TYPE OF FACILITY
(IN MINUTES)

Facility	Average Waiting Time
MOH Hospital	148.56 (2. 47 hours)
MOH Units and Posts	146.29 (2. 44 hours)
Commercial Private	61.08 (1 hour)
ISSS	89.47 (1.49 hours)
Pharmacy	9.35
NGO	101.56 (1.7 hours)

Source: REACH household survey.

3.3.3 Treatment by personnel

A feature of quality that is very difficult to quantify, but extremely important to overall client satisfaction, centers on how health center personnel treat the patients, and how patients feel they are being treated. When asked why she did not seek treatment for a recent illness, a 34 year old woman said "the last time I went to the health center, they scolded me for not vaccinating my child on time, so I don't want to go back there." People entering a treatment facility often feel intimidated by the place, the personnel, the unfamiliar bureaucratic systems that they have to follow, in addition to anxiety over their own or family member's illness.

[14] Interestsingly, people who have full-time permanant employment in the formal sector are more likely to seek care than people employed in the informal sector or unemployed. It would be inaccurate to assume that employed people have more serious illnesses; rather, we can conclude that these people seek more care because they have the required resources, including a steady income and permission to take time away from work without risk of losing their job.

Not surprisingly, they are extremely sensitive to the way they are treated by the health care personnel. Health care workers (physicians, nurses, clerks, administrators, auxiliaries, and *promotores*) have an enormous effect on a client's overall perception of the facility, merely by being kind and helpful, and explaining systems, symptoms and prescriptions to the client, or by the converse, being brusque, disrespectful, unfriendly, and generally unhelpful.

3.3.4 Availability of personnel, medications, and supplies

One of the most important questions that health care consumers ask themselves prior to setting out to seek care is: when I arrive at the health center, will there be someone there who can take care of me? During our interviews, when asked "why don't you use the health post or health unit?" the most common response was "the last time I went there, nobody was there" or "they don't have any medicines there, they just gave me a piece of paper and told me to go to the pharmacy to buy my medicine, so it's easier to go directly to the pharmacy." Clients have no interest in going to a place where they are not going to encounter services, particularly when they have to travel a great distance to get there. In many rural areas, (and in some urban areas) people do not have reliable information about when health posts and centers will be staffed. So, rather than go to a place and risk wasting the trip, people tend to go to places where they know they will receive treatment.

3.3.5 Overall satisfaction

Prior experience with one or another treatment option shapes clients' decisions about which treatments to use under different circumstances. People generally know what kind of investment they will need to make in terms of time, money, opportunity costs, and the trouble it takes to seek care, in order to obtain various different treatment options. The one they select is generally the one that they have determined will provide them the most satisfaction for their investment.

3.4 Client perceptions of different health facilities

A number of studies have been conducted in El Salvador attempting to document precisely which health services people use when they are seeking care. These studies have finely detailed questions in which the client is asked where they went for care during the past 15 days. Unfortunately for researchers and policy-makers, the clients themselves generally do not distinguish between the various facilities to the desired degree of specificity. For example, when asked "what did you do the last time someone in your household was sick" the standard response usually is something like: "I went to get some medicine" or "I went to see the doctor" (*fuimos donde hay médico*). Follow-up questions such as "where did you go to get medicine?" or "where did you see the doctor" usually elicit equally inexplicit responses such as: "at the shop" or "at the clinic."

To the average consumer of health services, the various options are not so differentiated as they are to the researcher or policy maker. To consumers, the *tienda*, and *botica* are practically the same thing; the *farmacia* is recognized as a higher level of specialization, assumed more likely to carry a greater variety of stronger medicines. Consumers have no problem making the distinction between the *puesto de salud* and the hospital. However, all of the intermediate health care providers, i.e. centers, units, NGO clinics, look more or less the same to most clients. In their lexicon, these are the places *donde hay medico*, and are commonly referred to generically as the clinic. Clients do distinguish between commercial private practitioners and government clinics, generally acknowledging that the private practitioners are more expensive, and that they sometimes have more convenient hours. In some cases, community members, without hesitation, associate the health promoter or health post directly with an NGO, such as in Morazán (PADECOMSM) or in Chalatenango

(Fundación Knapp). In other cases, clients are not sure whether the government or an NGO is providing the services.

Understanding how clients distinguish (or do not distinguish) between various modern health care options is important because it reminds policy-makers of what matters to the client. In most cases, what matters to the client is not which organization runs the health facility, how many doctors work there, or whether the facility has 3 beds or 25 beds. What matters to the consumer is whether or not the facility is conveniently located, is open and providing services on a regular (i.e. full-time) basis, is staffed by knowledgable, skilled people who are likely to be able to identify and treat their problems, and are likely to have on hand the required supplies and medications for a reasonable price.

4 The role of health promoters

Health promoters from both the Ministry of Health and from the NGOs have the potential to be a very powerful force in community health in El Salvador. Generally respected members of the community, and frequently selected by the community to be trained as promoters, these people provide invaluable service as the "front lines" of the health system. In some communities, health promoters are living up to their potential, providing a wide range of surveillance, education in preventive health, and some basic curative care. In other communities, however, the health promoter's presence is barely noticed. During this study, we visited a number of promoters and travelled with them on their community visits, and also talked with campesinos about their use or non-use of promoter services. In interviews conducted for this study, we found that there were some communities in which a health promoter was working, but many members of the community either did not know that he was a promoter, or knew only that he had come around at one point to do a small survey and ask a few questions, and conduct some *charlas* on letrines and sanitation. In these communities, the community members generally did not know that the promoter could do any basic diagnosis or provide some primary care treatments or referrals. On the other hand, in some of the communities where NGO promoters[15] are working, community members not only knew the promoter's name, but also knew where s/he lives, are usually more or less familiar with the range of services that the promoter can provide, and consult the promoter with some regularity. For example, in the community of La Carmen, in the Department of Chalatenango, many respondents said that when they have a health problem, they "go to see Cesar" (the health promoter in the community).

The community definition, recognition and utilization of some NGO promoters seems to relate to a combination of the high motivation of the promoter, and good supervision that the NGOs do with their promoters. For example, the NGOs associated with the PROSAMI project have assigned one supervisor to every 5 *promotores*.[16] One of the most successful aspects of the supervision that we observed was a physician supervisor accompanying the promoter on his community visits. The physician was not only able to make his

[15] Most notable among the NGOs providing good community outreach that we observed are: Fundación Knapp, Asociación de Mujeres Campesinos, Organización Profesional de Desarrollo (OPRODE), Diocesis de Zacatecoluca, Asociación AGAPE de El Salvador (AGAPE), Centro Coordinador de Programas Alternativas de Salud (CPAS), and Patronato de Comunidades de Morazan (PADECOMSM).

[16] The ratio of promotors to supervisor in the Ministry of Health is approximately 1 supervisor for 11 promotors. The MOH system of supervision consists of some promotors being assigned as supervisors of other promotors. This system could be very useful in terms of incentives and motivation, as well as supervisors truly understanding what the promotors have to do. The Ministry of Health has an elaborate set of regulations and standards for supervision, as well as forms that supervisors fill out following each supervisory visit. However, the high ratio of promotors to supervisors leaves some promotors feeling that they do not receive the kind of support that they need to perform their duties.

own house-calls, assist the promoter with his activities and provide on-site training; of equal significance, the presence of the physician and promoter travelling together seemed to imbue the promoter with a higher stature and greater level of credibility, which will be invaluable in earning the community's trust that this individual can help in the case of illness.

In order to increase the utilization rates of pre-natal care and other basic health services, it will be necessary to improve the delivery of these services by health promoters and other health care providers close to the community. The Ministry of Health and the NGO community have trained 3,246 midwives to provide pre-natal care and assist in deliveries. Likewise, 1,442 MOH and NGO health promoters have been trained in a variety of basic health care and monitoring skills. Although we have a good idea of how many of these primary health care workers have been trained, it is not known how effective these programs have been overall. Promoters are trained during a 12 week course that covers a variety of community participation and health promotion skills. Topics covered include latrines, water, garbage, hygiene, growth monitoring, vaccination, acute respiratory infections, family planning, control of diarrheal diseases, and pre and post-natal care.

There is little documentation or analysis to date of the specific activities that the promoters actually do in their communities. Data from the "Sistema Gerencial del Promotor"[17] showed that there is a great discrepancy among the number of *charlas* (informal talks or presentations) given for different promotor activities in the communities. In 1992, promotors gave a total of 405,947 *charlas* on community activities related to water and sanitation -- latrines, water, garbage, and hygiene-- (112,622 *charlas* on letrines alone). During the same time frame, one-tenth of the time spent on water and sanitation was spent on pre- and post-natal care, or 49,921 *charlas*. It is clear that in order for promoters to contribute more towards bringing down the maternal and infant mortality rates, they will need to invest much more time providing information, education and conducting examinations related to family planning, pregnancy, and the neo-natal period.

[17] Taken from the draft report Evaluation of the Health System Support Project (APSISA) Prepared for the Health Population and Nutrition division, USAID/El Salvador, December 8, 1993.

Table 18

COMMUNITY HEALTH PROMOTER ACTIVITIES

Activity	Number of *Charlas* given by Health Promoters
Letrines	112,622
Water	102,001
Garbage	96,645
Hygiene	94,679
Growth Monitoring	92,212
Vaccination	86,326
ARI	66,168
Family Planning	66,344
Diarrhea	62,769
Pregnancy	33,006
Post-natal	16,915

Source: APSISA Evaluation Report, 1993.

It is possible that the current breakdown of time spent on different activities is related to the gender of the health promoters. At the time of this writing, available data on the gender distribution of Ministry of Health promoters tell us that out of 1,000 promoters working in the field, 531 are male and 469 are female. In the preceding years, the ratio of male to female was more like 3-1. It is very likely that male health promoters feel much more comfortable, and in their own milieu, giving talks on water, sanitation, and demonstrating how to construct letrines. Likewise, respondents, including community members, physicians, nurses and promoters themselves mentioned that women frequently feel uncomfortable discussing "female" issues, such as pregnancy, menstruation, and the like, with a man who is not a physician. In any event, it will be necessary to improve the distribution of health promoter time spent on each of the community health activities, particularly emphasizing maternal and peri-natal health, in order to improve community health outcomes.

4.1 Health promotor training

The health promotor training program is comprehensive and impressive. Health promoters spend time in formal classes, studying the technical content of each subject area, and also in small groups, working together to solve certain problems. At the end of the training, promoters in the group that we observed received practical training working side-by-side with professional staff at the regional hospital in San Miguel. While the current training regimen provides a good base from which health promoters can begin their work, this program could be improved in some areas.

Health promoters are selected by their communities to attend the promotor training, and they tend to be bright, eager and energetic. However, most of them also tend to have only a very basic education (around 4 years of formal schooling) and so are not highly practiced at intense studying and and formal learning processes. Knowing this, it becomes even more important to ensure that the training involves a lot of experiential

learning, with close supervision, to ensure that the promotors will internalize and become comfortable with the information they are studying. During this study, we observed a group of NGO promoters at the end of their trianing, during their practice work at the regional hospital in San Miguel.[18] While we recognize that one can not evaluate an entire program based on one day of observations, a few issues emerged that are worth noting.

During the "practicum" at the hospital, health promoters are assigned to work for a day or two in each of the units of the hospital: out-patient adult; maternal-child clinic; vaccinations; well-baby clinic; oral rehydration unit; pre-natal in-patient unit. In general, this is the first chance that the health promoters have to apply what they have learned during the academic (formal) portion of their training. While the praticum should be an excellent opportunity for promotors to learn how to actually do a lot of the things that they will be required to do in their communities, the setting and training methods did not always provide much opportunity for the promoter and trainer to interact. The pressures of the clinical setting, in which many clients are waiting to be attended by a few busy staff members, provide a difficult, but realistic setting in which to train community health workers. The MOH physician in the pre-natal ward of the hospital had struck an excellent balance between instruction/supervision and letting the promoters learn by doing the work themselves. He introduced the promotors to the women in the ward, and asked for their patience in working with the trainees, explaining that they are learning how to take medical histories, vital signs, and the like. Then he worked individually with each of the health promoters, observing as they did their work. In other cases, the trainers either did not supervise the work of the health promoters at all, or if they did, their supervision consisted of watching, and telling the promotor what to do each step of the way, or doing it for them.

