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**Private Health Care Financing Alternatives
in Metropolitan Lima, Peru**

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PRIVATE HEALTH CARE FINANCING ALTERNATIVES
IN METROPOLITAN LIMA, PERU

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FOREWORD

This is the third in a series of technical reports on Health Care Financing in Latin America and the Caribbean (HCF/LAC), produced under contract with the U.S. Agency for International Development. Its authors worked through the Group Health Association of America (GHAA), under subcontract to the State University of New York at Stony Brook (SUSB). Research for the study was designed and carried out in close cooperation with Peruvian private health sector leaders (See Appendix 1) and staff members of USAID/Peru.

The design of this study was based on exploratory research conducted under the Health Sector Analysis of Peru (HSA-Peru) project, funded by USAID/Peru under a Cooperative Agreement with SUSB during 1985-87. One of the two Peruvian co-authors of this report, Jose Carlos Vera, was responsible for the exploratory research, and his colleague Julio Castañeda Costa was instrumental in establishing the necessary contacts for the expanded research effort whose results are presented here. Formal responsibility for the design of this report rested with Alfredo Solari, whose extensive knowledge of prepaid health care systems in Latin America uniquely qualifies him to provide technical assistance for this and several other studies of alternative health care financing mechanisms in preparation under the HCF/LAC project.

The present report was coordinated by GHAA staff member Gail-Marie Crowley who also participated in the field research. The team was assisted in Peru by Maritza Torres Garazatua, with secretarial support provided by Olga Diez Ruiz Eldredge and Susana Cavassa de Pinedo. The final report was edited in Stony Brook by Gretchen Gwynne, Research Associate of the HCF/LAC project.

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EXECUTIVE SUMMARY

This report analyzes private health insurance and other prepaid, risk-sharing health care plans in metropolitan Lima/Callao, Peru. It traces the evolution of health care financing and delivery arrangements, describes their current configurations and dominant patterns, and estimates the potential growth of prepaid health care in Lima/Callao.

Until the mid-1970s, the Peruvian Ministry of Health (MOH) and Social Security Institute (IPSS) provided relatively good health services to the metropolitan population. However, an influx of rural migrants to the area in the wake of land reform, combined with increasing urbanization, worsening economic circumstances caused by a deteriorating balance of payments, and reduced industrial production, curtailed the government's ability to maintain its health services. As the perceived quality of public services deteriorated, many middle- and lower-income Peruvians, traditional patrons of the public system, turned to the private sector for health care.

A large proportion of these patients pay for their health care on a fee-for-service basis, but the cost of private health services has risen even more quickly than the general consumer price index. In response, there has been significant growth in recent years in private health insurance sales, suggesting that residents of Lima/Callao have become more conscious of the need to seek risk protection through some form of insurance. Major employers have also begun to show interest in private health benefits programs, both as a way of increasing employee benefits without raising salaries and as a supplement to or replacement for the inadequate services provided to their employees by IPSS.

Private sector risk-sharing arrangements in Lima/Callao currently cover almost 500,000 people, or about 8.3% of the metropolitan population. They include a variety of prepayment schemes and delivery systems that can be categorized into four basic configurations, using criteria such as organizational form, assumption of financial risk, extent of benefits, etc.

The first category, which has captured a 45% share of the market (215,000 people), consists of diversified insurance companies offering health insurance policies. These arrangements were among the first forms of health insurance to be established in Lima/Callao in the 1970s. Policies are sold, either directly or through brokers, to large groups of employees and to

individual families.

A second form of insurance is the company-sponsored health fund (HF), typically associated with large companies of over 3,000 employees. Most HFs serve as administrative tools by which employee and employer contributions are collected and administered. They are, in effect, self-insurance schemes. If the total cost of claims exceeds the pool of contributions, the fund must ask the contributing parties for additional funds. HFs are administered either by the company or, for a fee, by an administrator (generally an insurance broker).

A third configuration might be called a "broker-as-coinsurer" scheme. Here, the administrator of a health fund agrees to assume a minimum amount of the insured group's risk. His risk is limited to the sum total of the fund's pool of contributions. If total claims surpass this amount, the fund agrees to raise the necessary amount to pay the debt in claims. However, if total claims are less than the fund's revenues (employer and employee contributions) for a given period, the broker retains the difference as his profit.

It is estimated that together these second and third configurations account for another 45% of the private insurance market in Lima/Callao, or an additional 215,000 people.

The fourth configuration, and the one of most immediate interest in this report, is a form of prepayment mechanism new to Peru: the provider-sponsored prepaid health plan. Four such plans, sponsored by private hospitals and offering comprehensive coverage, were identified in the metropolitan area. The most important feature of the provider-sponsored plan is the union of the insurance mechanism with the health care provider -- a relationship that frequently (though not always) implies a sharing of financial risk between the two parties, and consequently encourages cost control and efficiency measures such as utilization controls, peer review, and claims audits. Although a patient's choice of provider is limited to the physicians affiliated with the plan, coverage and benefits are comparable to those of commercial insurance and HFs, and are therefore competitive in the risk-sharing market. Due to their small size and relatively recent establishment, these plans so far cover only some 47,000 people, or 10% of the private health insurance coverage in Lima/Callao.

The research team concluded that the potential demand for private health insurance in Lima/Callao, including all of the configurations described above, is between the currently-estimated coverage of almost 500,000 and about 1.8 million people. Based on the estimated number of households in Lima/Callao with sufficient after-tax income to participate in a

comprehensive risk-sharing plan, potential family enrollment is likely to be between 330,000 and 815,000 individuals, while potential group enrollment (through employment), with employer contributions of 50%, is estimated to be an additional 343,000 to almost 1 million people.

Several factors may favor the further development of the various models of risk-sharing schemes:

a) Provider-sponsored plans have shown they have a certain market advantage, including greater benefits and competitive if not lower premiums than commercial insurance. They may thus expand their coverage, particularly for lower-middle-class people not currently covered by health insurance or employer health funds.

b) The growth in interest among large employers and their employees in private risk-sharing schemes will continue as long as the MOH and IPSS do not significantly improve the quality and efficiency of their urban health services.

c) There is an oversupply of physicians in Lima/Callao which has contributed to the formation of group practices or clinics, which in turn may initiate prepaid provider plans.

Other factors may hinder the development of private prepayment schemes: the unavailability of investment capital, the general lack of managerial skills, the opposition of physicians to negotiated fees, and high mandatory IPSS contributions (9% of wages), which make additional private coverage very costly.

The importance of expanding risk-sharing coverage in the private health sector lies in the benefits such coverage provides for middle- and lower-middle-income families who have been seriously hurt by lower real wages and high unemployment, and in the potential it could create for the MOH and IPSS to reallocate resources from urban hospital services to the primary health care needs of the country's urban and rural poor. The further development of private, prepaid health insurance arrangements, however, will largely depend on specific measures implemented by the Government, the health insurance industry, and private health care providers.

These agencies may wish to consider the following options:

-- The Peruvian Government might a) extend formal recognition to health insurance providers other than insurance companies; b) more clearly define the roles of the various players in the private health sector; and c) establish guidelines and regulations for private insurance activities.

-- The insurance industry should consider a) lowering its costs in the face of increasing competition from self-insurance plans; and b) working toward greater efficiency, especially in the area of cost control.

-- Existing prepaid health care organizations might benefit from increasing their administrative and managerial expertise.

-- Private providers could benefit from becoming more familiar with prepaid plans; those who are already involved in such plans might try to develop more efficient health care delivery systems at prices that do not exceed Peruvians' ability to pay for them.

-- The MOH might consider turning the operation of some public hospitals over to private providers. Since existing private hospitals and ambulatory care centers will not be able to satisfy expected growth in demand if insurance coverage expands, such a measure would ease the shortage of private facilities as well as relieve the MOH of part of its current fiscal burden.

-- Finally and perhaps most importantly, all parties involved in the administration and delivery of health care in Peru will need to take the present health care financing situation and its potential for further development into account in establishing future health sector policies and priorities.

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GLOSSARY OF ACRONYMS

AID	U.S. Agency for International Development
ALOS	Average Length of Stay
ANSSA-PERU	Analisis del Sector Salud en el Peru (Health Sector Analysis of Peru)
CEO	Chief Executive Officer
CGE	Central Government Expenditures
ENNSA	Peruvian National (Household) Survey of Nutrition and Health
FAET	Labor Assistance and Encouragement Fund
GDP	Gross Domestic Product
HCF/LAC	Health Care Financing/Latin America and the Carribean
HF	Health Fund
HMO	Health Maintenance Organization
HSA	Health Sector Analysis (of Peru)
INE	Instituto Nacional de Estadistica
IPSS	Instituto Peruano de Seguridad Social (Peruvian Social Security Institute)
LDC	Less Developed Country
MCO	Managed Care Organization
MOH	Ministry of Health
OR	Occupancy Rate
PPO	Preferred Provider Organization
PVO	Private Voluntary Organization
SBS	Superintendencia de Bancos y Seguros
SEGUS	Seguros Unidos (group of insurance companies in Lima)
WHO	World Health Organization

I.

INTRODUCTION AND HISTORICAL BACKGROUND

This report analyzes private health insurance and other prepaid, risk-sharing health care plans in metropolitan Lima/Callao, Peru (1). It traces the evolution of health care financing and delivery arrangements, analyzes their current configurations and dominant patterns, and estimates the potential growth of prepaid health care in Lima/Callao.

In Lima/Callao, only 18% of all hospital beds are private, although over 50% of the city's medical doctors are in private practice and 37% of ambulatory health care is provided by the private sector. Approximately two-thirds of the hospital beds in the metropolitan area are administered by the Peruvian Ministry of Health (MOH) and Social Security Institute (IPSS) (HSA-Peru 1986e:28), but the population for whom these services are intended represents only between 50-60% of the metropolitan region's 6 million inhabitants. The relatively high cost of private hospital services in Lima/Callao means that many middle-class residents who can afford to pay for private ambulatory care are hospitalized at public expense; indeed, half the in-patient care in the metropolitan area is provided to the upper- and middle-income segments of the population at MOH and IPSS facilities (Government of Peru 1984-85).

Given the high costs of operating health care facilities in Lima/Callao, it is clear that if patients who could afford to pay for their in-patient and their ambulatory health services in the private sector were to do so in greater numbers, either through fee-for-service or by means of an insurance mechanism, public resources could theoretically be re-allocated from curative care for the middle classes to preventive and curative care for the estimated 6 million poor Peruvians (out of a total of 11 million poor nationwide) who are unable to pay for adequate attention and yet are not being served by the MOH (HSA-Peru 1986i).