At one point during their practice, the PROSAMI supervisor worked with a few of the promotors, going over their growth monitoring charts, helping them to document and interpret their findings on each case. During these interactions, it was clear that, although the health promoters had a basic understanding of the concept of growth monitoring, they were still not confident or skilled in how to actually do it, and so required close supervision, which they did not always receive.

During the day of observation at the hospital, we had the opportunity to talk with some of the promoter-trainees about what they would do when they returned to their communities to begin their work. Some of them had a fairly good idea of how they would go about their surveillance activities, conducting their surveys and mapping their communities for illnesses, pregnancies, latrines, and the like. However, very few of them seemed confident about doing their *charlas* for groups of community members. They have their flow charts and visual aids, but lack experience or training in how to make their presentations in an effective way. One approach to solving this problem might be to have experienced promoters come to the training to work with small groups of trainees, demonstrating how to give a presentation to a group, and then supervising the trainees as they give presentations among themselves. Another approach might be to have trainees accompany experienced promoters for a day or two, working side-by-side in the promoter's daily activities. In either case, it will be important for the promoter-trainers to attend a similar "training of trainers" as mentioned below.

It would be useful to have a session or two of "training of trainers" within the promoter training. The Ministry of Health has appointed 127 supervisors for 1,441 promotors, (a ratio of about 11 promoters per supervisor), making the task of supervision a very difficult one, requiring some good systems, guidelines, training and

[18] This training session provides an excellent example of the cooperation between the Ministry of Health and the NGOs associated with the PROSAMI project; the NGO promotors were afforded the oppoutunity to work with the MOH physicians and nurses in the hospital, and to observe in a first-hand way the pressures and realities of providing health care.

resources. MOH supervisors have a *Manual del Supervisor* to guide their supervisory activities, and a detailed form that they fill out for each supervisory visit. Every health promoter is visisted approximately once a month, after which the supervisor writes up his/her observations and points to be followed up on the next visit. The Ministry of Health perceives the need to increase and improve health promoter supervision, and has a goal of one supervisor for every 5 health promoters by 1995.

The MOH promoter supervisors are former promoters themselves who showed particularly good leadership and ability. This method of selecting supervisors could be extremely effective, since nobody understands better the role of a health promoter than one who has served in that position before. However, having served as a health promoter does not automatically translate into being a good supervisor. Specialized supervisor training would consist of working with the health center staff and supervisors who will be responsible for overseeing the work of the health promoters, teaching them how to instruct and supervise in ways that will be effective and satisfying for both the trainees and trainers. In addition, some of the supervisors that we talked with commented that they would find it useful to have some training and guidelines for their supervision. The only structure that the PROSAMI supervisors currently have in their supervision activities requires that they make a stipulated number of visits to promoters in their communities. It is up to each supervisor to decide what to do during the visit. As the Ministry of Health and the NGOs rely on health promoters as the front lines of service provision in the delivery of Primary Health Care, it will be very important to institute an effective and appropriate system of supervision to assure, maintain and improve the quality of this very valuable workforce.

The Ministry of Health and the NGOs have established a good foundation of community health promoters and activities on which to build future programs. The people of El Salvador are eager to use community-based health care services. The challenge for the next five years will be to strengthen and/or construct high-quality, low-cost community-based health services that really meet the preventive and curative health care needs of the population.

II *THE DEMAND FOR HEALTH SERVICES*

This chapter consists of a quantitative analysis of the demand for health services in El Salvador. Preliminary analysis of the patterns of health care provider utilization reveal that there are three distinct, largely mutually exclusive, health care market structures in El Salvador. The types of health care choices Salvadorans make are circumscribed by the characteristics of these three markets. The markets are distinguished by a combination of insurance coverage and geographic residence. More specifically, they consist of:

1) Persons who live in urban areas and are beneficiaries of ISSS. These persons have the greatest selection of health care providers: ISSS, MOH and the private sector.

2) Persons who live in urban areas and are not beneficiaries of ISSS. These persons have two sub-sectors from which to select their providers; the MOH and the private sector.

3) Persons who live in rural areas. Although these persons have the same two sub-sectoral choices available to them as the urban residents who are not ISSS beneficiaries, the differences in this sub-population's characteristics and conditions, and those of their providers results in systematically different behavior processes. As a result, in order to develop measures which are as statistically valid, reliable and precise as possible it is necessary that the behaviors of these two groups be assessed in separate and distinct analyses.

The table below contains the percentage distribution of actual provider choices made in each of these market segments. (Each line in the table sums to 100 percent, i.e., all of the choices for that particular market segment)[19].

Table 19

PROVIDER CHOICE FOR CURATIVE CARE BY MARKET SEGMENT
(PERCENTAGE DISTRIBUTION OF EACH MARKET SEGMENT)

Market Segment	MOH Hospital	MOH Unit/Post	ISSS	Private Subsector	Self-Treat
Urban ISSS Beneficiary	---	- -	22.7	8.7	68.6
Urban, Non-ISSS Beneficiary	3.6	4.3	---	4.0	83.6
Rural	3.2	4.3	---	4.0	88.5

[19] This is a slight simplificatioin of reality. In each of these three market segments, one or more "other providers" have been dropped. In each case, this was done because the number of observations was so small -- less than 2 percent in each market segment. Also, it is believed that they constitute aberrations and are generally not viable options by persons in the particular market segment in question. An additional motivation in adopting this approach was that it enables us to more precisely model the behavior patterns within each market segment, which, as will be demonstrated shortly, are substantially different.

1 Empirical specification

The analysis of health care demand is restricted here to the demand for curative outpatient care. Individuals face a choice among self-treatment and several professional treatments, with their choices among professionals varying depending upon where they live and whether or not they are ISSS beneficiaries, as explained above.

The model is conceptualized as follows: When an individual consumer experiences an accident or illness, he/she must decide whether or not to obtain medical care, i.e., whether or not to enter the formal health care market, or, alternatively, to self- treat the problem. If the individual elects to enter the formal health care market, he or she must choose where to obtain care. Next, the individual has to decide how much care, i.e., what quantity of services to consume.

It is assumed that both of these decisions--the choice of provider and the determination of the quantity of care to consume--depends on the observed attributes of each choice as perceived by individual, as well as various characteristics of the individual. It is assumed that the consumer's choice is such that he maximizes his utility (i.e., his or her perceived net gain from the choices and other action or actions he or she takes). The statistical model of the choice of provider is driven by the probability that a particular choice is made. The statistical model of the amount of care demanded is driven by the probability that a particular level of care is obtained, conditional upon the individual's having obtained at least one consultation (i.e., with the distribution of observed consultations truncated at zero).

In this study, the four attributes for each choice are the consulting fee, the cost of medicines, waiting time at the health facility, and travel time to the facility. It is assumed that each individual knows the location of each of the different subsectoral types of health care facilities which are available, the expected costs of the facilities and medicine, waiting time at the facilities, and traveling time to the facilities. Individual characteristics are age, sex, income, a severity of illness/health status measure (the number of sick days in the previous month), education, working status, and the illness or condition.

Once the parameters of the choice model have been estimated, it is possible to use the estimated coefficients to simulate the impact of changes in the characteristics of the individual and/or of the facility on the probability that the individual will choose a particular health facility. The model will be used to assess the impact of potential changes in monetary and time prices on choice of health care facility. Similarly, the estimated demand (quantity) model will be used to assess the impact of potential changes in monetary and time prices on the quantity of care consumed.

The bulk of the discussion about the empirical findings and their implications focuses on the first of the two, sequential health care demand decisions; viz., the choice of provider, as opposed to the number of consultations. Three considerations prompted this approach. First, the critical problem confronting the health care delivry system and the Government of El Salvador is the degree of access to health care. The first equation investigates factors influencing the choice of provider, including self-care, and thereby directly addresses the question of who opts into the formal care system and what factors influence this decision.

Second, the time period during which utilization experience was surveyed was short, a two week period (in order to ensure adequately accurate recall, and thereby adequate validity and reliability of the phenomenon studied). A relatively small number of persons had more than a single outpatient consultation during the study period, thus making the second demand question, How much care? a relatively unimportant issue.

Third, owing in part to the relatively small variation in the number of persons with more than a single consultation, the estimated parameters do not fit the data particularly well, nor are the empirical results particularly robust. For all three of these reasons, therefore, the focus of the following discussion will be primarily the choice of provider equation estimates.

2 Empirical results

2.1 Descriptive statistics

The data set used in the empirical analyses was collected in a 1989 USAID household interview survey. The survey was a national probability sample of more than 23,000 individuals residing in 3,687 households. Approximately 15 percent of the country was not included in the sampling frame because of the level of hostilities in these areas owing to the civil war (see REACH, 1989, Volumes I, II and Appendices for details). The analysis here is limited to the help-seeking behavior of those persons who reported having had an accident or being ill in the two week period prior to being interviewed.

2.2.1 The urban market of ISSS beneficiaries

Table III-1 shows the sample statistics for patients who live in urban areas and are beneficiaries of ISSS. More than two-thirds of persons who self-reported being ill self-treated their illness. The remaining 31.4 percent sought formal medical care. Seventy-two percent of those who sought formal medical care (23 percent of this sample segment) turned to ISSS, the remaining 8.7 percent went to a private sector provider. Thus ISSS beneficiaries were more than 2.5 times as likely to go to an ISSS facility for care than to turn to a private provider.

The average person who self-reported being ill or having an accident in the previous two weeks, was an ISSS beneficiary and lived in an urban area was 37 years old, female (53 percent), and had slightly more than a primary school education. Sixty-six percent of the persons in this sample segment worked and 50 percent of them suffered from respiratory illness.

The ISSS users among this group appear to have generally been more ill; they reported having spent nearly one and one-half days in bed due to illness, more than three times the average among the self-reported ill in this market segment. The average user fee charged by ISSS users was zero. ISSS users paid an average of 2.3 colones for medicines, and, on average, they waited a bit more than one and one-half hours at the facility before seeing their health care provider, after having traveled for nearly one hour to reach the facility.

Not surprisingly, the private facilities users spent considerably more on their health care. On average they paid 16.6 colones for a consultation, and medicines requires an additional outlay of nearly 31 colones. Waiting time at private facilities, however, on average was nearly half that of ISSS users, 49 minutes. Travel time for those visiting private providers was nearly identical to those turning to ISSS. Users of private facilities are from the wealthiest families with an average income (2 weeks) of 1123 colones, more than 25 percent greater than those using ISSS.

Sixty eight percent of the sample treated themselves. (Self-care does not include care at pharmacy.) Persons who treated themselves were more likely to be less severely ill (as measured by bed-days and stay-at-home days), were more likely to have a respiratory ailment and were slightly older. Males were more likely to treat themselves.

2.1.2 The urban market of non-ISSS beneficiaries

Table 2-1 contains information about non-ISSS beneficiaries who live in urban areas. Persons who self-reported being ill in this market segment were more likely to not seek formal medical care. Fifteen percent more people in this market self-treated their ailment compared to the urban based ISSS beneficiaries. The seventeen percent that sought formal medical care were about equally divided between MOH and private providers. The average age of persons in this market is roughly 26 years old, with the exception of MOH unit and post users who averaged 19 years. At least in this particular market, it would appear that these "front- line" MOH facilities are the major provider of care to children.

Persons using units and posts were also more likely to report having a respiratory or a digestive illness compared to all other persons in this market--those using either an MOH hospital, a private provider or self-care. Units and post users in urban areas paid the lowest amount for their consultation and their medicines. They also had the shortest travel time, about one- half hour, roughly half that of hospital users, while persons using private providers had an intermediate travel time of 45 minutes.

Non-ISSS beneficiary, urbanites who visited a unit or post had a waiting time, on average, of two and one-half hours; about 15 minutes longer than at an MOH hospital. In contrast, the waiting time at a private provider was one hour.

The users of private facilities in this market segment are the oldest and most educated of the groups studied.