The possibility of greater private-sector health coverage in Peru, which dovetails with recently-issued AID health financing policy guidelines (USAID 1986), provided the rationale behind the MCF/LAC study of alternative financing mechanisms in

Lima/Callao. As a recent AID memorandum points out,

No country achieves full cost recovery in health, including the U.S. The proportion of costs that can be recovered from users will vary across countries. Progress can and should be made to raise or free-up revenues for the public health care system not only through user fees, but through efforts to shift the responsibility and costs of providing most personal curative services from the public sector to those willing and able to pay in the private sector (USAID 1986:11).

A. Features of Study

1. Objectives. The primary aims of the study were to identify the various forms of health care financing currently existing in the private sector of metropolitan Lima/Callao; to measure the demand for private, prepaid, managed health care in the area; to assess current financing and delivery arrangements; and to estimate the potential size of the private risk-sharing market, with a view to facilitating accessibility to managed, prepaid mechanisms by a larger proportion of the population. It is hoped that the hospitals and ambulatory centers, insurance companies, and employers that contributed to the study may, as a result of this report, discover common concerns and goals, and take positive new steps toward better coordination and more rapid expansion of prepaid private sector coverage. In addition, foreign donor agencies can use the report to better evaluate the kind and extent of assistance they might provide to existing and newly-emerging prepaid health care organizations.

2. Structure of Report. In accordance with the twin foci of the study on existing health care financing mechanisms in Lima/Callao and on their potential for growth, in any of several different directions, this report -- after providing background material (Chapter I) -- contains two main sections: a detailed description of the existing health insurance market and a comparison of its various organizational and operational patterns (Chapters II and III), and an evaluation of the potential -- given existing circumstances and the possible intervention of government and/or outside agencies -- of expanding prepaid managed health care systems, primarily through organizations that

combine an insurance function with the delivery of health services (Chapter IV). The study team's conclusions and recommendations are presented in Chapter V.

3. Database. To the greatest extent possible, the study draws upon statistical data available from previous research efforts and descriptive reports. The 1984 national household survey of nutrition and health (Government of Peru 1986) provided demand data, while a recently-completed analysis of the Peruvian health sector (HSA-Peru 1986, a-i) was a comprehensive base of information on national health resources. Specific information on Lima/Callao, however, was difficult to obtain, as private sector utilization data, financial statistics, and provider information were often either non-existent or unavailable.

In addition to collecting statistical data, the research team conducted personal interviews, following written protocols (see Technical Note 1), with health care providers; administrators of private hospitals, ambulatory care centers, insurance companies, and health funds; insurance brokers; and health benefits managers of large public and private companies (see Appendix 1 for the names and institutional affiliations of authorities consulted). Patients at private hospitals and ambulatory centers were also interviewed, to assess their attitudes and behavior toward public and private providers of care and to determine the type of health insurance coverage preferred (see Technical Note 2). Four health care delivery institutions offering prepaid health care plans, were studied in depth. These are listed and described in Appendix 2.

4. Methodology. Based on earlier exploratory discussions, the research team originally expected health care providers, insurers, and employers to provide a significant amount of cost and utilization data. It soon became evident, however, that this information would not be forthcoming, primarily because the organizations involved -- with a few exceptions -- do not make a practice of systematically collecting such statistics or of sharing them with outsiders. The study methodology was therefore modified to incorporate and emphasize institutional and other qualitative data, collected in interviews with representatives of different areas of the private health sector.

B. Historical Background

1. Prior to 1968. Until 1968, the hospital and ambulatory

care needs of Peru's poor were served by (mainly urban) charity organizations (sociedades de beneficencia), which operated an extensive network of hospital facilities for acute and chronic care. These facilities were generally administered by religious orders, and patients received services free of charge. A national network of smaller facilities operated directly by the MOH, typically serving cities and towns rather than metropolitan centers, also attended the health needs of the poor. Two separate social security organizations, one serving blue-collar and the other white-collar workers, each operated large (1000 beds or more) hospitals in Lima. Finally, health care was provided to a few Peruvians by several small, non-profit, private hospitals and clinics developed by ethnic, religious, or other groups, and by a few even smaller private for-profit hospitals, generally owned by physicians. These hospitals served middle- and upper-income groups on a fee-for-service basis.

The emergence and early growth of health insurance in Lima/Callao is undocumented, but the research team learned through interviews with insurance officials that there were several unsuccessful attempts during the 1960s to establish health insurance and a prepaid hospital plan. Their failure, amidst accusations of fraud and incompetent management, created a feeling of distrust towards health insurance among the middle and upper-middle income groups. It was widely believed, for instance, that insured people would receive second-class treatment and inferior services compared to those paying on a fee-for-service basis (Salas, Solis; Appendix 1).

2. Late 1960s and Early 1970s. This period saw significant socio-economic change in Peru, largely a result of the fiscal and agrarian reforms of the Peruvian Revolution. A tide of immigrants from the countryside began to flow into Peru's cities (especially Lima/Callao), creating a huge class of urban poor whom urban areas were to become less and less capable of employing. Meanwhile, the country was becoming increasingly industrialized. A number of large state-owned and private business conglomerates, some of which incorporated insurance companies, were created, and their sophisticated labor force quickly became accustomed to receiving company benefits.

In a number of these companies, employees' welfare funds (fondos de asistencia y estímulo al trabajador) were established. Supported from low-productivity penalties levied against employees and from voluntary employee contributions for specific purposes (such as day care centers), these health funds (as they

are commonly known) sometimes handled health-related expenditures not covered by IPSS.

Concurrently, the operation of charity hospitals -- involving nearly 3,000 of Lima's hospital beds in seven major hospitals and several smaller ones -- was transferred from the sociedades de beneficencia to the MOH (2). Because of the unique legal status and financial basis of charity organizations, however, these MOH-operated facilities could no longer obtain financing from the beneficencias; they now had to depend on general tax revenues. In addition, MOH personnel were substituted for the health care providers associated with the religious organizations previously operating these facilities.

In the early 1970s, the two social security organizations were united under a single board of directors, yet each organization continued to maintain its own administration, financial sources, personnel, ownership and operation of health facilities, and benefit programs. In 1973 the Peruvian Social Security Administration (Seguro Social del Peru) was created, but different benefits packages for blue-collar and white-collar workers continued to exist even after this restructuring.

The transfer of beneficencia hospitals to the MOH and upheavals created by the merger of the two social security organizations, combined with an economic downturn and consequent erosion of the tax base, resulted in a decline in the effectiveness and efficiency of public sector health care organizations. As dissatisfied employers and unions in the manufacturing and service sectors began to seek alternatives to the public health care systems, the first employment-related private health insurance policies appeared. Sales of policies grew rapidly, since private insurance allowed workers to access private providers of their choice at reasonable cost. Meanwhile, private hospitals and medical groups began to provide health services to social security beneficiaries through contracts with the social security organization.

The development of private health insurance and the contracts between private practitioners and social security laid the financial foundations for the development of private hospitals. Several new medium-sized (75- to 125-bed) facilities, with relatively sophisticated equipment and services, appeared in Lima/Callao in response to increased demand.

This period thus saw two important developments in health

care coverage by general commercial insurance companies: the creation of employee welfare funds, which created a demand for supplemental health insurance to complement IPSS coverage; and the incorporation into larger business conglomerates of insurance companies, which strengthened the economic base of the latter. The first health insurance policies were limited to hospitalization coverage, and were tailored to the supplemental insurance needs and contributor capabilities of the new corporations' management and employees. However, health insurance sales would not reach sufficient volume to be listed in the periodic report of the insurance regulatory agency (Government of Peru 1977-84) until 1977.

3. Mid-1970s. By the mid-1970s, with industrial growth coming to a halt and the city of Lima no longer able to provide jobs for the continuing flood of immigrants from the countryside, unemployment increased. Meanwhile, declining IPSS resources were reflected in a progressive deterioration of services, and it was becoming more and more difficult for workers to obtain prompt medical attention. Typically, patients had to wait a day or two for an appointment, another day to obtain clinical or x-ray services, an additional three days for the results, and still another day for a new appointment. Obtaining hospitalization was even more tedious, with waiting periods extending two, three, or more months. This situation resulted in much dissatisfaction among IPSS beneficiaries, who felt their health needs were not being met, as well as among employers, who were experiencing declines in worker productivity. Both groups thus had strong incentives to seek alternate sources of care, even if at a higher direct cost. Through health funds, they began to buy insurance policies that would permit access to faster and more efficient medical attention (Fernandini; App. 1) -- despite their continued obligation to contribute to IPSS (3).

The period was characterized by two seemingly contradictory developments: the growth of private health care arrangements financed by health insurance and by contracts with the social security organization, and government efforts to centralize and strengthen both the MOH and medical care under social security. Even as the operation of these public sector health care organizations became more and more dependent on general revenues and wage-based contributions, however, revenues dwindled due to the economic slow-down.

4. Late 1970s and Early 1980s. With inflation persisting through the late 1970s and severe recession beginning in 1982-84,

the government's continued attempts to bring about changes in the health sector had little effect. A turning point occurred in 1977, when a proposal to create a national health system, which would have concentrated public sector facilities in the hands of the government and strengthened its control over the private sector, was rejected by the government. Instead, a policy to maintain a more flexible, pluralistic system, strongly supported by the social security organization, private hospitals, and the medical profession, was instituted. Each organization would maintain its administrative and financial autonomy, with coordination among them handled by a National Health Council (4).

After their transfer from the sociedades de beneficencia, MOH facilities had deteriorated badly, creating widespread dissatisfaction among users. As part of a general government initiative, the MOH made several attempts in this period to decentralize the administration and operation of its facilities, but these efforts were short-lived. Meanwhile, the maintenance of physical plants and equipment and the operation of programs and services continued to deteriorate for lack of sufficient resources. At the same time, patients faced financial barriers to private sector care as disposable income declined and the prices of health services increased at a greater rate than prices in the rest of the economy (Table 1 illustrates this trend). The private health insurance alternative became ever more appealing.

In 1980, the social security system's dual benefit structure was abolished, and standard benefits were established for all beneficiaries. To emphasize the complete integration of the two organizations, the social security administration was reorganized and given a new name: the Peruvian Institute of Social Security, or IPSS. The major problem of social security during this period was its progressive financial insolvency. Declining employer contributions due to the increasingly difficult economic climate, a dwindling tax base resulting from a drastic fall in salaries measured in constant terms, a relaxation of controls regulating social security contributions, and mismanagement of facilities all contributed to increasing IPSS deficits. Services rapidly deteriorated, and social security health services lost their former reputation for sound administration and effective delivery (HSA-Peru 1986h).

As a result, prepayment for private care by those who were dissatisfied with the public health system and aware of the benefits of pooling their health risks grew rapidly in this period (5). Table 2 shows that sales of health insurance policies

by insurance companies grew from less than 2% of total insurance sales in 1977 to almost 9% in 1984. Meanwhile, the relationship between insurance companies and their largest clients was changing. Through the 1970s, insurance companies -- either directly or through sales agents or brokers -- sought out firms with employee welfare funds, but by the late 1970s and early 1980s the firms and their unions, sensing the deterioration of IPSS services, began actively seeking health insurance policies. Requests for private health insurance began to appear in the petitions of several large unions.

Information concerning the number of health policies sold by insurance companies is not publicly available, so it was impossible for the study team to determine what proportion of the increased sales (Table 2) was due to an increase in policy sales, what proportion to changes in benefits packages, or what the premiums charged for those policies were. However, the research team did learn that between 1977-82 more and more health insurance policies covered not only hospitalization but also ambulatory care as well. Today, most policies sold by insurance companies cover both (Blufstein, Kapilinsky; App. 3).

5. 1982-present. The inflation of the early 1980s and the deep recession of 1982-83 forced health insurance buyers -- particularly the health funds of industrial, service, and commercial firms -- to look for the most cost-effective way of obtaining coverage. The market now became very competitive, with several factors contributing to the development of alternative health care financing and delivery systems.

First, the insurance market fragmented as more and more insurance companies entered this field. At present, most of the general commercial insurance companies operating in Lima/Callao offer health insurance; 53.5% of 1984 health insurance sales were made by the three largest companies, but there is competition among these three and within the insurance sector as a whole (Table 3). Second, insurance costs rose as the cost basis used by insurance companies to determine their prices was affected by inflation and a service tax levied on policy sales (6). Third, the increased cost of premiums put pressure on the health funds, with fund administrators forced either to increase the mandatory contributions of employers and employees or to seek less costly insurance (7). Several funds decided to bypass the insurance companies altogether and seek certain brokers' administrative and insurance options to traditional commercial health insurance. Two different broker-managed models (described below) developed,

with similar impacts on reducing the price of policies and/or increasing the benefits to health fund members.

Arrangements between health funds and brokers have consequently proliferated, and now account for a large share of the market (Fernandini; App. 1). Since brokers have lower administrative costs than insurance companies and need not charge sales tax, potential savings to the health funds can result.

Private hospitals and providers also saw the opportunity to reduce prices and increase earnings by contracting directly with company health funds, thus eliminating both brokers and insurance companies. The growth of this type of managed health care was encouraged by two factors: first, health fund administrators had gained several years' experience in estimating their beneficiaries' utilization of services and negotiating with providers; and second, private hospitals and medical centers had improved their administrative skills by handling IPSS contracts and arrangements with insurance companies and brokers. Private hospitals also saw a way to increase their occupancy rates by offering prepayment plans directly to individuals and groups of people not necessarily related by employment -- sometimes with as few as five members. Thus, several alternative prepayment schemes have emerged in the last few years, although the health insurance market is still dominated by insurance companies.

In sum, the emergence and growth of private health insurance in Peru, a phenomenon almost exclusively restricted to the Lima/Callao area (8), was a direct result of economic and social changes: the reforms introduced in the late '60s and early '70s in the course of the Peruvian Revolution; industrial development up until the mid-1970s; rapid urban population growth due mainly to immigration; economic recession; and the decline in public sector health services. In the view of most study team interviewees, the health insurance market is now moving away from general insurance company plans and toward provider-sponsored prepaid plans. It should be noted, however, that these alternatives are still in a very early stage of development.

II.

CURRENT STATUS OF HEALTH CARE COVERAGE AND INSURANCE IN PERU

This chapter outlines the contemporary Peruvian health care delivery system, characterized by a mixture of private and public providers and financing arrangements and by unevenly-distributed physical and human resources.

A. Principal Providers of Health Care

Health care is currently administered and financed in Peru by a number of different organizations, both private and public. Public services and financing are provided by the MOH, IPSS, the Armed Forces and Police, and other public and quasi-public organizations (9). At the same time, health care is provided by a number of private providers and financing mechanisms, including private voluntary organizations (PVOs), cooperatives, employers, hospitals, ambulatory centers, individual practices, pharmaceutical wholesalers and pharmacies, insurance carriers, and others (HSA-Peru 1986a). HSA-Peru researchers arrived at the following estimates for health care coverage, resources, and expenditures by subsectors (1986a:4):

- a) the MOH covers approximately 26% of the population, administers 59% of the hospital beds, and accounts for 27% of the country's total health care expenditures.
- b) the IPSS provides services to about 18% of the population, operates 15% of the hospital beds, and is responsible for 33% of all health care expenditures.
- c) the private sector provides coverage to 21% of the population, administers only 18% of the hospital beds, yet accounts for 34% of total health care expenditures.
- d) an estimated 32% of the population, including including one out of every six residents of Lima/Callao, have no modern health services coverage.

B. Health Care Resources

1. Physical Facilities. With about 1.65 hospital beds per 1,000 people, Peru is relatively well-endowed with in-patient facilities (HSA-Peru 1986e). The distribution of hospitals, however, heavily favors a few highly urbanized coastal states -- in particular, the Lima/Callao area, where the ratio is 2.1 beds/1000. Tables 4 and 5 illustrate the distribution of hospitals and hospital beds by subsector for the entire country and for Lima/Callao, respectively. As Table 5 shows, Lima/Callao, with about a third of the country's population, has 41.8% of its hospital beds.

Almost 82% of the hospital beds in the metropolitan area are in the public sector, with the MOH operating 49% of the total. There is a striking difference in the average size of hospitals administered by the different subsectors: IPSS and MOH hospitals are very large, averaging 771 and 360 beds respectively, while private sector facilities average only 43 beds. It should be noted that there is also wide variation in size among private hospitals. Fewer than a dozen are in the 75-125 bed range; the majority are very small -- frequently with fewer than 20 beds.

The performance records of hospitals also vary by sub-sector. Private hospitals in Lima/Callao have the shortest average length of stay (ALOS) and, correspondingly, the highest average number of discharges/bed/year (Table 6). In contrast, IPSS and other public hospitals have the longest ALOS (2 weeks) and the lowest number of discharges/bed/year. The performance levels of MOH hospitals in Lima/Callao falls between these two groups.

The highest occupancy rates (ORs), both at the national and metropolitan levels, are found at IPSS and other public hospitals, while private hospitals have relatively low ORs. An attempt was made to verify this figure over a period of years, but this could be done only for one large private hospital, representative of its group. In a four-year period, 1983-1986, this hospital had ORs in the range of 52% to 66% (see Appendix 4), although interviews conducted by the research team with private hospital administrators yielded stated occupancy rates of 65% to 75%. The implication is the same for either set of figures: the private subsector may have excess capacity for hospitalization.

Ambulatory care centers (usually called medical centers in Peru) form another important component of the private sector in Lima/Callao (see Appendix 4). These are recent arrivals; most have been in operation only since the early 1980s. Although their emphasis is on medical and surgical specialties, a few offer other types of care (such as dental services) as well. Their emergence is due to two factors: an increasing number of physicians and the activities of insurance companies.

The number of physicians in Lima/Callao has been growing faster than the general population, increasing the relative supply. In the face of a diminishing average patient/doctor ratio, some doctors have formed group practices in order to economize on capital and operating costs, while others have organized themselves into corporations, working jointly out of a single facility that provides a full range of ambulatory services.

In addition, insurance companies are promoting ambulatory care alternatives to costly hospitalization. In the early days of health insurance in Lima/Callao, most medical services were provided by physicians associated (through ownership, affiliation, or courtesy) with private hospitals. Practices were closely linked to the well-being of hospitals, and vice versa, and there was considerable pressure to hospitalize. As hospitalization costs rose, so did health insurers' costs, prompting some insurance companies to promote ambulatory care medical centers.

Since medical centers are not registered with the MOH, the research team was unable to determine the number of these facilities in the Lima/Callao area. The team visited the five largest, in terms of physical plant, human resources, and volume of services: Medex, Medicsa, Los Pinos, Juan Pablo I, and Marconi.

2. Human Resources. The total number of health care personnel in Lima/Callao, and their distribution by sub-sector or geographic area, was difficult to establish, but there are enough data to make a good estimate. In 1984, Peru had a ratio of 1,100 inhabitants per physician, which is within the range generally accepted as adequate. However, as in many other LDCs, this national figure is misleading, since in Lima/Callao the ratio was 480 persons/physician. Of the total number of physicians in Peru, 73% were located in Lima (Table 7), leaving many other urban and particularly rural areas underserved.

In addition to physicians, other health personnel,

especially nurses, are needed to develop alternative health care organizations. Table 8 shows nursing personnel in Lima/Callao and the entire country in 1983. As in most other Latin American countries, nurses are relatively scarce and unevenly distributed. There were 5.6 nurses per 10,000 people nation-wide, but in Lima/Callao, this ratio was 10.7/10,000 (HSA-Peru 1986a:20).

3. Financial Resources. Peru's total health sector expenditures are divided, by sub-sectors, as follows: MOH = 27%; IPSS = 33%; private sector = 34%; others = 6%. The sub-sectors receive their funds from the following sources: general taxes and foreign donor support (MOH), wage taxes (IPSS), and direct household and third-party payments (private sector). In 1984, health services accounted for about 4.5% of GDP (Hsa-Peru 1986a:25).

Table 9 shows the evolution of MOH and IPSS health care expenditures from 1980-1984, in relation to CGE and GDP. It should be recalled that these two ratios both declined sharply in the 1982-1983 recession, so that a constant or even an increased proportion spent on health was actually a decrease in absolute expenditures measured in constant terms. If both institutions are considered together, their combined relative share of expenditures increased until 1982, thereafter declining to levels similar to those of 1980. The relative values of Table 9, however, hide the deep cuts in expenditures that took place during these 1980-84 the MOH and IPSS. Since per capita GDP declined 2.4% and 14.6% in 1982 and 1983 respectively, the absolute amount spent by both institutions declined accordingly. In constant 1980 soles, the expenditures of the MOH were reduced from 68.7 billion to 58.0 billion between 1981 and 1984, a decline of about 16%, while the IPSS budget was reduced during the same period from 87.9 billion to 69.5 billion 1980 soles, a decline of 21% (HSA-Peru 1986i).

There are no comparable figures available for MOH and IPSS expenditures in Lima/Callao, but the reduction may have been smaller in the metropolitan area than in the rest of the country. Most of the decline was in capital expenditures, transfer payments to PVOs, and medical supplies. Wages increased slightly during this period in absolute, constant terms. Since the largest relative concentration of manpower is in Lima/Callao, the decline in total health expenditures in the metropolitan region may also have been smaller than in the rest of the country.

The decline in MOH expenditures for medical supplies between 1980 and 1984 may have had a significant impact on the perceived quality of services. MOH expenditures on goods and

services declined from 15.74 billion soles in 1980 to 10.53 billion in 1984 (1980 equivalent), a decline of 33% (HSA-Peru 1986i:41, Table 8). This category includes medicines, whose availability to public sector health services has declined dramatically (HSA-Peru 1986g).