2.1.3 The rural market

Table 3-1 contains descriptive statistics of self-reported ill ruralites. Persons in this market segment were by far the most likely to self-treat for illness. Only 12 percent sought formal medical care. Among ill ruralites, females were more likely to go to MOH facilities, especially hospitals. At MOH health unit/post, user fees and medicine costs were the least expensive, but only slightly lower than at MOH hospitals. In sharp contrast, private sector user fees and medicine costs were 6 to 7 times their average MOH levels. Although travel time is shortest to the units and posts, the time spent travelling to obtain health services among ruralites are generally long to whichever services they select, particularly compared to travel times for their urban counterparts.

The consultation fees paid at MOH units and posts by ruralites is nearly identical to the average fees paid by urbanites. Ruralites visiting MOH units and posts, however, on average, pay 50 percent more for medicines than urbanites. Thus ruralites using units and posts on average have a total medical visit expenditure that is one-third again higher than urbanites, although the ruralites' incomes are only one-fifth as large. Hence, while the average urbanites' outlays for medical care in the past two weeks amounts to 0.3 percent of their household income, it comes to 2.2 percent of ruralites' household income.

At the same time, ruralites are far more likely to cite economic reasons for not seeking care. Ruralites who did not obtain a medical consultation and cited economic barriers from doing so constituted 9.0 percent of ruralites who self-reported being ill. This is nearly double the proportions reported in the other geographic strata of the country; 5.7 percent of Metropolitan San Salvador residents who reported being ill, and 4.6 percent of the residents of other urban areas (Table 4.11, Gomez, AID-REACH, 1990). In conclusion, it appears as though the combination of user fee (consultation) and medicine costs paid by users of MOH health units and posts are considerably more than the combined total paid by urbanites, and constitute a substantial barrier to access to care for ruralites[2].

In the case of MOH hospital users, urban residents pay about 50 percent more for both user fees and medicines than do rural residents.

3 Econometric results

3.1 Structure of the presentation of the results

The discussion of each of the 3 markets is structured in the same way. First the choice model results are presented, with the results summarized in two tables. The first table contains the estimated multinomial logit coefficients and standard errors for the particular market segment. The statistical significance of each of the coefficients is also identified. This set of tables will be referred to as the "choice of provider" table.

The second table contains the predicted probabilities of choosing a particular type of provider (evaluated at the median values of the characteristics of the individuals and the providers). There is one such table for each of the three markets. This set of tables will be referred to as the "probability of choice" tables. The top portion of these tables shows how the proportion of persons (i.e., the predicted probabilities) of choosing a particular provider changes as one of the characteristics of the individuals or one of the providers' characteristics changes in value. Each line in the top portion of the table reports changes in the predicted probabilities of selecting each of the different provider sources as a result of changing one of individual or provider characteristics, while holding the value of all other variables in the equation constant. The new estimated probabilities are generated from the fitted model.

The degree of accuracy (i.e., the fit) of the model can be assessed with two different measures, the log-likelihood of the estimated model and the degree of coincidence between the percentage actually choosing a particular provider and the predicted percentage choosing that provider. The log-likelihood of each equation is presented at the bottom of the "choice of provider" table. In all cases the estimated equations are statistically significant at beyond the 99 percent confidence level. The actual and predicted choices are contained in the first two lines of the top portion of each of the "probability of choice" tables. The main purpose of these tables is to demonstrate the degree to which the selection of a provider type is sensitive to the particular variable being altered. This degree of sensitivity is referred to as "elasticity." The focus of the analysis of elasticities in this report is on monetary price elasticities, and to a lesser extent time-price and income elasticities.

After discussing the choice of provider results, the results on "quantity demanded" will be discussed. (The censored regression or tobit estimates are presented in Appendix 2 for the interested reader. Only the price elasticities derived from these estimates are discussed in the text.)

In the final section, the two elasticities, choice of provider and quantity demanded, will be combined to provide total price elasticities. The impact of various changes in monetary prices of the public sector will be simulated to demonstrate how the introduction of user fees can be expected to alter consumers' health care choices of providers and the amount of care they consume.

3.2 Choice of provider

3.2.1 The urban, ISSS beneficiary market segment

As may be seen in Table 1-2, all of the provider characteristics are related to the economic costs of obtaining care at the particular provider in question are statistically insignificant. It may be inferred that economic considerations -- viz., monetary costs, waiting time and travel time costs -- do not constitute important

deterrants to ISSS beneficiaries' obtaining care, whether that care is obtained at ISSS or private sector providers.

Maximum-likelihood estimation results of the multinomial logit model for outpatients in urban areas who are beneficiaries of ISSS are presented in Table 1-2. The interpretation of the coefficients is not particularly intuitive or altogether straightforward: the estimated coefficients are measured relative to self-care. The provider's characteristics are user fee, cost of medicine, waiting time and travel time. All of the signs of provider's characteristics are statistically insignificant. This suggests that when patients are beneficiaries of ISSS, neither monetary costs (user fee and cost of medicine) nor the opportunity cost of time (waiting and travel time) are important influences in choosing a provider type in this market segment.

Several of the individual's characteristics, age, sex, income, duration of illness and type of illness, have statistically significant coefficients for some providers. For example, relative to self-care, age has a positive effect on the selection of several provider types. In other words, older people are more likely to seek formal treatment.

The negative income coefficient for the ISSS choice means that for ISSS beneficiaries, relative to self-treatment, ISSS providers are an inferior good. As income increases and (other things being equal) they are able to "purchase" more care, ISSS beneficiaries obtain less ISSS coverage, suggesting they purchase more private coverage. (Although the coefficient of income in the private provider equation is positive it is not statistically significant.) Other interesting components of the profile of ISSS beneficiaries is that they are more likely (1) to self-treat respiratory illnesses, and (2) to turn to ISSS providers for digestive ailments and accidents, while (3) they go to private providers for more serious problems as indicated by their having stayed home at least one day in the previous two-week period. This composite profile suggests that ISSS beneficiaries regard the private sector as providing a higher quality of care.

The findings of the "probability of choice" results for urban residents with ISSS coverage are presented in Table 1-3. They reveal the following:

Age: A person's age has a positive effect on the decision to seek care. In particular, the elderly are more likely to seek formal care in the presence of a health problem. At age 15 years, the probability of a person to care for himself is 74.81 percent while, at age 37 years old it is 69.85 percent. Young people may have a higher opportunity cost of time. Age also affects the choice of provider, with middle- aged people showing a marked preference for ISSS.

Sex: Females appear to be more likely to seek care than males. The probability of treating themselves is 79.39 percent for men, while it is 69.86 percent for women. Among health care providers, women are more likely to choose ISSS.

Education: The level of formal education of the person has a positive effect on the probability to seek care, suggesting that the more educated place a higher value on treatment. Among the providers, the more educated choose ISSS.

Work status: People who are not working are more likely to choose self-care (77.85%) and less likely to go to ISSS (18.90).

Illness: For digestive illnesses, only 49 percent are found to be treated at home.

Income: As income increases from 400 to 800 colones, the probability of an ISSS beneficiary choosing an ISSS provider actually falls, again reflecting the fact that for ISSS beneficiaries, ISSS providers are an inferior good; as income rises they prefer to use more self-care, as well as more private providers.

3.2.2 The urban, non-ISSS market segment

Maximum-likelihood estimation results of the multinomial logit model for urban residents who are not ISSS beneficiaries, are presented in Table 2-2. Patients face four choices: MOH hospital, MOH health unit or health post, private and self-care. All of the coefficients of provider's characteristics are negative and highly statistically significant. This implies that the probability that people will seek care outside the home from any provider decreases with increasing user fees, high costs of medicines, longer travel time, and longer waiting time at the provider; i.e., that these economic costs are important determinants of the choice of a provider for urban residents who are not ISSS beneficiaries.

For the individual's characteristics, age, household income, duration of illness and type of illness have statistically significant coefficients in most of the individual provider equations. For example, income has a positive effect on the choice of MOH health unit/post, and private facilities, but a negative coefficient in the MOH hospital equation.

Relative to self-care, age has a negative effect on the choice of providers: older persons are more likely to self-treat. As the "probability of choice" table, Table 2-3, shows, younger persons are more likely to seek formal care in the presence of a health problem than are other age categories. At age 20 years, the probability of a person caring for himself is 84.77 percent while, at age 40 years old this probability edges 86.22 percent. Age also affects the choice of provider, with younger people showing a marked preference for MOH health unit/post and older people showing a preference for private.

Other findings from Table 2-3 include:

Income: People from wealthier families seek more formal care, and among formal care options, private facilities are preferred. Increasing income results in virtually no change in the probability of selecting an MOH hospital for care, and actually results in a reduction in the choice of an MOH unit or post. Just as was the case with the choice of ISSS providers by ISSS beneficiaries, MOH units/posts are an inferior good. When income increases, more people do not select these facilities. Rather, fewer people choose them, opting instead for other higher quality provider types. As income increases, other things being equal, the only type of provider type chosen more often is the private provider.

Education: The level of formal education of the person has a positive effect on the probability of seeking care. The more educated are more likely to choose private facilities and the less educated are more likely to choose an MOH health unit/post. Just as with income, when education levels increase, other things being equal, the only provider type chosen more often is the private provider.

Work status: People who are working are more likely to treat themselves.

The bottom portion of Table 2-3 shows how changes in user fees, the cost of medicine, travel time and waiting time at MOH hospital and MOH health unit/post have an effect on the probability to seek professional care

and the choice of provider. An increase in user fees from 2 colones to 10 colones at MOH hospitals results in a decrease of patients selecting MOH hospitals for care. The 2.04 percent who would have selected the MOH when user fees were 2, is reduced by about 30 percent to 1.37 percent. The bulk of these persons (88 percent of them) are pushed out of the formal care market entirely, as the percentage choosing self-care rises 0.59 percent to 85.36 percent. The remaining .08 percent of persons are split equally in choosing to switch to an MOH health unit/post or private care.

Quantifying these changes with the actual number of persons involved in the sample[20] may make it easier to understand the movements and relative magnitudes of the changes involved. The 3,838 persons who were urban residents without ISSS coverage and who self-reported having had an accident or being ill in the last 14 days made the following initial provider choices and responded to a 400 percent increase in hospital users fees. The following section details these results.

- The Impact on Choice of Provider in the Urban, Non-ISSS Beneficiary Market Segment of an Increase in the Average MOH Hospital Consultation Fee from 2 to 10 colones.

Table 20

CHANGES IN PROVIDER CHOICES RESULTING FROM AN INCREASE IN HOSPITAL USER FEES FROM 2 TO 20 COLONES

	Initial Choices		Subsequent Choices
MOH Hospital	78	decrease of 26	52
MOH Units and Posts	245	increase of 2	247
Private	261	increase of 2	263
Self-Treat	3254	increase of 22	3276
Total	3838	26 persons (0.68%) changed their choice of provider	3838

It should be evident that the behavioral changes prompted by this substantial proportionate increase in hospital prices (400 percent) is very modest (99.32% of the persons in this market segment did not change their choice of a provider), revealing that price elasticities in this market segment are very low--i.e., that people's choice of provider in this market segment is very insensitive to price changes.

At the same time, however, it should be remembered that increasing the average hospital outpatient user fee from 2 to 10 colones would result in a 5-fold increase in the hospitals' user fee revenues, which would annually yield an additional 12 million colones. This sum constitutes roughly 11 percent of the hospitals' cost of providing these same outpatient services (outpatient services consume 40 percent of total hospital operating

[20] We were unable to blow them up by their weighting factors, to provide nationally representative estimates, because the weights were unavailable at the time of this writing.

costs according to Gomez, Clapp & Mayne, 1992, Volume I, page 38). If the hospitals were assured of being able to retain control over this money it could be used to purchase additional drugs and other supplies, thereby increasing the quality of services provided. This, in turn, would probably result in making the price elasticity of demand/provider choice even more inelastic. (It is important to note that in this scenario of increasing the average fee, it is implicitly assumed that the same proportion of the population that is currently exonerated from paying for hospital outpatient care, about 20 percent, would continue to be exempt from payment).