The recession of 1982-83 had an effect on private providers completely different from the one in the public sector. In the public sector, there was a decline in health expenditures, whereas in the private sector, expenditures increased in both relative and absolute terms. In the private subsector, the recession was not felt until 1983, when expenditures dropped by 7%; the subsector quickly recovered the following year (HSA-Peru 1986a). Some of this transfer of resources from public to private providers was due to dissatisfaction over the deterioration of MOH and particularly of IPSS services. Peruvians began to seek alternatives -- in particular, health insurance alternatives.

C. Current Health Insurance Configurations (10)

Private health insurance involves four essential participants: a financing institution, a medical care facility, a medical staff, and a beneficiary, who may be insured as an individual or as a member of a group. In Peru, relationships between these participants have evolved into four major health insurance configurations: 1) insurance company coverage; 2) company-managed health funds; 3) broker-managed health funds; and 4) provider-managed prepaid plans (see Chart II.1).

1. Insurance Company Coverage. About 25 general insurance companies now offer health insurance policies in Lima/Callao. Most of these policies are group insurance contracts between insurance companies and employed groups. (Although most insurance company enrollees are covered through employers or health funds, all insurance companies accept individual enrollments.) The insurance agent or broker involved may also serve as a mediator between the insurance company and the enrollees or company benefits manager (11). In either case, premiums may be paid by companies directly or by their health funds; in the latter case, a part of the premium may be paid by employee contributions. The coverage is usually limited to specific services and always by maximum amounts, and frequently the enrollee is responsible for deductibles and copayments. The benefits packages of insurance company policies are of three types: hospitalization only; hospitalization and medical care; and comprehensive care (including emergency treatment and drugs). Over 75% of the

CHART 11.1

CURRENT CONFIGURATION OF HEALTH INSURANCE MECHANISMS, LIMA, 1986

Main Features	Insurance Company Coverage	Company-managed Health Funds (1)	Broker-managed Health Funds	Provider-managed Prepaid Plans (2)
Assumption of Financial Risk	Large	Large	Shared by HF and Broker	Large
Coverage for enrollee	Always limited	Sometimes limited	Always limited	Sometimes limited
Range of Benefits	Varies from limited to comprehensive	Generally comprehensive	Generally comprehensive	Generally comprehensive
Individual Enrollment	Yes	No	No	Yes
Freedom of Choice of Providers	Unlimited	Limited	Limited	Very limited
Financial Deterrents to overutilization	Deductibles Sometimes copay up to 20%	Generally Comprehensive Coverage	Generally Copayment	Generally Copayment
Control Cost by Sharing Risk with Providers	None	None	None	varies: extensive in some plans
Determination of Price of Premiums	Cost of claims +Administrative Cost +Profit +Service tax	Cost of claims +Administrative costs or fee	Cost of claims +Broker's Administrative costs & profit	Cost of services +Administrative costs

Source: Personal interviews

- Notes: (1) A Health Fund assuming risk may be self-administered, or managed by an insurance company or by a broker, acting as an administrator only.
 (2) Within this model, there are three configurations: a) plan and hospital share risk; b) plan, hospital, and medical group share risk; c) plan assumes risk alone.

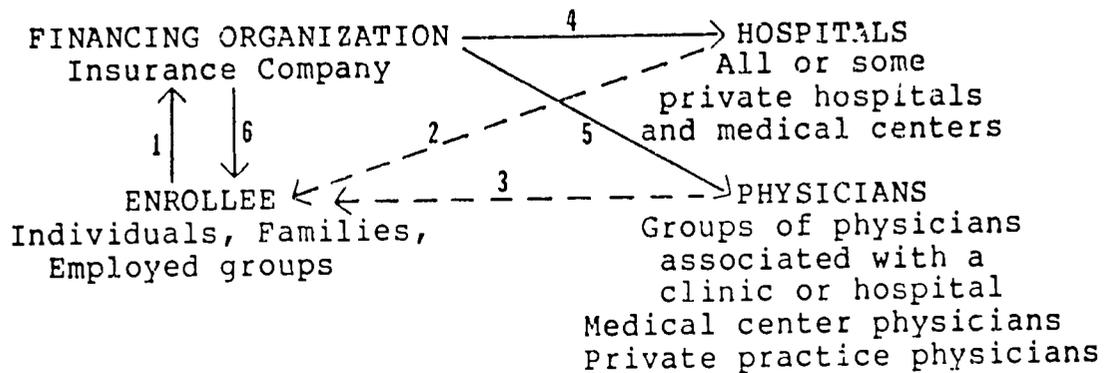
policies sold in Lima/Callao are comprehensive.

Generally, this type of insurance does not imply a contractual bond between the insurance company and specific health care providers (hospitals or physicians); enrollees are usually free to select from a wide spectrum of providers. At most, certain providers may agree to provide services at preferential rates, a practice that orients beneficiaries to preferred health care providers. In these cases, the enrollees' freedom of choice of provider may be limited. Depending on the policy, the insurance company may pay health care providers directly (a third party payor assignment of benefits system known in Peru as "by credit"), or may reimburse the enrollee for the costs of services incurred (known as "indemnity").

In theory, premiums are set so as to cover insurance costs plus a reasonable profit, but they reportedly do not cover actual costs in practice. They are adjusted quarterly, varying with utilization, duration of the contract, and the inflation rate, but these adjustments are quite inaccurate, as evidenced by an average cost of claims of over 80% of premiums during the past two years, rather than the targeted 65%. Indeed, for a number of companies, claims paid in 1985 were equal to, if not greater than, the amount collected from premiums. Thus, despite adjustments, insurance companies bear considerable financial risk; indeed, health insurance is now considered to be a poor risk by diversified insurance companies, but they continue to offer it as a "loss leader" with which to attract clients to more profitable kinds of insurance (e.g., fire, shipping, etc.). Insurance companies have tried to establish cost-control mechanisms, but these have generally consisted only of claims limitations and medical audits of utilization of services. Providers do not share the financial risk with the companies, so they lack incentives to control costs.

In all insurance company policies, the maximum coverage in any given period is limited. Moreover, adjustments of maximum coverage and premiums are such that premiums are generally set at a fixed 4% of the total maximum annual face value of the policy. Costs of treatment beyond the maximum amount covered are usually the responsibility of the individual enrollee, although they are sometimes paid by the enrollee's company or health fund. According to various sources, more than 60% of all insured patients requiring hospitalization incur hospital costs greater than the maximum amount covered under their policies.

The interaction among the various elements in this type of health insurance may be diagrammed as follows:



(Note: Solid lines denote financial transactions, dotted lines delivery of care.)

(1) The enrollee pays a fixed amount to the insurance company. The financial risk arising from a possible illness is thus transferred to the insurance company.

(2,3) The enrollee receives health care covered by the insurance from a private hospital or medical center, a group of physicians associated with a clinic, or a physician in private practice. The enrollee pays excess charges, coinsurance, deductibles or copayment as stipulated in the policy. Copayments vary between 10% and 20% of the unit costs of services, except for hospitalization, which requires a much lower percentage.

(4,5,6) The insurance company pays the clinic or health center for services provided to the enrollee, or reimburses the latter on a payment-by-service basis.

Conceptually, relations between the four agents in the model are such that the insurance company assumes the risk within certain limits, and providers (and to some extent users) -- since there are no incentives to seek more efficient alternatives -- are encouraged to utilize services regardless of efficiency or cost. This results in excessive utilization of health services, which in turn increases costs.

Insurance companies in Lima/Callao now constitute a fairly homogeneous group in terms of the types of health policies

offered, benefits, limits of coverage, and relationships with insured persons and providers. Most offer both reimbursement and direct payment to providers; the latter system is the most extensively used. Peruvian insurance companies have tried to develop a standardized policy with a single package of benefits and premiums, for 10 of the 15 kinds of risks that they cover (12), but despite repeated efforts have not yet been able to develop such a policy.

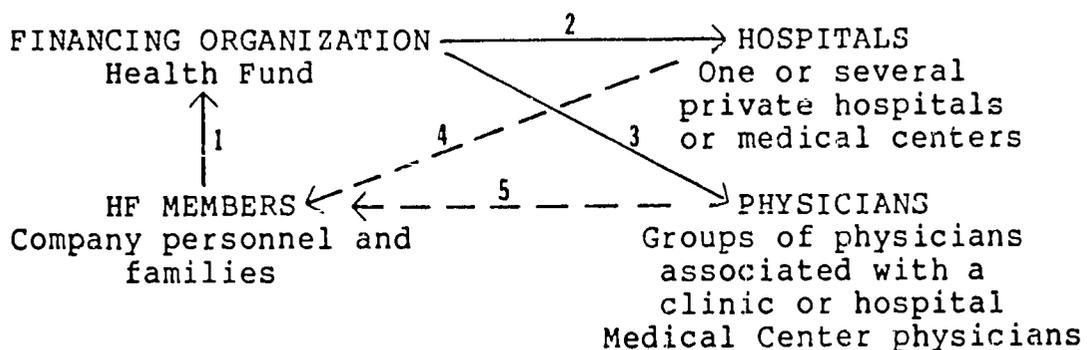
An important achievement of Peruvian insurance companies has been the formation of SEGUS, a technical group of seven such companies, which negotiates fee schedules with providers in order to standardize the industry. These insurance companies also now obtain preferential rates -- usually 20% below regular rates -- from both hospitals and physicians (Table 10). SEGUS also attempts to control the quality of health care by reviewing the resources and organization of providers; it arbitrates disputes between insurance companies and providers, and is the only organization that collects statistical information about health insurance on a systematic (if limited) basis.

2. Company-managed Health Funds (HFs). The financing agent in this type of health insurance is either a company or a corporate entity directly and exclusively related to such a company. Most Peruvian corporations of over 200 employees have established HFs, created from equal contributions from employer and employees. Some of the largest companies plan to develop their own health care facilities, but at present all of them purchase health care services from outside providers (Ostos; App. 1).

Health fund administrators can acquire health services for members in three different ways. First, they can obtain a traditional group health policy with an insurance company; the resulting configuration is the same as that described under "Insurance Company Coverage," above. Second, they can obtain a group health plan with a clinic or hospital offering a prepayment arrangement; this will be discussed in detail below. Finally, they can assume the financial risk themselves, purchasing services either directly from providers or through insurance brokers. If intermediaries are used, they may implement cost control methods such as claims reviews and utilization controls, and negotiate the price of health services with providers. Brokers may also act as administrative mediators, hired for a fixed fee to manage the invoicing, payments, auditing, and utilization control functions, or as financial coinsurers; the latter function brings about a type of financing to be discussed below under "Broker-managed Health Funds."

Most HFs make arrangements for health care with one or more private hospitals and their associated medical groups by means of bids, sometimes for two to five year periods, in order to obtain preferred rates. A patient's choice of providers is thus limited, sometimes to the extent that he or she can obtain health care from only one clinic or hospital and its associated medical group. The range of health benefits covered by HFs for their beneficiaries is usually quite comprehensive. The study team encountered no benefits packages limited to hospitalization only, although there is wide variation with regard to dental care and the provision of drugs.

The relationships between the four participants in this configuration is illustrated by the following diagram:



(1) Generally, the members pay the HF a fixed amount regardless of the expenses incurred, which partially covers the cost of the health plan. The company pays the difference in the premium. HF members transfer the financial risk of possible illness to their HF.

(2,3) The HF enters into contracts with one or several hospitals and medical staffs, who provide services to the members at preferential rates and for a specific benefits schedule, and bill the fund accordingly. Services are generally awarded through a bidding process to hospitals (and their staff of doctors) and/or medical centers. If the HF is administered by a broker, he manages the resources and returns any remaining funds to the HF.

(4,5) The members receive the health services covered in the benefits schedule from the private hospital and its staff of doctors and/or from the medical center. Depending on the contract's provisions, recipients sometimes pay, upon consumption of services, deductibles and copayments that are generally lower

than those required under standard insurance company policies.

Conceptually, relations between the four elements in this model are such that the HF ordinarily assumes the financial risk -- within certain limits. Some HFs have set a maximum amount of coverage per beneficiary per period of time. Others provide unlimited coverage, in which case the HF bears the main risk and thus the main responsibility to contain costs. HFs generally assume a larger proportion of financial risk than insurance companies do; some charge employees for costs in excess of the maximum coverage, but the most common arrangement is for the fund to pay excess costs itself or to recover them from employees in monthly installments. Since neither users nor providers are discouraged from overutilization and overproduction of services (a situation reminiscent of the insurance company configuration), most HFs have established financial deterrents to discourage overutilization. A few specify deductibles, but most require copayments in the form of flat fees-per-service. Cost control measures undertaken by HFs include reviews of the appropriateness of claims, utilization reviews, the identification of heavy users, and medical audits. However, as there is no sharing of financial risk with providers, there is little control of costs of service (13).

The costs of an HF program can vary. The bidding process does lower provider fees, and hence costs, but there is little control over providers, who are typically paid on a fee-for-service basis. In theory, total program costs should equal the costs of premiums plus administration. When administration is handled by an outside agent, the administrative cost is identifiable as the agent's administrative fee; with internal administration, the administrative cost is difficult to estimate, since information processing, accounting, etc., are handled by other departments of the company.

3. Broker-managed Health Funds (a "Broker-as-Coinsurer"). The organization and operation of this kind of health coverage is quite similar to the one described immediately above, except that the administrator of the HF hires a broker who has absolute control over the fund. If the fund's resources exceed the expenses incurred by its enrollees, the broker keeps the difference as his profit. If the expenses incurred by the users exceed the fund's resources, however, the HF, rather than the broker, pays the difference. The broker assumes no risk; the health fund bears all the consequences.

This configuration introduces a new element into the provider/user relationship. The broker has a powerful incentive

to control costs by supervising services utilization, by negotiating predetermined fees, and by invoicing. Indeed, his profits depend on effective control over services utilization. (No diagram is included here, since this configuration is basically the same as the previous one.)

4. Provider-managed Prepaid Plans. These plans differ from the insurance company and HF configurations in that they link insurers and providers; the insurance plan is closely associated with a hospital, medical group, or both. The financing agent in this type of health coverage is a private hospital or medical center, or an entity directly associated with one of these. The financing entity offers health coverage to individuals, or employed groups (generally health funds). The enrollees, whether an individual, family, group or a company group, receive coverage by paying a fixed amount regardless of the amount of consumption of services.

At present, this arrangement is offered by only four providers in Lima (App. 2), although the arrangement exists in at least three forms, differing according to who bears the risk. The plan and the hospital may share the risk, while the medical group is paid on a fee-for-service basis; the plan, hospital, and medical group may share the risk, with compensation, on a fee-for-service basis, tied to the costs of utilization and monthly revenues; or the plan may assume all the risk, paying both the hospital and the medical group (usually very closely associated with it) on a negotiated fee-for-service basis regardless of utilization and/or cost -- an arrangement explored in greater detail in the next chapter. The prices of premiums vary across the different plans, but are usually determined by their administrators' desire to maintain a competitive edge in the marketplace. One plan (Maison de Sante), however, has significantly lower prices, due to its special philanthropic orientation.

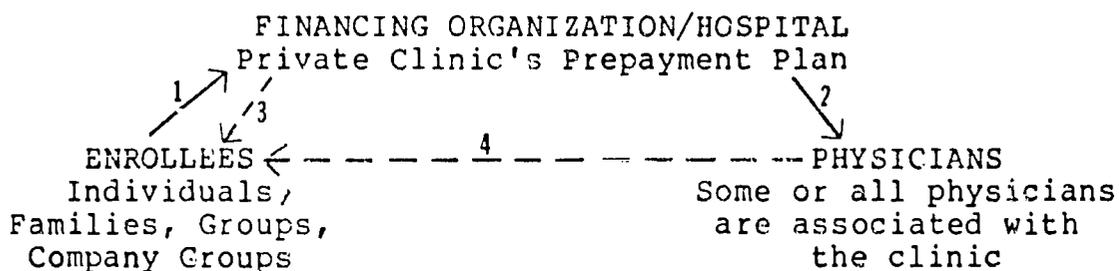
There are a number of similarities between this configuration and insurance company/HF coverage. Most providers' prepaid plans have limitations on coverage, having set maximum expenditures/enrollee/year as well as maximum amounts for particular services; only one currently-existing plan assumes all risk and offers unlimited coverage. Like insurance company plans, most providers' prepaid plans accept individual enrollment, although groups of at least three members are more typical. They also accept enrollment from large employers and/or groups of employees. Most prepaid plans have established deterrents to preclude overutilization -- "hesitation fees" or copayments that enrollees must make at the time of consumption of

services (14). The benefits offered are similar to those offered by the HFs. They are comprehensive, and include emergency care and drugs prescribed during hospitalization. Dental care and drugs for ambulatory patients are not included.

Of the various configurations, provider-managed prepaid plans place the greatest limitations on the enrollee's choice of provider (15); the choice is limited to physicians who are members of the medical group and/or hospital associated with or sponsoring the plan, a limitation that may be offset by higher quality or greater continuity of care. Proposals have been made to establish prepaid plans with multiple providers of both ambulatory and hospital care, since choice is a feature highly valued by beneficiaries (Salas; App. 1), but at present all plans are limited to one sponsoring hospital and medical group.

Schematically, the three main types of providers' prepaid plans in Peru look quite dissimilar.

In the first type, the financing entity (plan) is a clinic, separate from the staff of physicians. Clinica San Borja and Clinica San Felipe conform to this model.



(1) The enrollees pay a fixed amount regardless of the consumption of services, transferring the financial risk of possible illness to the plan.

(2) The plan pays the physicians associated with the clinic for services provided to the enrollees. Payment is on a fee-for-service basis, individually to each physician.

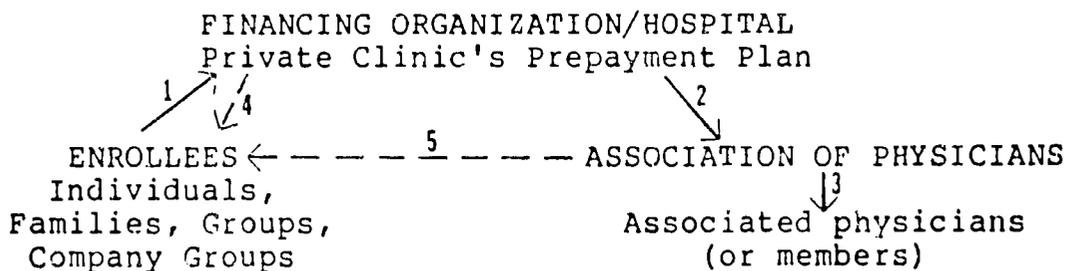
(3,4) The clinic and physicians provide the services included in the benefits schedule. The enrollees pay, upon consumption of services, the copayment stipulated in the contract.

The clinic promoting the plan does not receive formal payment for the services it provides to the enrollees. Its

profits or losses depend on two factors: ambulatory care service utilization (generally beyond the plan's control), and hospitalization expenses (which the clinics may partially control through an efficient use of resources).

The relationships between the four principal participants are such that the clinic assumes the financial risk, within the limits of coverage. Moreover, overutilization and overproduction of services are encouraged by the low copayments, by the method used to pay physicians, and by the lack of a unified health care system.

In the second type of provider-managed prepaid plan, the financing entity is a clinic which is separate from the staff of physicians. The physicians, however, have formally established themselves into an association. Clinica Anglo-Americana conforms to this model.



(1) Similar to the previous prepayment plan.

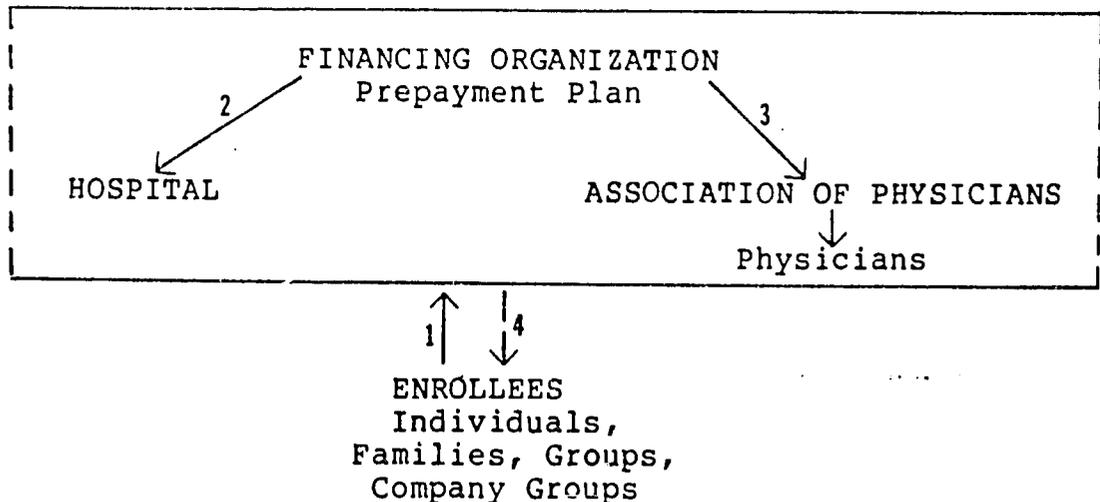
(2,3) The plan pays the association of physicians a fixed amount per enrollee per month, regardless of the enrollees' consumption of services during the period. The association distributes this amount to its members. At the Clinica Anglo-Americana, it is distributed according to the services provided by each doctor. Each service has a point value, which is the same for all doctors. The monetary equivalent of each point depends on the proportion of the amount collected by the plan (which varies only according to the number of enrollees) and the total number of services rendered, measured in points. Excessive utilization of services reduces the monetary value per point of each medical act.