If, instead of changing hospital user fees there were an increase in user fees from two colones at MOH health units/posts, other things being equal, there would be a decrease of units'/posts' patients by 2.06 percentage points (6.39-4.33). The price elasticity of choosing an MOH unit/post is substantially greater than that of an MOH hospital. Nevertheless, the absolute value of that elasticity is very low; people's behavioral patterns do not change a great deal as a result of a substantial proportionate change in the price of units/posts. Most of the impact of the increase in the unit/post price would be seen in an increase in the number of persons who would self-treat; the price increase would effectively push them out of the formal care market.

It is interesting to note that increasing the unit/post price would also reduce the use of MOH hospitals. This implies that MOH units/posts and MOH hospitals are complements; that is, a substantial number of persons who use the units/posts also use MOH hospitals. This is evidence of the pyramidal structure of the MOH functioning as the referral system it was intended to be. Further evidence of this relationship is provided by the fact that increasing the MOH hospital price does not decrease the choice of MOH units/posts, but rather results in a slight increase in the use of units/posts. Thus, while hospitals are complements of units/posts, units/posts are substitutes for hospitals.

- The Impact on Choice of Provider in the Urban, Non-ISSS Beneficiary Market Segment of an Increase on the Average MOH Unit/Post's Consultation Fee from 2 to 10 colones

Table 21

CHANGES IN PROVIDER CHOICES RESULTING FROM AN INCREASE IN URBAN UNIT/POST USER FEES FROM 2 TO 10 COLONES

	Initial Choices		Subsequent Choices
MOH Hospital	78	decrease of 1	77
MOH Unit/Post	245	decrease of 79	166
Private	261	increase of 6	267
Self-Treat	3254	inrease of 74	3328
TOTAL	3838	80 persons (2.08%) changed their choice of provider	3838

An increase in the cost of medicine from 0 to 10 colones at MOH hospitals would result in a 0.3 percent decrease of patients going to MOH hospitals for treatment.[21] A dramatic decrease in waiting time at MOH

[21] Since the median value of the actual cost of medicine at all the facilities is zero, the predicted current probability is evaluated at 0.5 colones.

hospitals, from 120 minutes to 30 minutes, would increase the number of patients turning to MOH hospitals by a meager 1.06 percentage points. Both of these elasticities, like the two price elasticities analyzed above, are very low; for the most part, people's selection of health care provider is relatively insensitive to changes in the four characteristics of the care assessed in this study (monetary price, cost of medicines, waiting time and travel time). Table 2-5 shows all of the own-elasticities and cross-price elasticities of the probability of selecting a particular provider. With one exception, all of these elasticities are low. The exception is waiting time elasticity; people are most sensitive to changes in the waiting time at MOH facilities, and particularly at units/posts.

If the average waiting time at a unit/post could be reduced to one- quarter of its present size, from 2 hours to one-half hour, it would result in a 48 percent increase in the number of people selecting a unit/post for their health care. The percentage of the urban, non-ISSS market choosing an MOH unit/post would increase from 6.39 percent to 9.46 percent. This increase would be drawn from all three of the other provider types in this market segment. The smallest portion of the increase (2 percent) would be drawn from MOH hospitals, and another 7.5 percent would formerly have selected private sector providers. The vast bulk of the increase in persons using units/posts (91 percent) would come from people who previously would not have entered the formal health care market at all, but instead would have self-treated. Among the urban, non-ISSS beneficiary market, reducing waiting time at these "front-line" facilities would be the most effective way to increase access to care.

3.2.3 The rural market segment

Maximum-likeliohood estimates of the multinomial logit model for outpatients in rural areas are presented in Table 3-2. The coefficients of user fees, waiting time and travel time are all negative (though not statistically significant) implying that the probability that persons in rural areas will seek care outside the home is negatively influenced by these economic considerations. As the level of any of these 3 variables increases, the probability of obtaining formal care falls.

There is evidence that persons in rural areas are more likely to turn to MOH hospitals as the severity of an illness (as measured by bed-days or the number of days the person stayed at home) increases. Furthermore, there is an even greater increase in the probability that persons will turn to the private sector as the severity of an illness (as proxied by the number of days the person stayed at home) increases. Given the absence of such a relationship in the unit/post equation, it may be inferred that MOH units/posts are turned to for the least serious illnesses, and that hospital and private providers are resorted to more frequently as the health problem becomes more serious and requires a greater illness resolution capability. This is further evidence that Salvadorans use the MOH pyramidal referral structure as it was intended.

The top portion of Table 3-3 shows how changes in individual and household characteristics affect the probability of choosing a particular source of care. The bottom portion of the same table shows how changes in economic considerations related to each possible provider selection affect the probability of choosing a particular source of care. The major findings are as follows:

Age: A Person's age has a negative effect on the decision to seek care. In particular, younger persons who report being ill are relatively more likely to seek formal care. Age also affects the choice of provider. Younger persons demonstrate a marked preference for MOH health unit/posts, while older persons have a decided preference for private providers.

Sex: Males are more likely to self-treat than are females. Among persons choosing a formal care

provider, women prefer MOH facilities.

Income: Persons living in wealthier households seek more formal care, and are more likely to choose a private sector provider.

Work status: Persons who are working are more likely to treat themselves.

Education: A person's level of education is positively related to the probability of his/her self-treating. Among those choosing a formal care provider, as the education level of the person increases the probability of his/her going to a private sector provider increases.

Monetary price elasticities of the probability choice are presented in Table 3-4. All of the elasticities, own- and cross-price, are low, and all three of the different provider types are substitutes for one another. The table below quantifies the impact of a five-fold increase in the average price of an MOH hospital consultation fee on self- reported ill ruralites' choices of provider. As can be readily seen, only a small percentage (1.2 percent) of persons change their behavior. Most of those who do, however, are forced out of the formal market by the price increase.

In the next table, the impact on provider choice of a five-fold increase in the user fee of MOH units/posts is quantified for this rural market segment. While the probability of choice is more sensitive to changes in the price of units/posts relative to hospitals, the monetary price elasticity is very low. Only 2.06 percent of persons change their behavior in response to this dramatic increase in the price of units/posts. Just as in the case of the hospitals, here too, most of the increase (94 percent) is in the number of persons who, subsequent to the price hike, do not enter the formal care market.

- The Impact on Choice of Provider in the Rural Market Segment of an Increase in the Average MOH Hospital's Consultation Fee from 2 to 10 colones

Table 22

CHANGES IN PROVIDER CHOICES RESULTING FROM AN INCREASE IN RURAL HOSPITAL USER FEES FROM 2 TO 10 COLONES

	Initial Choices		Subsequent Choices
MOH Hospital	100	decrease of 35	65
MOH Unit/Post	177	increase of 2	179
Private	108	increase of 1	109
Self-Treat	2618	increase of 32	2650
TOTAL	3003	35 persons (1.2%) changed their choice of provider	3003

- The Impact on Choice of Provider in the Rural Market Segment of an Increase in the Average MOH Unit/Post's Consultation Fee from 2 to 10 colones.

Table 23

CHANGES IN PROVIDER CHOICES RESULTING FROM AN INCREASE IN RURAL UNIT/POST USER FEES FROM 2 TO 10 COLONES

	Initial Choices		Subsequent Choices
MOH Hospital	100	increase of 2	102
MOH Unit/Post	177	decrease of 62	115
Private	108	increase of 2	110
Self-Treat	2618	increase of 58	2676
Total	3003	62 persons (2.06%) changed their choice of provider	3003

4 Total MOH price elasticities of demand

Total price elasticity consists of the total impact of a change in price on the quantity demanded. As already noted, the demand for curative health care is a sequential decision-making process. Once an individual becomes ill or has an accident, the individual must determine what to do about it, whether and where to seek care. The monetary and time prices that an individual must pay in order to obtain care are hypothesized to influence that decision. By extension, a change in the price of one or more of the provider options available is likely to affect that decision. How sensitive individuals' choices are to price changes is termed the price elasticity of the probability of selection.

If an individual has entered the formal market and seen a provider, a second decision must be made: How much care, how many consultations, should he/she obtain? Again, the monetary and time prices of different providers is assumed to influence this decision, and a change in the price of one or more of the provider options available, is likely to affect that decision. How sensitive individuals' choices of the level of care they will receive is termed the price elasticity of the quantity demanded. Total price elasticity is the total impact of a change in price on the number of consultations of a particular provider type demanded, which is the outcome of the changing probability of selecting that provider together with the change in the level of use of that provider. The discussion turns now to an analysis of the total elasticity of demand for MOH providers.

The table below presents the monetary price elasticities of demand in each of the three market segments, dervied from the Tobit regression estimates of the quantity of consultations demanded, conditional upon selection of the particular identified provider type.

Table 24

MONETARY PRICE ELASTICITIES OF DEMAND CONDITIONAL UPON SELECTION OF THE IDENTIFIED PROVIDER TYPE

	ISSS	Private	MOH Hospital	MOH Unit/Post
Urban, ISSS	---	-0.0113		
Urban, Non-ISSS		-0.0100	-0.0019	-0.0082
Rural		-0.0365	-0.0154	-0.0010

The monetary price elasticities are all very small; i.e., changing the monetary price of consultations has only a very small impact on the quantity of consultations demanded of any of the provider types in all market segments.

The table below presents the predicted total impact on the quantity of MOH curative outpatient consultations services demanded resulting from an increase in the average consultation fee from 2 to 10 colones. (Only the own-price elasticities are analyzed here.) The base for these estimates is the number of persons in each of the market segments; for the non-ISSS beneficiary market n=3838, for the rural market n=3003.

Table 25

ESTIMATED TOTAL IMPACT ON THE QUANTITY OF SERVICES DEMANDED FROM MOH PROVIDERS OF AN INCREASE IN THE AVERAGE CONSULTATION FEE FROM 2 TO 10 COLONES

At Initial Price of 2 Colones				After Price Increase to 10 Colones		
Facility	Number of Persons	Average Consultations per Person	Total	Number of Persons	Average Consultations per Person	Total
In the Urban, Non-ISSS Beneficiary Market Segment						
MOH Hospital	78	1.033	81	53	1.026	54
MOH Unit/Post	245	1.091	268	166	1.0491	174
In the Rural Market Segment						
MOH Hospital	100	1.015	102	65	0.946	61
MOH Units/Posts	177			115		

Evaluated between 2 and 10 colones, the total (arc) price elasticities of demand for urban residents are: 0.083 for MOH hospitals and 0.088 for MOH units/posts. The total price elasticity of demand for rural residents is 0.1 for MOH hospitals. Unfortunately at the time of this writing, rural residents' predicted number of consultations at MOH units/posts was not available, which precluded calculating this total price elasticity.

As is evident from the table, the vast majority of the impact of the fee hike is associated with changes in the number of persons choosing the particular provider type, with changes in the average quantity of services demanded of each person in the market accounting in all instances for less than 10 percent. Thus, the primary impact of an increase in the price of MOH consultations is to drive persons entirely out of the formal market (most of whom now self-treat), but again, the magnitude of the elasticity is very small. A relatively small proportion of persons change their care-seeking behavior in response to even the very substantial price inceases which have been simulated here.

III FINDINGS AND RECOMMENDATIONS

1 Summary of findings

The focus here is on the findings related to the MOH. The discussion will emphasize the urban, non-ISSS beneficiary and the rural market segments. First we juxtapose the findings of these two market segments.

The determinants of choosing whether or not to self-treat are similar in these two market segments. Being male, poor, and old are all positively related to choosing to self-treat in both markets, although the magnitude or importance of the relationships varies considerably. A fixed increase in income, for example, results in a larger reduction in self-care in rural areas than it does in urban areas, suggesting that income is a much more important barrier to access to care in rural areas. This is not surprising in light of the substantially lower level of average per capita income in rural areas vis-a-vis urban areas: 717 versus 387 colones, respectively. Notwithstanding, the income elasticity of choosing self-care is not large.

There are 5 economic variables--income, monetary price of the consultation, monetary cost of medicines, travel time price and waiting time price--for each of 3 different formal provider equations in each of 3 different markets. All 45 of these economic variables, with the single exception of waiting time in the MOH unit/post equation within the rural market segment, have been found to be inelastic and generally highly inelastic. It must be concluded that economic considerations do not play a major role in shaping people's decision about where to obtain health care.