(4,5) The clinic and physicians provide the services described in the benefits schedule to the enrollees. As in the first prepaid plan described, the clinic does not receive payment for hospitalization services provided to the enrollees. Its profit

or loss depends on the ratio of income from subscriptions to hospitalization expenses of the insured. The clinic may partially control this through an efficient use of its resources.

Conceptually, the relationship between the four participants is such that, within the limits of coverage, the financial risk is assumed jointly by the clinic and the physicians. The clinic's risk is somewhat greater, since it promotes the plan and since its influence over physicians is more limited than the influence they may exert over the clinic through their medical decisions. Doctors decide on hospitalization and length of stay; the clinic does not take part in these decisions. Overutilization of services is discouraged, since neither the clinic nor the physicians gain from it. Given the highly competitive market and physicians' ethical standards, it is improbable that this system will result in any deterioration in the quality of health care provided.

In the third type of provider-managed prepaid plan, the financing organization, the clinic, and the doctors' association are three separate entities, interrelated so as to form one organization. The Club de Salud at the Clinica Maison de Sante and the Association de Medicos Miguel Aljovin conform to this model.



- (1) Similar to the two preceding types.
- (2) The plan pays the clinic for the services it offers to the insured.
- (3) The plan pays the physicians' association for the services

they provide to the insured.

(4) The enrollees receive the services required according to contract provisions.

Theoretically, the financing organization assumes all risks. Its profits and losses are directly related to the health care and hospitalization expenses incurred by the enrollees. In practice, however, the risk is shared by the three organizations, since they all operate within one entity. In spite of the fact that payments are made on a fee-for-service basis, working for one common organization is a disincentive to the overproduction of services.

5. Other Plans. Several other provider-managed prepaid plans are offered in the Lima/Callao area. One is sponsored by a medical center (Los Pinos), and offers extensive ambulatory care at the center and hospitalization benefits through contracts with private hospitals. Other plans have more limited services. The Clinica Ricardo Palma offers a 20-30% fee discount to members of its "hospital club." Ambulancia San Cristobal, the Colegio Medico, and various guilds and specialized associations also offer health services and discounts with membership. Finally, a local financial institution recently began to offer a health insurance system. Individuals with accounts at the institution (which is similar to a savings and loan) may opt to have part of the interest earned on their deposits applied toward the cost of a health insurance policy premium. The cost and benefits of this premium are similar to conventional insurance policies. Apparently, the financial institution assumes all risks, but this could not be verified by the research team.

III.

COMPARATIVE ANALYSIS OF HEALTH CARE INSURANCE ALTERNATIVES

In order to determine the potential future market expansion of health care insurance and other prepayment alternatives, one needs to compare the following characteristics of the currently-existing mechanisms: a) arrangements for sharing the financial risk involved; b) the benefits offered for premiums charged; and c) the present extent of market coverage of each.

A. Assumption of Risk

All health care insurance mechanisms share one feature: individuals pass their risk of incurring medical costs to an institution, which pools the risk of subscribers and their premium payments. What distinguishes one model from another is the nature of the organization that assumes the risk and to what extent it is assumed.

1. Insurance Companies. The limit of the financial risk an insurer is willing to take in the event of an enrollee's illness or injury is specified in every insurance policy, and the insurance company configuration involves the least amount of risk to the insurer. Maximum coverage is similar to what is offered by most health funds, but expenditures in excess of the stipulated amount covered are invariably borne by the enrollee. The health fund beneficiary, in contrast, may or may not be individually liable for excess expenditure; if he is, credit may be extended, which he may pay back over a lengthy period of time, or immediate additional contributions may be required.

A second important aspect of the insurance company configuration is its system of incentives to consumers as well as providers. Consumers, whose costs for using private medical care are substantially lowered by insurance, are thereby encouraged to consume more services; deterrent measures (copayments and deductibles) and a limit to the amount of coverage per type of service help to curb unnecessary overutilization. Providers, paid on a fee-for-service basis, do not have a strong incentive to control abuse of the system, since the more services they deliver and the more expensive those services are, the higher their incomes. The insurance company payment method may thus encourage unnecessary utilization, since providers not only do not share the risk, but profit from delivering more rather than fewer services, leaving consumers to cover the extra costs.

In a highly competitive insurance market, however, insurance companies find it difficult to pass costs on to consumers. They are thus forced to consider stronger cost-control measures. Several companies have taken steps in this direction, including cooperative action through SEGUS (discussed above). In addition, the recent trend toward providing more ambulatory care through group practices as an alternative to hospitalization can be viewed as a cost-controlling approach.

2. Health Funds. Since the risk-bearing arrangements between HFs and broker-coinsurers was described in the previous chapter, this subsection treats only HFs that are not financially mediated by other organizations. Self-administered HFs assume the most risk of all the insurance alternatives. Recovery of excessive expenditures from beneficiaries may be difficult to achieve, but a more significant problem is the HF administrators' lack of experience in dealing with health care providers. Since they pay providers on a fee-for-service basis, the structure of incentives is similar to that described for insurance companies. The funds' lack of expertise is compounded by the close institutional relationship between plan administrators and beneficiaries. The problem of distinguishing between actual health needs and abusive behavior on the part of consumers, for instance, is complicated by the fact that the HFs typically are not subject to independent audits -- hardly an objective position. Nevertheless, self-administered HFs in Lima/Callao are slowly developing the expertise to review claims, control utilization by beneficiaries, and perform medical audits.

Some recent changes in the management of HFs are worth mentioning. Most have hired brokers or insurance companies either to administer or to coinsure the funds, thus passing the utilization and claims review responsibility to another party. One is planning to develop its own ambulatory care services, with its own facilities and salaried physicians, and to offer these services as an option to more traditional insurance arrangements (Ostos; App. 1); the absence of copayments for care will apparently be consumers' incentive to seek treatment at the HF's facility.

3. Provider-managed Prepaid Plans. Three possible risk-bearing entities have been identified for this configuration -- the plan itself, the hospital, and/or the medical group. The implications for cost-control incentives are significant for each.

In the first configuration, a plan and hospital are incorporated into a single institution, but physicians associated with the plan are not formally grouped; they have (more or less formal) contractual arrangements with the plan on an individual

basis. At present, two private hospitals in Lima, San Borja and San Felipe, conform to this pattern. In both instances, the hospitals have sponsored, created, and operated the plan. Physicians are paid, on a fee-for-service basis, for services provided to beneficiaries. The hospitals receive no separate payment, since they are part of the same organization as the plan.

Two results can be expected from this configuration. First, the financial risk, within the maximum coverage and benefit limits described in the policy, is assumed by the hospital/plan. Second, there are some incentives to overutilization: the method of remuneration of physicians (discounted fee-for-service), the absence of organized procedures typical of a managed care setting, and very low copayments.

A second configuration involves a plan and hospital as parts of the same institution, but physicians who are formally incorporated into a medical group, as at Clinica Anglo-Americana. A central feature of this configuration is that the medical group is paid on a per capita basis, regardless of the number and value of services rendered to enrollees. In one such plan, 30% of the monthly premiums go to the medical group, which determines the means by which its physicians will be reimbursed for their services. Physicians share in the 30% premium pool based on a formula related to the number of procedures performed and the stated value of each procedure. If the cost of services provided by physicians to the plan's beneficiaries is greater than the amount raised in premiums, the resulting loss cannot be passed to another organization or back to the consumer; the risk is shared by the medical group and the hospital sponsoring the plan, with each institution bearing its share independently of the other. For example, if the services provided by the physicians have a higher value than what is obtained from their 30% of premiums, then only the medical group has its payment per service reduced.

Two characteristics, then, typify this configuration. First, the financial risk is assumed, within the limits set by the maximum coverage, by both organizations -- but separately, with the hospital bearing a larger share since it is legally responsible for the plan and since its performance can be affected by the decisions of its physicians concerning who will be hospitalized, for what, and for how long. And second, there is little incentive in this arrangement to overutilize medical services. Each physician in the medical group is paid for services performed, but payment is based on a sliding scale of fees. A strong peer review system has been established among the physicians, insuring that only needed services are provided. In a few instances in which the cost incurred by physicians could not

be brought under control despite repeated warnings, the physicians were removed from the medical group and were no longer permitted to serve the patients of the plan.

A third configuration, developed by the Maison de Sante hospital and the A. Jobin medical group, involves three separate legal entities: the plan, the medical group, and the hospital. They are, however, joined by cross-referrals and by the use of the same physical facility, so that in effect they form a single organization, called the Club de Salud. The plan pays both the hospital and the medical group on a fee-for-service basis.

This arrangement has two characteristics. First, although on paper the financial risk is assumed solely by the plan, in reality -- since the three institutions form a single organization -- gains and losses are shared. The research team was unable to learn how this sharing is actually achieved. It appears, at least in the mid-term, that if utilization or costs of any one of the two components goes up, an attempt is made to regain equilibrium by revising premiums on the one hand and lowering fees (in constant terms) on the other. To what extent this is done simultaneously or proportionally for the hospital and medical association is not known. Second, in theory neither the hospital nor the medical group has incentives to control utilization and costs, but since the plan is, for both institutions, their main source of income, they have informal cost-control agreements of an unspecified nature.

There are, in addition to the three kinds of provider-managed prepaid arrangements described here, several others whose importance in the market is very small or limited to a specific group of beneficiaries. These were discussed briefly in section C-5 of Chapter II.

B. Comparison of Premiums and Benefits Among Insurance and Prepayment Configurations (16)

In metropolitan Lima/Callao the prepaid health care market has many variations in premium prices, benefits, and cost coverage, and in the number of options offered by various types of insurers. Despite recent efforts of several insurance companies through SEGUS to standardize policies, benefits, and the setting of formulas, some diversity persists. This diversity can be viewed as evidence of competition through product differentiation, but it may also be due to inadequate information available to insurers and clients.

In Table 11, premiums and cost coverages are compared among insurance, HFs and provider plans. Monthly premiums range

from 27 intis, in a low-option insurance plan, to a high-option plan offered by a broker at 450 intis (17). The difference in benefits coverage, of course, is likely to be considerable, although there is no systematic information on the basis of which one might compare benefits and costs among plans.