The role of individual or household attributes as determinants of selecting a private provider, are all qualitatively the same in both of these two market segments. In both market segments, age, income, education and being male are all positively related to choosing a private provider.

The role of only one of the individual characteristics as a determinant of self treatment varies by market segment. Education plays a qualitatively different role in rural vis-a-vis urban areas. In rural areas, increasing education is positively associated with self-care, whereas in urban areas it is negatively associated.

Similarly, in the case of selecting an MOH unit/post, only one household characteristic, income, plays a fundamentally different role in the rural and urban market segments. Whereas in the rural area, increasing income results in an increase in the probability of selecting a unit/post relative to self-care, in the urban market it results in a decrease. In urban areas, among persons who are not ISSS beneficiaries, only the poorest segments use MOH units/posts. It may be that the MOH does a good job in its practice of price discrimination and that the very poor in urban areas not only are not charged for care, but may also be more likely to receive medicines free of charge, which they might not otherwise be able to afford. As their income increases they may be better able to "afford" self-care, i.e., to purchase medicines, and opt to avoid the other outlays associated with receiving care the unit/post (these other outlays consisting of the fee for the consultation, and probably more importantly the associated waiting and travel time prices).

It is only in the selection of an MOH hospital that the role of individual or household characteristics varies substantially across the rural and urban markets. In the rural areas, increasing education and income are associated with an increase in the probability of selecting an MOH hospital, whereas as age increases, people are less likely to choose the hospital (being more likely to self-treat or to choose a private provider). In contrast, in the urban market, the direction of all three of these relationships is reversed. In rural areas, care obtained at a hospital is regarded as a substitute for that obtained at a unit/post; it is an either/or decision, probably owing in large part to the travel-related considerations. In urban areas, in contrast, people are more

likely to go first to the unit/post and to regard the hospital as a complementary source of care to be turned to if and when satisfactory results are not obtained at the unit/post.

1.1 Key findings

1) Many communities in El Salvador are effectively without Primary Health Care coverage, including rural *cantones* as well as marginal urban communities. Within the issue of coverage are included travel time to a health facility, which currently averages more 1 hour in rural areas, and the absence in many communities of a first-line health care provider -- health promoters, midwives, nurse or nurse-practitioner at the health post -- who can resolve health problems at the community level.

2) The current system for the delivery of basic health services is inappropriate for achieving universal coverage of Primary Health Care.

3) There is inadequate capacity at the local level for the delivery of high quality basic health services. Inadequacies are found in the areas of appropriately trained personnel, appropriate and well-maintained equipment, personnel incentives, management systems, and a weak system of referral and support between promoters and the next level of community health -- skilled personnel at health posts and units.

4) Community members do not, in general, value primary health care. Community members tend to under-value the role that health promoters and midwives can play in the provision of basic health care, and tend to over-value the role of medication and physicians.

5) Pharmacies are not included in Primary Health Care strategies, and consequently there is a tendency among pharmacy proprietors to emphasize treatments that are the most commercially profitable, rather than those that might be the most medically appropriate and would support the PHC model.

6) Residents of marginal urban communities experience similar lack of access to quality basic health services as their poor rural counterparts.

7) The MOH system is being used as a pyramidal, referral system with "front-line" facilities (units and posts) being used to resolve relatively minor ailments, and persons going to MOH hospitals for treatment of more severe problems.

8) When the price of MOH units/posts increases these facilities are less likely to be choosen for care and the probability of using an MOH hospital also falls; i.e., MOH hospitals are complements of units/posts. This suggests that persons using MOH units/posts also use hospitals. This finding, coupled with the fact that the probability of using the hospitals falls less than the probability of using the unit/post as the latter's price increases, implies that the hospitals are being used as intended, as the source of care which is turned to when the "front-line" facilities prove to have inadequate ability to resolve the problem (or when the person has a more serious problem).

9) In urban areas, but not in rural areas, MOH units/posts are inferior goods; i.e., as the average per capita household income of an individual increases, the individual is less likely to choose to visit a unit/post and turns either to an MOH hospital or the private sector. In this instance, higher income does not increase the probability that the individual will choose the unit/post by virtue of being relatively less constrained by income. Rather, the individual opts to purchase higher quality care.

10) Hospital price elasticities of probability of selection are greater than unit and post elasticities, and units and posts are a substitute for hospitals. Thus if there are equal price increases in MOH hospitals, units and posts, it will result in the decreased probability that people will go to MOH hospitals, and the increased probability that people will go to units and posts. Setting equal or relatively higher prices in all MOH facilities, therefore, will discourage the by-pass phenomenon.

11) Ruralites' elasticities are generally greater than urbanites', and ruralites are more likely to self-treat illness. Equal increases in the prices of MOH care in rural and urban areas will result in proportionately more ruralites relative to urbanites changing their selection of provider type, and proportionately more ruralites relative to urbanites being pushed out of the formal care market (i.e., self- treating). This would suggest that to have the same impact on the probability of entering the formal care market and on the selection of a particular type of provider, that urban price levels (or changes therein) should be relatively higher than rural price levels.

12) The principle impact of a change in the monetary price on the quantity of services demanded is on changes in the decision of provider type, and not on the quantity of services demanded given that the person has decided to enter the formal market. The choice of provider accounts for more than 90 percent of the change in the demand for services.

2 Policy implications and recommendations - *community perceptions*

Community-based care

It is clear that Salvadorans, like people everywhere, are desirous of improved health status, and greater access to high quality health services. Clients want good care at a reasonble price, without having to travel too far or wait too long upon arrival. Health promoters should have the capacity not only to teach some preventive health measures; they should also be trained and provided with equipment and medications to treat some of the most common illnesses that they encounter in their communities. There should be one skilled health promoter per community of xxx people (the actual number of people in each community will be calculated during up-coming strategic planning and program design sessions, when issues such as available resources and costs of these programs can also be considered).

Hierarchy of health promoters

Community-based health workers need to be able to quickly identify, diagnose and treat a range of symptoms that could threaten the life of the individual or community.[22] It would be useful to institute a kind of hierarchy of health promoters. In such a system the more skilled promoters or some variation of lay health worker would provide more of the triage and basic care, while less skilled workers conduct some of the surveillance, latrine supervision, and referrals. The more skilled promoter would work closely with a nurse or nurse-practitioner at the health post and in the communities, conducting some of the more complex community-based health education, such as how to differentiate between mild and serious symptoms, and providing some basic diagnosis and treatment. The less skilled health worker would be responsible for more of the information gathering, surveillance, and more basic preventive health activities such as personal hygiene and sanitation. These different kinds of promoters would, of course, receive different kinds of training and supervision, but would work closely with each other, providing a network or teamwork approach to community-based health care.

[22] This will require not only a change in emphasis of the promotor training programs, but also a change in the norms and regulations that currently prohibit promotors from doing many basic diagnostic and treatment activities.

Re-distribute health promoter time for community activities
The distribution of health promoter time spent on each of the community health activities should be altered to emphasize maternal health, peri-natal health and child survival, in order to improve overall community health outcomes. Health promoters should emphasize the importance of pre-natal examinations to ensure the health of the pregnant woman and her un-born baby, and to identify potentially difficult deliveries. Growth monitoring, control and treatment of of diarrheal and respiratory disease should receive more attention from health promoters in their community presentations. The midwives who have been trained by the Ministry of Health should be encouraged to market their services in their communities, perhaps accompanying the promotors on their household visits from time to time. More midwives should be trained and providing pre-natal and delivery services in underserved urban and rural areas.

Improve health promotor supervision
As mentioned above, supervision of health promoters remains weak. In order to maximize the potential of the health promoter program, systems, guidelines, training of supervisors and an explicit set of goals and expectations should be developed. It would be extremely useful for the Community Health and the Health Education divisions of the Ministry of Health to work together with the PROSAMI project as well as with representatives from NGOs not associated with PROSAMI to improve and increase utilization of norms, guidelines and materials, and a training program for supervision of community health workers. Supervision of promoters should include individualized supervision and on-site training for health promoters; periodic refresher courses for all health promoters working in a *municipio* or *departamento*; focused 1-day small group seminars with practice sessions, up-dates and follow-up. The training program for supervisors should include basic supervision techniques such as: instruction in how to teach adults through interactive learning techniques; instruction in "on-site" training; guidance in how to provide helpful, constructive criticism; development of systems for follow-up; techniques for encouraging community participation; and "marketing" of the health promoter program.

Institute an effective referral system
The best, most cost effective way to improve access to health care will be to provide high quality, low cost basic health care services at least in each *muncipio*, if not every *canton* in the country. These health care services should be staffed full-time (minimum 8 hour day, with someone on call 24 hours a day) by a trained health care professional who can diagnose and treat a wide range of problems -- a registered nurse, nurse practitioner, maternal-child health technician or nurse midwife, with periodic visits (1 - 3 days per week) by a physician. The health units should be supported at the *caserio* level by health promoters, who will be responsible for community surveillance, education and outreach, and some treatment of basic problems that require immediate treatment. The community-based health units should also include a well-stocked, basic pharmacopeia available at a reasonable cost. It will also be very important to have in place a well-structured referral network between the community-based health units and the higher levels of care, with reliable institutional reception at the secondary or tertiary level. It would also be extremely beneficial to offer transportation to the referral site for the client when necessary.

Design and implement a system that has as its first priority the delivery of PHC
The health delivery system should be based on the provision of basic health care services at the community level, and all services should be designed to support that system. The support system includes the referral network mentioned above, and should also integrate the services of skilled nurse-midwives for pre-natal care, attended deliveries, and post-natal care.

The government should be responsible for assuring the financing of universal coverage of PHC
In particular, the government should be responsible for assuring universal access to the five components of

maternal and child health care, as detailed in the final ANSAL report. Priority should be given to the 50% of the population that lives at or below the poverty line.

Management of the PHC and referral system should be based at the local level
In order to ensure that the PHC and referral system respond to local needs and requirements, local organizations at the community level should be contracted to manage the delivery of PHC. These organizations could include a consumer cooperative, a local community health committee, an NGO already functioning in the community, or some other kind of organization. Training in basic management, planning and supervision will be necessary to create or upgrade skills at this level.

Transfer the authority to select, contract, pay and supervise trained health promoters and midwives for the provision of integrated maternal and child health services to the community level (through organizations such as those mentioned in 3.1 above).

Improved community health education to improve understanding and appreciation of PHC
The first way to increase peoples' appreciation of PHC services will be to improve the capacity of the PHC system to address peoples' health needs. The second step in increasing utilization of PHC will include community education that emphasizes the importance and utility of basic health care provided by community level health personnel.

Marketing of community health services
Rather than follow the "If we build it, they will come" model of health care service provision, proponents of community based health services should develop and implement programs for marketing community health services. These programs could include education for adults and children about some basic preventive and curative health measures to take at the household or community level. Media campaigns, community events such as a "teatro campesino" in which community leaders and health workers include messages about health problems and how to address them can be very effective. Health promoters can also play an important role in basic community strengthening through activities such as some kind of community fiesta organized by the health promoters. Activities such as this let community members see the health promoter as a community organizer and provide a forum through which the community can learn what the health workers can do, who they are, what kind of training and credentials they have, what kinds of problems they can treat or diagnose, and generally provide some publicity for the community health promoter program.

Education to distinguish between mild, severe and acute symptoms
Problems arise when community members and community health workers do not (can not) distinguish between symptoms that are genuinely everyday, mild, and non-threatening (a cold or indigestion), and those that may pose a threat either to the life of the ill person (such as a breech birth or acute watery or bloody diarrhea), or to the community at large (such as tuberculosis or cholera). Average Salvadorans definitely have a concept of mild and severe, and make their own distinctions between them all the time when deciding how to treat different symptoms. Health education programs should play into this base of understanding, and build on it by teaching specific serious symptoms to look for that could be danger signs. Community health workers (promoters) should also have training both in content and teaching methodology for conducting community health education. Programs should aim at teaching community members how to distinguish between everyday symptoms, that can be effectively treated with locally available remedies, and extraordinary illnesses that require some kind of professional care, and where to go to receive that care.