The hospital health plans serve different population groups. The most expensive and prestigious hospitals (Clinica Anglo-Americana and Santa Lucia) serve a small group of upper-income clients with a limited schedule of benefits. Two more (San Borja and San Felipe) together provide services to the largest group of users, approximately 25,000 middle-income enrollees, at a high-premium, limited-benefits rate. One (the Maison de Sante) stands alone, with 14,000 enrollees, the majority of whom are in the lower-income groups but who have three health insurance options within the plan and who enjoy unlimited comprehensive health benefits, assuming the services they require are available at the hospital.

One could assume from Table 11, in which premiums (for a family of 3) are compared to coverage, that third-party payor or indemnity plans are more competitive than the hospitals' plans -- if, as in this example, a more favorable return on premiums exists. However, the insurance company policies generally require a 10% to 20% coinsurance provision, a deductible amount, and also establish limits on cost coverage by category of services, such as hospitalization, ambulatory care, maternity benefits, etc. In contrast, benefits offered by the hospital plans are more comprehensive and not limited in this fashion, though frequently copayments are required at the time of delivery of services.

1. Insurance and Prepayment Limitations. With the exception of the Maison de Sante, all the provider-managed plans' policies specify coverage limitations. Many have copayment arrangements in which the enrollee is liable for a fixed proportion of costs. Most health fund and hospital plans require "hesitation payments" or copayments for hospitalization, ambulatory care, diagnostic tests, and ambulance services. Similarly, most employer health plans exclude from coverage congenital conditions, psychiatric services, regular physical exams, plastic surgery for esthetic reasons, orthopedic prostheses, dental care, ophthalmological services, pregnancy and prenatal care, drug addiction, injury due to civil disturbances, suicide attempts, injuries due to treatment performed by non-physicians, blood products, and nursing care.

Generally, enrollment of new members is limited to those 65 and under, except for the Maison de Sante which has no age limit (but a higher premium rate for the elderly). Frequently,

physicals are prerequisites to enrollment, and can be used to deny admittance to the plan. Though most policies become effective within 30 days of enrollment, the Maison de Sante permits certain benefits upon enrollment, gradually increasing coverage to 100% over a period of four months.

2. Determination of Premiums. Since in a large group of enrollees the risk per person is reduced as the size of the risk pool increases, the difference in costs and coverage varies, in part, according to the size of the insured group. Other considerations, such as the characteristics of the group, the effort to establish premiums at 4% of the total maximum face value of policies, and the willingness of insurance companies to take losses on their health insurance policies, are also important factors. Moreover, a direct relationship exists between cost/coverage and the degree of freedom of choice of provider. By forfeiting their choice of provider, enrollees can benefit from more favorable terms with the hospital-sponsored plans.

C. Estimated Market Size

The number of people covered by private sector prepayment arrangements in the Lima/Callao area is difficult to estimate due to the scarcity of information. Data on insurance companies is limited to official statistics on sales volume and claims by type of risk; there is no information on either the number of policies sold or the number of people protected (18). No regulation mandates that brokers, health funds, or providers' prepaid plans report either the volume of sales or number of persons covered to any agency. From interviews, the research team obtained estimates of the number of enrollees in each of the provider-managed prepaid plans, but beyond these figures it was not possible to obtain reliable data for the different health care financing mechanisms.

As an alternative, the total 1985 sales of health insurance by insurance companies and the prevailing price of an average individual policy were used to estimate the number of people covered by insurance companies, based on the largest-selling policy of the insurance company with the most sales (El Pacifico). The representative policy, under a plan sold to the Banco de Credito for its employees and dependents for December, 1985, cost I/177.58/month for the policy-holder, two dependents, and one additional person, for an annual cost of I/2,130.9.

The total volume of sales of health insurance policies by all insurance companies for 1985 was I/101.64 million. This figure corresponds to sales of health insurance in the entire

country; there is no data available specifically for Lima/Callao. However, since almost all health insurance policies were sold in the metropolitan area, it is appropriate to assume that the value for the country is applicable to the metropolitan area. Thus the number of insurance company policies sold in 1985 was estimated to be about 47,700 -- a conservative estimate, since the policy was priced at December 1985 prices while the sales represent the total number of policies sold through 1985 at lower prices. Since the average policy covered 4.5 people, the minimum number of persons who could have been covered by insurance companies in 1985 was around 215,000.

Interviewees suggested that health funds represent a similar number of persons, adding another 215,000 to the size of the privately-insured population.

Finally, it was estimated in interviews with hospital administrators that the total number of enrollees in provider-managed plans was 40,000. The total for all types of insurance is thus 470,000 people, of whom 45% are covered by insurance companies, 45% by brokers and health funds, and 10% by providers' prepaid plans.

This total is in accordance with the estimates of interviewees. The most experienced and best-informed people involved in health insurance in Lima/Callao all produced figures in the range of 400,000-600,000 enrollees. If these figures are correct (and we believe they are), the coverage of total households by some form of private insurance in Peru is only 4%. In the next chapter we assess the potential size of this market, if alternate prepayment configurations were to expand significantly in Lima/Callao.

IV.

POTENTIAL DEMAND FOR PRIVATE HEALTH INSURANCE AND MANAGED CARE ORGANIZATIONS IN LIMA/CALLAO

This chapter contains an estimate of the potential demand for health insurance in Lima/Callao, and an analysis of the factors most likely to affect the future of health insurance in general and managed care organizations in particular.

A. Demand Estimates for Family and Group Affiliation

Table 12 estimates the potential demand for health insurance in Lima/Callao, taking into account two important variables: the price of premiums (in relation to benefits offered), and the amount of after-tax income available to purchasing households (19). It is based on the following premises: that the cost of most premiums in Lima/Callao varies between US \$15 and \$25 per person per month; that families are willing to spend up to 5% of their after-tax income on health services, including health insurance premiums or other prepayment plan contributions (a figure suggested by the Encuesta Nacional de Salud y Vivenda); and that when policies are purchased through the workplace, employers typically contribute 50% of their value.

Two different scenarios emerge, depending on whether households pay 100% or only 50% of premiums. The potential number of people with coverage through insurance companies, HFs, and provider-managed prepaid plans could range from the current estimated number, almost 500,000 (215,000 under insurance company plans, 215,000 under HFs, and 40,000 under provider-managed plans), to 1.8 million; the projected ranges are 320,000 to 815,000 for potential family enrollment, and 343 to almost 1 million for potential group enrollment. The actual number will depend on the cost of premiums and the proportion of the population benefitting from employer contributions.

Based on a medium-priced premium as the most representative in the long run, family enrollment could theoretically reach a maximum of 900,000 people. However, only about 56% of middle- and upper-middle-class Peruvians indicated they would purchase health insurance under current economic circumstances (see Technical Note 3), so the size of the family enrollment market is more likely to be around 500,000 people (Table 12, column 4). Based on the medium-priced premium and

group enrollment, the maximum number of enrollees is estimated at almost 600,000 -- the number of people whose heads of households are either blue- or white-collar workers and whose salaries are above the level estimated as necessary to afford the premium. The research team was not able to obtain an estimated acceptance rate for this group; however, because of employer contributions, it is likely to be higher than the 56% projected for individual affiliation. If we assume that 80% of employees who could afford group affiliation will obtain health insurance through group enrollment, the size of this part of the market is likely to be almost 500,000 people (Table 12, column 10).

It is important to recognize that some of the 500,000 people who are likely to be insured individually are also among the nearly 500,000 who would enroll through group or job-related affiliation. At present there is no information available to estimate the size of this overlap; one can conclude only that the size of the market falls somewhere between 500,000 and 1 million people.

Another important factor in any prepayment market estimate is the average premium price per configuration and the distribution of the configurations prevailing in the market. At present, traditional insurance companies and health funds, both with medium to high premium prices, dominate the Peruvian market. Table 12 estimates the size of the market if more cost-efficient plans were to develop, lowering premium prices. (This will probably occur, as the market has been very competitive -- particularly over the last four years.) To illustrate this scenario, we have used a low premium value derived from a prepaid health plan aimed at lower-middle-income people. Based on the 56% demand rate calculation for individual enrollment and the 80% rate for group enrollment, the likely size of the market for low-priced premiums would be 815,000 and 980,000, respectively. Again, it is impossible to determine the extent of overlap between the two groups. It should also be noted that as premium prices fall the number of people enrolling in new plans will probably increase. Thus we can conclude that if purchases of more efficient insurance plans, such as provider-managed prepaid plans, increase in Lima/Callao, the approximate size of the market will be between 500,000 and 1.8 million people -- or up to one-third of the current population of Lima.

It is unlikely that this market size estimate will be readily accepted, because of the lack of a complete database and the consequent number of assumptions the research team was obliged to make. Yet, barring a major recession similar to that of 1982-83, a continuation of the trend toward private coverage

through risk-sharing that has been shaping the Lima/Cao insurance and prepaid health care market for the last 15 years is likely to continue. A mixture of individual and group enrollments and of low-, medium-, and high-priced premiums is the likely result. But a cautionary note is in order. According to our interviewees, the largest companies -- those that pay relatively high salaries and have the strongest management and union leadership -- are already covered by private health insurance. The conclusion that the market can grow significantly should therefore be qualified. The projected growth will materialize only if more and more efficient provider-managed plans emerge to take larger shares of the family and smaller group potential demand for low-cost, prepaid coverage.

B. Factors Influencing the Expansion of Insurance and Prepaid Plans

While our demand estimates suggest that the market potential for private prepaid health care in the Lima metropolitan area could be significant, the prospects for further development of the various configurations of prepaid health insurance must be put in perspective, given expected changes in socio-economic conditions and the government's health sector policies.

1. Development of Managed Care Organizations (MCOs). The volume of demand and the probability of further development of forms of health services coverage similar to the few recently-implemented hospital or provider-sponsored plans will be largely dependent on the capacity of the private hospital system to absorb increased demand without driving up costs. Under present circumstances, existing organizations will not be able to satisfy the expected growth in demand. Either of two developments will have to occur: an increase in the number of provider-sponsored plans and/or the creation of new forms of MCOs. Both would have to deliver services efficiently and at relatively low premiums.

It is more likely that in the short to medium term most new health plans will be offered by existing hospitals and provider groups. In order for this to happen, however, it will be necessary for providers to become more familiar with the concept and the organization of prepaid plans. Specifically, providers and hospital administrators must develop administrative and management skills that will permit them to render more efficient medical care. They must also modify their present organizational structures, eliminating existing incentives to inefficiency. A particularly good model to follow would be the prepaid managed

care plans of the Maison de Sante and the Clinica Anglo-Americana, in which medical groups share, either directly or indirectly, in the financial risk assumed by insurance plans.

In order to meet the potential demand of between 500,000 and 1.8 million people, the establishment of new health centers, particularly for ambulatory care, will be necessary. This judgment is based on data from MCOs, both in Peru and abroad, showing that an emphasis on ambulatory treatment causes hospitalization rates to fall and ambulatory encounter rates to rise.