Include pharmacists in the PHC system, by providing incentives for them to stock and dispense essential drugs
The government and the local community health committee should establish agreements with pharmacists

relating to the purchase and dispensing of essential drugs that support PHC. The government and local community health board should agree on what the essential drug list should include, based on the minimum package of PHC services.

Provide basic health services in peri-urban "marginal communities"
As seen from the above analysis, poor people living in peri-urban marginal communities tend to consume health services in patterns more akin to their rural counterparts than to their middle class urban counterparts. This demonstrates that access to health services is more a function of socio-economic status, and other factors (detailed above) than merely geographic proximity to health services. In light of this information, it is evident that much more emphasis will need to be placed on providing basic health services to poor people living in marginal communities in and around San Salvador.

3 Key findings and recommendations - *demand for health services*

1) Rural users of units and posts have, on average, a total medical visit expenditure that is one-third again higher than that of their urban counterparts, despite the fact that ruralites' incomes are only one-fifth as large. Hence, while the average urbanites' outlays for medical care in the past two weeks amounts to 0.3 percent of their household income, it comes to 2.2 percent of ruralites' household income.

   1.1) At the same time, ruralites are far more likely to cite economic reasons for not seeking care. Ruralites who did not obtain a medical consultation and cited economic barriers from doing so, constituted 9.0 percent of ruralites who self-reported being ill. This is nearly double the proportions reported in the other geographic strata of the country; 5.7 percent of Metropolitan San Salvador residents who reported being ill, and 4.6 percent of the inhabitants of other urban areas.

2) The combination of user fee (consultation) and medicine costs (not always purchased at the same site of care) paid by users of MOH health units and posts constitute a sum that is considerably greater than the combined total paid by urbanites, and may constitute a substantial barrier to access to care for ruralites.

3) The higher price elasticities of ruralites vis-a-vis urbanites suggests that price increases in rural areas should be smaller than in urban areas, in order not to push relatively more ruralites out of the formal health care market as a result of increasing prices.

4) In all three of these market segments, the probability of going to a private provider increases for more serious problems (as indicated by their having stayed home at least one day in the previous two-week period). This relationship is also characteristic of ISSS beneficiaries, suggesting that all people, ISSS beneficiaries, as well as non-beneficiaries, regard the private sector as providing a higher quality of care.

5) As an ISSS beneficiary's income increases from 400 to 800 colones, the probability of the beneficiary choosing an ISSS provider falls. This reflects the fact that for ISSS beneficiaries, ISSS providers are an inferior good; as income rises they prefer to use more self-care, as well as more private providers.

6) In the urban and rural market segments, the behavioral changes prompted by proportionate increases in MOH hospital prices (400 percent) are very modest (more than 99 percent of the persons in these two market segments did not change their choice of a provider, including self-treatment), demonstrating that price elasticities in this market segment are very low, i.e., people's choice of provider in this market

segment is very insensitive to price changes. Increasing the average hospital outpatient user fee from 2 to 10 colones (while continuing to exempt indigents from payment) would result in a 5-fold increase in the hospitals' user fee revenues. These revenues would (given 1990 prices) annually yield an additional 12 million colones. This sum constitutes roughly 11 percent of the hospitals' cost of providing these same outpatient services (outpatient services consume 40 percent of total hospital operating costs according to Gomez, Clapp & Mayne, 1992, Volume I, page 38).

Hospital outpatient user fees have almost certainly increased in the four years since the REACH survey. It is unlikely, however, that the price elasticity of the probability of selecting an MOH hospital for care has changed much. Since the median value of the actual cost of medicine at all the facilities is zero, the predicted current probability is evaluated at 0.5 colones.[23] Thus a five-fold increase in current prices would yield substantially greater revenues than the 12 million colones estimated on the basis of four year old data. If the hospitals were assured of being able to retain control over this money it could be used to purchase additional drugs and other supplies, thereby increasing the quality of services provided. This, in turn, would probably result in making the price elasticity of demand/provider choice even more inelastic. This suggests that with adequate protection for indigents and preferrably a sliding scale, the price of hospital outpatient departments could be increased by considerably more than the five-fold hike analyzed here. The preferred method for implementing such a change would be to introduce a 10-fold price increase and to closely monitor utilization. Experience througout the world has shown that such a change can initially be expected to have a dampening effect on demand, followed by a gradual restoration to what can be considered the more permanent, long-term level of demand.

7) With one exception, all 45 of the elasticities analyzed in this report are low. The exception is waiting time elasticity; people are most sensitive to changes in the waiting time at MOH facilities, and particularly at units/posts.

If the average waiting time at a unit/post could be reduced to one-quarter of its present size, from 2 hours to one-half hour, it would result in a 48 percent increase in the proportion of people selecting a unit/post for their health care. The percentage of the urban, non-ISSS market choosing an MOH unit/post would increase from 6.39 percent to 9.46 percent. This increase would draw from all three of the other provider types in this market segment, but the bulk (91 percent) would consist of persons who previously would not have entered the formal health care market at all, but instead would have self-treated. Reducing waiting time at these "front-line" facilities would be the most effective way to increase access to care in the urban, non-ISSS beneficiary market segment.

[23] On the one hand there are probably more private sector provider substitutes available now, which would increase this elasticity. On the other hand, average incomes have increased fairly substantially, which would act to reduce this elasticity. In addition, the quality of services at MOH outpatient departments (particularly as measured by the availability of drugs and other supplies) has probably increased. The net effect of these various changes is probably such as to leave the hospital choice probability roughly the same as it was in 1989.

Table 1-1

DESCRIPTIVE STATISTICS
(PATIENTS WHO LIVE IN URBAN AREAS AND ARE BENEFICIARIES OF ISSS)

		ISSS	Private	Self-Care
Number of People	436 (100%)	99 (22.7%)	38 (8.7%)	99 (68.6%)
Variables	Mean (Std.Dev.)	Mean (Std.Dev.)	Mean (Std.Dev.)	Mean (Std.Dev.)
User fee (Col.)	1.45 (11.85)	0 (0)	16.63 (37.32)	0 (0)
Cost of medicine (col.)	3.20 (16.04)	2.25 (11.08)	30.87 (42.78)	0 (0)
Waiting time (min.)	25.40 (60.50)	93.13 (88.80)	48.76 (64.07)	0 (0)
Travel time (min.)	17.96 (75.54)	57.42 (123.46)	56.45 (135.75)	0 (0)
Age	37.29 (15.17)	37.53 (12.12)	33.03 (19.97)	37.76 (15.35)
Sex (1=Male)	0.47 (0.50)	0.41 (0.50)	0.45 (0.50)	0.49 (0.50)
Income[24] (two weeks)	974.57 (810.37)	815.54 (317.22)	1123.13 (843.43)	1004.76 (904.36)
Education [25]	2.30 (1.70)	2.66 (1.59)	2.11 (1.81)	2.21 (1.72)
Stay at home (1=yes)	0.08 (0.28)	0.19 (0.40)	0.16 (0.37)	0.04 (0.20)
Days in bed	0.42 (2.09)	1.37 (3.99)	0.42 (1.29)	0.10 (0.72)
Work (1=yes)	0.66 (0.47)	0.67 (0.47)	0.55 (0.50)	0.67 (0.47)
Respiratory (1=yes)	0.50 (0.50)	0.47 (0.50)	0.45 (0.50)	0.52 (0.50)
Digestive (1=yes)	0.17 (0.38)	0.22 (0.42)	0.18 (0.39)	0.15 (0.36)
Accident (1=yes)	0.05 (0.21)	0.10 (0.30)	0.03 (0.16)	0.03 (0.18)

[24] Out of 436 people, 249 reported income. These numbers are average income for those who reported income.

[25] 0: no education, 1: primary 1-3 years, 2: primary 4-6 years, 3: junior high school (tercer ciclo), 4:senior high school (bachillerato), 5:technical school, 6: university.

Table 2-1

DESCRIPTIVE STATISTICS
(PATIENTS WHO LIVE IN URBAN AREAS AND ARE NOT BENEFICIARIES OF ISSS)

		MOH-Hospital	MOH-Unit/Post	Private	Self-Care
Number of People	3839 (100%)	139 (3.6%)	176 (4.5%)	316 (8.28%)	3208 (83.6%)
Variables	Mean (Std.Dev.)	Mean (Std.Dev.)	Mean (Std.Dev.)	Mean (Std.Dev.)	Mean (Std.Dev.)
User fee (Col.)	1.62 (12.88)	2.82 (7.92)	1.83 (2.28)	17.48 (41.36)	0 (0)
Cost of medicine (col.)	3.67 (23.41)	11.29 (45.73)	4.28 (9.81)	37.28 (66.43)	0 (0)
Waiting time (min.)	16.98 (58.68)	139.05 (126.90)	153.72 (117.66)	59.54 (73.67)	0 (0)
Travel time (min.)	7.08 (45.08)	57.20 (72.24)	28.88 (93.15)	44.75 (119.79)	0 (0)
Age	26.55 (22.61)	28.71 (24.03)	18.39 (19.16)	29.41 (25.51)	26.62 (22.32)
Sex (1=Male)	0.43 (0.49)	0.36 (0.48)	0.43 (0.50)	0.43 (0.50)	0.43 (0.50)
Income[26] (two weeks)	716.95 (923.73)	309.15 (317.21)	1732.21 (2355.71)	1129.64 (1283.34)	663.14 (797.09)
Education [27]	1.26 (1.44)	1.08 (1.14)	0.79 (1.19)	1.56 (1.76)	1.26 (1.42)
Stay at home (1=yes)	0.07 (0.26)	0.19 (0.40)	0.13 (0.33)	0.20 (0.40)	0.05 (0.22)
Days in bed	0.24 (1.42)	0.47 (1.84)	0.70 (2.61)	0.69 (2.33)	0.16 (1.15)
Work (1=yes)	0.26 (0.44)	0.18 (0.39)	0.14 (0.35)	0.26 (0.44)	0.27 (0.45)
Respiratory (1=yes)	0.63 (0.48)	0.54 (0.50)	0.72 (0.45)	0.58 (0.49)	0.63 (0.48)
Digestive (1=yes)	0.21 (0.41)	0.26 (0.44)	0.31 (0.46)	0.22 (0.41)	0.20 (0.40)
Accident (1=yes)	0.04 (0.20)	0.15 (0.36)	0.04 (0.20)	0.05 (0.23)	0.03 (0.18)

[26] Out of 3839 people, 848 reported income. These numbers are average income for those who reported income.

[27] 0: no education, 1: primary 1-3 years, 2: primary 4-6 years, 3: junior high school (tercer ciclo), 4:senior high school (bachillerato), 5:technical school, 6: university.

Table 3-1

DESCRIPTIVE STATISTICS (PATIENTS WHO LIVE IN RURAL AREAS)

		MOH-Hospital	MOH- Unit/Post	Private	Self-Care
Number of People	3003 (100%)	95 (3.2%)	129 (4.3%)	120 (4.0%)	2659 (88.5%)
Variables	Mean (Std.Dev.)	Mean (Std.Dev.)	Mean (Std.Dev.)	Mean (Std.Dev.)	Mean (Std.Dev.)
User fee (Col.)	0.74 (5.04)	1.96 (3.08)	1.80 (2.41)	14.98 (20.20)	0 (0)
Cost of medicine (col.)	2.30 (15.67)	7.25 (21.30)	6.33 (28.79)	44.93 (54.41)	0 (0)
Waiting time (min.)	13.94 (57.71)	171.00 (171.74)	138.94 (105.79)	64.06 (71.89)	0 (0)
Travel time (min.)	8.20 (34.28)	73.59 (50.91)	55.00 (85.56)	87.88 (77.65)	0 (0)
Age	24.95 (21.77)	25.04 (23.02)	16.93 (17.32)	30.03 (24.19)	25.11 (21.72)
Sex (1=Male)	0.46 (0.50)	0.28 (0.45)	0.36 (0.48)	0.44 (0.50)	0.47 (0.50)
Income[28] (two weeks)	387.23 (335.06)	280.38 (195.21)	361.86 (149.95)	580.50 (480.10)	382.33 (332.56)
Education [29]	0.59 (0.92)	0.64 (0.90)	0.46 (0.80)	0.69 (0.96)	0.59 (0.92)
Stay at home (1=yes)	0.07 (0.26)	0.19 (0.40)	0.08 (0.27)	0.19 (0.40)	0.06 (0.24)
Days in bed	0.24 (1.38)	1.12 (3.14)	0.20 (0.96)	0.52 (1.43)	0.20 (1.28)
Work (1=yes)	0.22 (0.42)	0.07 (0.26)	0.13 (0.34)	0.19 (0.40)	0.24 (0.42)
Respiratory (1=yes)	0.65 (0.48)	0.60 (0.49)	0.66 (0.48)	0.51 (0.50)	0.66 (0.47)
Digestive (1=yes)	0.26 (0.44)	0.28 (0.45)	0.33 (0.47)	0.23 (0.42)	0.26 (0.44)
Accident (1=yes)	0.04 (0.18)	0.06 (0.24)	0.04 (0.19)	0.03 (0.18)	0.03 (0.1)

[28] Out of 3003 people, 503 reported income. These numbers are average income for those who reported income.

[29] 0: no education, 1: primary 1-3 years, 2: primary 4-6 years, 3: junior high school (tercer ciclo), 4:senior high school (bachillerato), 5:technical school, 6: university.

ANNEXES

Annex 1

PARTIAL LIST OF HOME REMEDIES
COLLECTED NOVEMBER 1993

Symptoms	Treatment
Stomach aches and mild diarrhea	• Té de Hojas de Juanilama[30] • Horchata de chichipinse • Té de cascara de mongollano, cascara de maquilishuat y raiz de amarillo • Té de cascara de caulote • Agua de manzana rosa
Cough	• Té de flor de tihuilote • Agua de fruta de caulote • Encino con piño • Agua de eucalipto con canelas de izote
Flu "Gripe"	• Agua cocida con hoja del aire, flor de muerto, cascara de guarumo y cascara de jiote • Agua de manzanilla y eucalipto • Agua de manzanilla con aspirina y grasa de gallina
Skin Irritations, Eruptions and Rashes	• Savia de chichinguaste, masa de hojas de chichinguaste • Baños de escoba amarga y bervena • Baños de copayos de San Andres
General Aches and Pains	• Masa de florifund y talia • Agua de altamisa y limonada
Earache	• Gotas de hoja de piña de cerco
Arthritis	• Masaje con kerosina
To Calm the Nerves	• Té de zacate, limon y naranja agria
Fever	• Café amargo con limón tibio

[30] The ubiquitous Juanilama bush seems to be used for treating all sorts of problems, particularly gastro-intestinal disorders, body aches, and general malaise.

Annex 2

ENCUESTA SOBRE ACTITUDES Y PERCEPCIONES DE SERVICIOS DE SALUD

Sección I. Información General

1. Fecha_____

2. a) Edad del informante _____ b) Sexo _____

3. Ocupación /Actividad _____

4. Departamento _____ Municipio _____

Rural_____ Urbana _____

5. Número de personas que viven en este hogar/casa _____

6. Percepción personal de su estado socio-económico

_____ pobre
_____ medio pobre
_____ medio
_____ medio alto
_____ alto

6a. Percepción del encuestador/a del estado socio-económico, en comparación con la comunidad en general, y, si es diferente de la opinión del informante, ¿Por que?

_____ pobre
_____ medio pobre
_____ medio
_____ medio alto
_____ alto

7. Nivel educativo del informante y de su pareja

Informante _____ Pareja _____

a) 1-3 años
b) 4-6 años
c) 7-9 años
d) Bachiller
e) Técnico
f) Universitario
g) Otros

Sección II.

Perfil de los servicios de salud utilizados

1. ¿Cuando fue la ocasión más reciente en que alguien de su familia tuvo un problema de salud? _____

2. ¿Cuál fue el problema? (favor de contarnos el nombre de la enfermedad y los síntomas) _____
_____

2.a. ¿Quién en su familia se enfermó?_____

2.b. Edad de la persona que se enfermó _____

2.c. Sexo de la persona que se enfermó _____

3. ¿Cuál fue **la primera cosa** que hizo cuando esa persona se enfermó? (encuestador, lee la lista, y chequee lo que aplique)

_____ Preparar un remedio de yerbas en casa
_____ Preparar un atole
_____ Consultar al curandero/a
_____ Consultar al Yerbero/a
_____ Consultar a la Partera
_____ Ir a la farmacia/Botica
_____ Consultar al Médico (¿dónde?)
_____ Consultar a la Enfermera (¿dónde?)
_____ Consultar al Ayudante de Salud (¿dónde?)
_____ Consultar al Promotor de salud (¿dónde?)
_____ Ninguno de éstos
_____ Otros (especifique)

4. ¿Porqué decidió hacer esto? (pregúnteles sobre los asuntos de costo, hora de atención, como es el tratamiento que reciben, distancia que tiene que viajar, tiempo que tiene que esperar, etc.)

_____
_____

5. ¿Después de hacer esto que pasó?

_____
_____

6. ¿Cuál fue la cosa siguiente que hizo?

_____
_____

6.a ¿Por qué decidió hacer esto?_____

_____

7. ¿Y qué paso?

_____

8. ¿Cuál fue la última cosa que hizo en relación a esa enfermedad?_____

_____

8.a ¿Por qué decidió usted hacer esto?

_____

_____

9. ¿Cuál fue el resultado de lo que hizo en relación a esa enfermedad?_____

_____

10. Ahora queremos discutir la ocasión **más reciente** en que alguien en su casa se enfermó con algo muy serio/agudo/grave

10a. Cuál fue el problema? (Síntomas y nombre de enfermedad)

_____

_____

11. Edad y Sexo de la persona que se enfermó :
Edad _____ Sexo_____

12. ¿Cuál fue la primera cosa que hizo cuando esa persona se enfermó?

_____ Preparar un remedio de yerbas en casa
_____ Preparar un atole
_____ Consultar al curandero/a
_____ Consultar al Brujo/a
_____ Consultar al Yerbero/a
_____ Consultar a la Partera
_____ Ir a la farmacia/Botica
_____ Consultar al Médico (¿dónde?)
_____ Consultar a la Enfermera (¿dónde?)
_____ Consultar al Ayudante de Salud (¿dónde?)
_____ Consultar al Promotor de salud (¿dónde?)
_____ Ninguno de éstos
_____ Otros (especifique)

13. ¿Por qué decidió hacer esto? (pregúnteles sobre los asuntos de costo, hora de atención, como es el tratamiento que reciben, distancia que tiene que viajar, tiempo que tiene que esperar, etc.)

_____

_____

14. ¿Después de hacer esto que pasó?

_____

15. ¿Cuál fue la cosa siguiente que hizo?

_____

15.a ¿Por qué decidió hacer esto?_____

_____

16. ¿Y qué pasó?

_____

17. ¿Cuál fue la última cosa que hizo en relación a esa enfermedad?_____

_____

17.a ¿Por qué decidió usted hacer esto?

_____

_____

18. ¿Cuál fue el resultado de lo que hizo en relación a esa enfermedad?_____

_____

19. Hay alguien en su casa que ha recibido atención de alguno de los siguientes tipos en los últimos dos años? (hay que poner sí
o no en el espacio a la izquierda. Si contesta sí, preguntarle dónde se recibió el servicio, el costo, etc...)

Servicio	Dónde	Costo	Cómo se Transporte	Tiempo para viajar
Vacunacion hijo # 1 hijo # 2 hijo # 3				
Consulta pre-natal				
Control de Niño Sano				
Planificación Familiar				
Detección de Cáncer cérvico-uterino				
Detección de Enfermedades Transmitidas Sexualmente				
Otros (especifique)				

PARA LOS ENCUESTADORES
Códigos para llenar el cuadro

Costo de servicio

A. 0-1 colón
B. 2-4 colón
C. 5-9 colón
D. más de 10 colones

¿Cómo viaja hasta el lugar de consulta?
A. a pie
B. en carro
C. en camioneta, bus
D. lancha, panga, canoa
E. caballo o mula
F. carreta o palanca
G. motocicleta
H. otros (especifique)

¿Cuánto tiempo para el viaje al servicio de salud que utilizó?

A. 5-10 minutos
B. 15-30 minutos
C. 30-45 minutos
D. más de una hora

Sección III. Percepción General de los servicios de salud

1. ¿Cuáles son los servicios para curarse que existen en su comunidad? (Hay que chequear todos de los que apliquen)

_____ Yerbas en el jardín
_____ Curandero/a
_____ Yerbero/a
_____ Partera
_____ Brujo/a
_____ Promotores de salud
_____ Hospital
_____ Puesto de Salud (clínico)
_____ Consultorio médico particular
_____ Consultorio/clínico _____(ONG en esta comunidad)
_____ Farmacia /Botica
_____ Otros (especifique)

2. ¿Cuándo hay problemas de enfermedades, en su casa, a quienes recurre con mayor frecuencia? Y ¿Por que?

_____

(Encuestadores, aquí estan los códigos para el "por qué"...)

¿Por qué utiliza usted y su familia esta forma de curarse? -- mencionar las 3 más importantes, en orden de importancia. (marque 1,2,3,)

A.	buen servicio	____	____	____
B.	bien ubicada	____	____	____
C.	bajo costo	____	____	____
D.	no hay que esperar	____	____	____
E.	no hay que pagar	____	____	____
F.	buen trato para el personal	____	____	____
G.	tiene el nivel de atención mas alto	____	____	____
H.	siempre tiene medicamento	____	____	____
I.	horas de atención adecuadas	____	____	____
J.	dan buena medicina	____	____	____
K.	es el único servicio que conozco	____	____	____
L.	siempre la he (hemos) utilizado	____	____	____
M.	conozco personalmente al proveedor en esta lugar	____	____	____

N. porque me gusta _____ _____ _____
O. otro _____ _____ _____ _____

4. Le voy a nombrar varios lugares y personas que podrían ayudarle si tuviera una enfermedad en su casa. Po favor dígame los que **NO UTILIZA**, y el por qué (marque las 3 causas más importantes para cada servicio en orden de importancia). [Entrevistador: coloque la letra que corresponda a la causa en el espacio previo a la unidad]

_____	_____	_____	Hospital
_____	_____	_____	Centro de Salud
_____	_____	_____	Unidad de Salud
_____	_____	_____	Puesto de Salud
_____	_____	_____	Consultorio Institucional
_____	_____	_____	Consultorio Médico Particular
_____	_____	_____	Consultorio de _____ (ONG en esta comunidad)
_____	_____	_____	Farmácia/Botica
_____	_____	_____	Curandero/a
_____	_____	_____	Yerbero/a
_____	_____	_____	Yerbas en el jardín
_____	_____	_____	Partera
_____	_____	_____	Promotor de Salud
_____	_____	_____	Otros (especifique)

Razones para **NO USAR** cada uno de los servicios que no usa:

a. muy lejos
b. muy caro
c. hay que esperar mucho tiempo
d. no es apropiado para los problemas de salud de mi familia
e. horas no convenientes de atención
f. no sé dónde está
g. no me gustan los servicios que dan
h. no me gusta como es el lugar
i. nunca tiene medicamento ni material suficiente
j. no hay médico
k. el personal no me trata bien
l. los tratamientos no funcionan; no son efectivos
m. cuando se necesita el servicio, nunca hay nadie
n. los miembros de la familia tiene buena salud; nosotros no necesitamos servicios de salud.
o. los servicios que se ofrece no son apropiades para nuestros problemas
p. otros_____(especifique)

5. Si usted tuviera una emergencia de salud en la familia, por ejemplo, un niño con fiebre alta y convulsiones, que haría? Y ¿Por que?

_____
_____
_____

_____

6. En su opinión, ¿Cuáles son **los problemas de salud (no necesariamente enfermedades** -- pueden ser problemas de desnutricion; de falta de agua potable; falta de un buen camino; lo que sea) más serios (importantes) en su comunidad?

_____

_____

7. En su opinión ¿Que se necesita para mejorar las condiciones de salud en su comunidad?

_____

_____

8. ¿Tiene usted alguna pregunta o comentarios sobre esta encuesta?_____

_____

Muchas gracias por su tiempo.

Annex 3

A more detailed discussion of econometric issues and the methodological approach

1 Measuring Prices

In estimating a model for choosing health care providers, it is necessary to have some information about provider characteristics, such as user fee, the cost of medicines, traveling time, and waiting time, for each available health facility, regardless of the choices actually made. The definition and measurement of prices in the health care market pose difficult theoretical and empirical problems. The problems arise because health care services vary in quality and, thus, their individual prices are not easily comparable.

Two main schools of thought regarding appropriate pricing can be found in the empirical literature on health care demand. Researchers such as Akin et al. (1986) conducted health facility surveys and used the provider-reported price of a visit for each type of health service. Such a price is a fixed datum which is independent of patient characteristics. Other researchers such as Gertler et al. (1987), Bitran (1991) and Gertler and van der Gaag (1990), on the other hand, use self-reported user fees as prices from the household survey. Gertler et al. (1987) and Bitran (1991) use as price the predicted price from an estimated hedonic price equation with individual and health care provider characteristics as independent variables. First, individuals are grouped by the health care provider they chose. Then, within each group, three separate linear regressions are run for price, travel, and waiting time using individuals, and location variables as regressors. The resulting estimates are used to impute price, travel, and waiting time values to each individual for both the option taken and those not taken.

In order to correct for the selectivity bias arising from the fact that price, travel, and waiting time are only observed for the choices made, selectivity bias correction coefficients are computed for each individual and choice using a conditional expectation correction method described in Dubin and McFadden (1984). Without correction for self-selection, the coefficients of the linear regressions are biased. Gertler and van der Gaag (1990) replace the missing prices with median expenditures based on the experiences of other users.

The method that uses provider-reported prices has its advantages and problems. One advantage is that the survey work is facilitated considerably by not having to gather price information from consumers. Also, recall problems are avoided. The disadvantages are important, however, and may outweigh the advantages. First, it is well known that some health care providers charge different prices to different patients, often in an ad-hoc manner. Recording of a single price thus ignores the presence of such price discrimination. Second, some providers have complex price schedules, with various prices for different types of health problems and with prices varying depending on the types and amounts of drugs and other supplies provided to the patient. Gathering this information as well as the criteria that would allow the analyst to assign the appropriate price to users can be very difficult. Third, some consumers have health insurance that allows them to receive free care, or care at reduced prices from certain providers. Provider-reported prices would thus have to be adjusted based on insurance information provided by users. The self-reported prices avoid these problems.

In El Salvador, no health facility survey data are available; therefore we have had to rely on household level expenditure data. For each health facility, we use the median reported expenditure for its health reagion as the expected price of the health care provider that the individual faces as an option, and the median reported traveling time and waiting time for its city as the expected time of that health care provider.

Only household level expenditure data were available in this study. For each health facility, the median reported expenditure in the same health reagion was used as a proxy to measure the expected price of the

health care provider that the individual faces as an option, and the median reported traveling time and waiting time for its city as the expected time of that health care provider.

Empirical Specification

Our study focuses on the demand for medical care in both urban and rural areas. Patients face a different set of health services depening on where s/he lives or whether or not s/he is beneficiary of ISSS. For example, if a patient lives in an urban area and is not a beneficiary of ISSS, his or her choice of health services will be Ministry of Public Health (hospital or health unit/post), private or self-care. ISSS will not be an option, since only ISSS beneficiaries can go use ISSS facilities for treatment.

We develop a demand model under the assumption that sick individuals face a choice among self-treatment and several professional treatments. The model is formulated as follows. Individual consumer i experiences an accident, or illness. The individual must decide whether to obtain medical care, where to obtain care, and what quantity of services to consume. The decision is made in order to maximize utility.

For the ith individual faced with J + 1 choices, suppose that the utility of choice j is

$$(1) \quad U_{ij} = \alpha' X_{ij} + \beta_j' Z_i + \varepsilon_{ij}.$$

Utility depends on X_{ij}, the observed attributes of the choice j perceived by individual i, and Z_i, the observed characteristics of individual i. A disturbance term ε_{ij} captures unobserved variation in tastes and in the attributes of alternatives, and errors in the perception and optimization by the consumer. If the consumer makes choice j, then U_{ij} must have been the maximum among the J + 1 utilities. Hence, the statistical model is driven by the probability that choice j is made, which is

$$(2) \quad Prob\,[\, U_{ij} > U_{ik} \,] \qquad \textit{for all other } k \neq j.$$

The model is made operational by choosing a distribution for the disturbances. Let Y_i be a random variable indicating the choice made. It takes one of the value 0,1,2,...,J. McFadden (1973) has shown that if and only if the J + 1 disturbances are independent and identically distributed with the type I extreme value distribution:

$$(3) \quad P\,(\, \varepsilon_{ij} < a \,) = EXP(\, -e^{-a} \,),$$

then,

$$(4) \quad Prob[\, Y_i = j \,] = \frac{EXP(\, \alpha' X_{ij} + \beta_j' Z_i \,)}{\sum_{j=0}^{J} EXP(\, \alpha' X_{ij} + \beta_j' Z_i \,)}, \quad j = 0,1,2,\ldots,J$$

This leads to what Greene [1991, p.494] calls the mixed model (a combination of the conditional logit model and multinomial logit model) or what Maddala (1983, p.44) calls the general model. Utility depends on X_{ij}, the attributes of the choice j for individual i, and Z_i, the characteristics of individual i. The attributes of the choice j, X_{ij}, vary with choice and individual, while the individual characteristics Z_i are the same for all choices and vary only across individuals.

In this study, the four attributes for each choice j are the consulting fee, cost of medicine, waiting time at the health facility, and traveling time to the health facility. We assume each individual knows which health care

facilities are available, the expected costs of the facilities and medicine, waiting time at the facilities, and traveling time to the facilities[31]. Individual characteristics are age, sex, income, the number of sick days in the previous month, education, working status, and initial health condition.

The vector α gives the vector of "implicit prices" for the health facility attributes[32]. If given the attributes of a new facility, as perceived by an individual, then the estimated coefficients can be used to predict the probability that this individual will use the facility. Therefore, the probability of choosing the category considered in the estimation procedure can be predicted given a new set of attributes X_{ij}. The number of elements in vector α, is the number of attributes of a health facility, namely three, as well as the number of alpha parameters to be estimated. On the other hand, the number of elements in vector β_j is the number of individual characteristics, L, and the number of beta parameters to be estimated is equal to L multiplied J-1, where J is the number of health facilities. With the estimated parameters and a new individual with specified characteristics, the probability that the individual will choose one of the J health facilities considered can be predicted.

Let choice 0 be the self-care alternative, and choices 1,2, or 3 be the various provider alternatives and let $X_{i0}=0$[33]. Therefore, the self-care demand function (that is, the probability of choosing self-care) is

$$(5)\ Prob[\ Y_i = 0\ ] = \frac{1}{1 + \sum_{j=1}^{J} EXP(\ \alpha' X_{ij} + \beta_j' Z_i\ )}$$

and the demand for provider i is

$$(6)\ Prob[\ Y_i = j\ ] = \frac{EXP(\ \alpha' X_{ij} + \beta_j' Z_i\ )}{1 + \sum_{j=1}^{J} EXP(\ \alpha' X_{ij} + \beta_j' Z_i\ )}.$$

The log likelihood for this problem is

$$(7)\ \ \ln L_i = \sum_{j=0}^{J} D_{ij} \ln Frob[\ Y_i = j\ ],$$

where D_{ij} is a dichotomous variable that takes on the value 1 if individual i chooses alternative j, i.e. if $Y_i = j$,

[31] This assumption is crucial in the multinomial logit model specification. Bitran (1990), however, found that "most respondents claimed either not to know anything about the choices not made or to have only a vague idea about the choices' characteristics" in the survey done in Zaire. Bitran also said that "Some respondents, however, were able to provide some cardinal information about distances and prices of the choices not made, relative to those options as well as to the choice made, e.g., provider X is farther away and less expensive than Y".

[32] I normalize this vector by setting the first element of α to be equal to 1.

[33] X_{i0} are the consulting fees, waiting time and traveling time for self-care.

Heller (1982) and Akin et al. (1986) found that prices and distance were not determinants of demand for medical care. These results may occur because they specified their empirical model in an excessively general way. Heller and Akin et al., attempt to consider two effects of the attributes. One is the effects of the choice characteristics on the determinants of choice probabilities. The other is the effects of individual characteristics on the determinants of choice probabilities. However, Heller and Akin et al. allowed both the coefficients of the attributes representing the choice and the coefficients of an individual's characteristics to vary with choices. Their utility function was expressed as

$$(8) \quad U_{ij} = \alpha_j' X_{ij} + \beta_j' Z_i + \varepsilon_{ij}$$

and probability of choosing provider j was

$$(9) \; Prob[\, Y_i = j \,] = \frac{EXP(\alpha_j' X_{ij} + \beta_j' Z_i)}{1 + \sum_{j=1}^{J} EXP(\alpha_j' X_{ij} + \beta_j' Z_i)}.$$

Their studies specified a set of independent variables similar to mine: cash price (with drug cost specified separately in Akin et al.), travel time and waiting time (Heller also included treatment time, Akin et al., travel cost), income (Heller) or asset value (Akin et al.), availability of a physician, age and sex of sick person, and urban or rural residence. In Akin et al. 'severity of illness' (respondent-reported dummy variable) was directly included, whereas in Heller a number of variables -- ethnic group, quality of the sewage disposal system and quality of water supply -- were used as proxies for likely occurrence of illness.

The Heller and Akin et al. studies have been extensively used, for example, Jimenez (1987) and World Bank (1987), to indicate people's high willingness and ability to pay for health services since none of the economic variables -- price, income or quality -- were found to influence utilization. Thus, these studies support the introduction of user fees on both efficiency and equity criteria, since equity will be better served by the expansion of services and the improvement of service quality than by the maintenance of low prices.

Quality of health care may have substantial influence on demand for health care, yet quality is the most difficult variable to measure. These studies may be misleading as a result of the influence of an unmeasured variable. Both Heller and Akin et al. used the availability of physicians as their only quality measure, yet this is unlikely to capture the service quality that is perceived by households. Abu Zeid and Dann (1985) asked households, physicians, traditional practitioners and pharmacists what would be the most important actions to improve health services. Only physicians included "more physicians" among their choices.

Though researchers are aware of its potential to underlie unexpected results, most studies do not attempt to model quality explicitly. Mwabu, Ainsworth and Nyamete (1993) included various types of drugs and diagnostic equipment as measures of facility quality. They found that availability of drugs and diagnostic equipment were not good measures of quality. If quality is positively related to price and the unmeasured quality-utilization relationship is also positive, the inability of the studies to explicitly model quality may be responsible for the generally insignificant results attached to price.

Annex 4

COMMENTS RECEIVED

Written Comments

The author would like to thank all those who read the preliminary draft of this report and took time to comment on it. We greatly appreciate your comments, insights and suggestions. The final version of the technical report "Demand for Health Services" has incorporated many of the comments and suggestions made by the various readers.

A number of comments received focused on the methodology employed in the "Community Perceptions" portion of the report. The final draft of the report has an expanded section in which the methodology is described more completely than in the first draft. The new methodology section describes in greater detail how communities and respondents were selected, who the interviewers were, and how the data were collected and analyzed.

Another main theme that emerged from comments received on the first draft of the report centered on the absence of national, generalizable data. As was explained in the introduction to the first draft, we did not have all of the data analyzed in time for the distribution of the first draft. The final version of the report contains an analysis of data from three national surveys, and includes models for projecting the elasticity of demand for health services. The combination of these nationally representative data with the qualitative, descriptive data obtained from community visits, interviews and observations provides what we hope amounts to a richer analysis than could be obtained by using only one or the other of these types of data.

We received some comments regarding specific facts or assertions that appeared in the first draft of this report that were either incorrect or not clearly stated. We have tried to correct or clarify these statements, and are grateful for having them pointed out to us.

Many comments expressed corroboration of various points made in the draft. Other comments, both written and spoken at the community meetings, confirmed the importance of conducting a community level analysis and agreed with most of our findings.