The estimated growth in demand could also be met, although to a lesser extent, by the creation of new forms of MCOs. Two possibilities exist: a system based on co-ownership by providers and hospitals, or one based on competition among providers within the system. Under the first system, a single managed health delivery organization, owned by a group of private hospitals and insurance companies and managed by a designated administrator, would offer prepaid health insurance (Salas; App. 1); under the second, competing organizations would offer plans financed by insurance companies or health funds, and would contract for the services of provider organizations (clinics and medical centers) on a risk-sharing basis. An arrangement approaching this second configuration already exists in the form of the broker-coinsurer model, although in its present form providers do not share in the financial risk.

Other forms of organized provider arrangements may emerge over the next few years, with those organizations providing the most comprehensive coverage for the most affordable premiums enjoying the greatest success. The hospital-sponsored plans have proven to be efficient, since both the hospital and physicians assume a portion of the risk, which discourages unnecessary hospitalization. These plans can also offer greater coverage for lower premiums, which makes them more accessible to a larger segment of the urban population.

Since hospitalization rates under these provider plans are lower than under traditional health insurance, it is possible that the number of hospital beds needed, in the short run, could fall, but this situation will soon reverse itself as the number of MCOs and enrollees begins to grow.

The development and possible proliferation of these organizations will also improve the quality of medical services, assure continuity of care, emphasize preventive care, and provide for medical audits, utilization reviews, quality assurance, and

other mechanisms that contribute to high-quality medical attention.

Several factors may hinder the expansion of existing hospital-sponsored plans and the development of new forms of managed care organizations:

- a) a general lack of adequate managerial capacity -- especially planning, statistical, and administrative skills -- in both the private hospitals and their prepaid plans;
- b) the unavailability of risk capital to finance start-up costs (20);
- c) lack of specific knowledge on the part of private hospitals and medical centers about the concept of managed care;
- d) opposition, particularly on the part of successful, established physicians, to negotiating fees and compensatory rates on any basis other than traditional fee-for-service;
- e) Peruvians' doubts about insurance plans, the result of past failures of several health plans and of the belief that health insurance is a luxury rather than a necessity (21);
- f) the effect of the IPSS tax, from which no exemption for those insured under an alternate system is permitted. Employers see the costs of benefits rise, while employees see their after-tax income diminish if they choose private insurance.

On the other hand, several factors favor the development of new or improved MCOs:

- a) the market advantage of the hospital-sponsored prepaid plans, which offer greater benefits and coverage for lower premiums -- albeit with limited choice of providers;
- b) the oversupply of physicians in the Lima metropolitan area, which permits managed care administrators to negotiate more favorable

compensatory terms with physicians than traditional fee-for-service;

- c) the natural evolution of the market, in which the search for more efficient forms of health care delivery encourages the survival and domination of the most efficient systems.

2. Development of Company Health Funds. A fundamental element in the growth of the private insurance and MCO market is the development of health funds in relatively large companies. It is through these organizations that a large part of the population of Lima/Callao can be covered by private health insurance plans. At present, most health funds exist in companies with 3,000+ employees, although it is estimated that groups of only 200 workers have enough leverage to bargain for group insurance. Even smaller groups can seek the assistance of insurance brokers or other agents who may be able to manage various employee funds as one, thus obtaining better benefits and/or lower premium rates. The workers with the greatest opportunity to organize health funds are those in the financial and industrial sectors, where incomes are sufficient to pay insurance premiums; fewer opportunities for organizing funds exist for those in lower-paying commercial and public service jobs.

Two factors may hinder the development of company health funds as participants in the financing of private health insurance:

- a) unawareness, on the part of inexperienced HF administrators and even brokers, of the principles of efficient managed care and of the potential for negotiating favorable arrangements with providers and insurance groups; and
- b) continued unstable employment conditions, including high unemployment rates, which undermine the economic base necessary to sustain coverage through prepaid, managed health care in the private sector.

On the other hand, there are two factors that favor the expansion of company health funds in health insurance schemes:

- a) the convenience of HFs as a way of pooling

employees' financial resources in order to share risks and facilitate premium collection (via paycheck deductions), billing, and claims reviews; and

- b) the health benefits offered by HFs as the only practical means of obtaining coverage for dependents, since the IPSS provides only maternity coverage and limited ambulatory care for children up to 14 years of age.

3. Resources Needed to Satisfy Potential Demand. Table 13 and Technical Note 4 project the number of hospital beds needed to accommodate significant expansion in private health insurance coverage. If the market were to expand in the direction of third-party payor and indemnity plans, characterized by the mid-priced policies discussed in this chapter and by higher hospitalization rates, the number of beds required would be between 1,600 and 3,200. If it were to expand toward even more efficient managed care organizations, with lower hospitalization rates and lower premiums for greater coverage, the bed estimate would be reduced to between 1,160 and 2,600.

It is important to remember, however, that neither insurance nor MCOs are likely to predominate, but that a "mixed" system will probably evolve, as it has in the United States. Thus, the requirement range is more likely to fall between 2,600 and 3,200 beds, the upper limits of the two ranges mentioned above. At present there are 2,300 private hospital beds in Lima and Callao. However, it is doubtful that more than 50% of these beds could be used for acute care by privately-insured patients, either because of specialty limitations (maternity, pediatric, trauma, etc.) or because of the quality of the facilities.

Given that the average private hospital occupancy rate in Lima is below 75% (65% is considered the break-even point for most hospitals), there is clearly some excess capacity at current costs of care. In the short term, as private health insurance arrangements expand, this excess of beds will diminish, and in the long run it will be necessary to obtain more beds. Since the overall bed-to-population ratio in Lima is adequate, the possibility of renting underutilized IPSS and MOH beds might be a less costly option than the construction of additional private hospitals.

With regard to manpower reserves, there is an oversupply of physicians in the metropolitan area, and the projected number of nurses and midwives seems adequate to meet expected growth in

demand. However, more and better-trained health administrators -- both traditional acute care managers and MCO specialists -- are sorely needed.

V.

CONCLUSIONS AND RECOMMENDATIONS

A. Policy Issues

Managed, privately financed health care, in four different configurations, is already well-established in Lima/Callao, and may expand in the future. This expansion would be more likely to occur if the Government of Peru included the encouragement of private sector health care financing and delivery alternatives within the country's national health care policy framework, in which primary health care and child survival are already strongly emphasized.

Of the many reasons for establishing such a policy, one of the most cogent is the heavy use of public health care facilities and services, operated by the Ministry of Health, by middle- and even high-income segments of the Peruvian population. To conform to the country's overall health policy, MOH facilities should be available primarily to the medically indigent. The origins of this problem lie in the transfer of charity hospitals from the private to the public health sector in the early 1970s, and in the present dearth of affordable private hospital services, especially for middle-income segments of the urban population. The possibility exists, at least in Lima/Callao, to reduce the Ministry's fiscal burden by encouraging the expansion of prepaid health care financing and delivery arrangements, especially for middle-income segments of the population.

It is by no means certain that a satisfactory mix of MOH, IPSS, and private sector health care financing and delivery arrangements -- appropriate both in terms of population coverage and the population's ability to contribute to health care through direct fees for services, premium payments for insurance, or other prepayment arrangements -- will eventually be achieved. The existing mix, however, is quite clearly inappropriate for meeting the Government's and international donors' health sector objectives. The MOH of necessity concentrates its support on hospitals, leaving primary care facilities and programs sorely deficient in staffing, medical supplies, and maintenance. Unless a combination of IPSS and private sector health services can be arranged that will provide adequate care for up to four million inhabitants of Lima/Callao now using MOH facilities, the

metropolitan region will continue to absorb over half of all MOH resources.

The emergence of insurance and prepayment arrangements in Lima/Callao over the past 10 years has largely been a reaction to the declining quality of public sector services -- particularly medical care provided by IPSS. There is reason to expect that IPSS services will improve, and that coverage for dependents will be further expanded -- developments that would tend to reduce the pressure on employers to provide private health care alternatives for their workers. These possibilities, together with unstable employment conditions and the low absolute incomes of a large proportion of the capital area's population, mitigate against the rapid expansion of private sector health care financing alternatives. There are policy options that would favor either IPSS improvements or an expanded private sector role in privately financed health care expansion -- but these two developments need not be mutually exclusive.

Another area for policy discussion concerns the Government's formal recognition of health care financing alternatives. Under present law and policy, the Government recognizes only the private coverage offered by insurance companies, regulated by the office of the Superintendent of Banking and Insurance (SBS). In reality, however, many other entities -- brokers, health funds, and provider-managed plans -- offer various forms of prepaid, risk-sharing health care coverage. The SBS has not opposed these activities; nor does it hold brokers, health funds, or hospitals to insurance-company injunctions, according to our interviewees. Neither does the MOH regulate the insurance industry; it, too, tacitly accepts private insurance activity. If the use of private plans were to increase, the MOH, as the Government's policy-making entity in the health sector, would need to establish some mechanism for the collection of utilization data and other information pertinent to coordinated health planning.

In the view of MOH and IPSS officials interviewed, two factors will enhance the development of various private health insurance and other prepayment arrangements in Lima/Callao. First, renewed economic strength and increased after-tax income will improve the demand for such coverage, although how this demand might be modified by accompanying improvements in IPSS and MOH health care delivery is difficult to judge. And second, it is already acknowledged within the IPSS and MOH that private health insurance and managed care organization (MCO) activity can complement public delivery systems, by reducing the demand on overburdened public health care providers so that they can devote

more attention and resources to serving the medically indigent. However, health sector officials also recognize that the "double tax" effect of mandatory IPSS contributions plus private insurance premiums will inhibit the growth of private sector health insurance mechanisms.

B. Recommendations

In light of these policy considerations, the HCF/LAC research team suggests that the following specific measures be carefully considered by Peruvian health officials, international donor organization representatives, members of the Peruvian health insurance industry, and private health care providers.

First, both the Government and international donor organizations should formally recognize the existence of a private sector market for a variety of risk-sharing arrangements, including traditional health insurance, health funds, and provider-managed plans. Already-existing private sector health insurance configurations -- since they have the potential to expand health care coverage, especially for middle-income people who in most cases now depend on public sector services and/or bear the burden of direct fee-for-service medical payments -- should be taken into consideration in determining future health sector policies and priorities.

Second, the Government needs to define the role of each of the players in the private health sector explicitly, and establish guidelines and regulations for their activities. Prepaid arrangements would benefit from greater coordination, and may require some government regulation or monitoring in order to enhance their cost-containment potential and make them more widely affordable to the middle-income population. More organizations like the health insurance industry's SEGUS are needed to serve the common need for information on -- and representation of -- health funds (whether managed by employers, employee groups, or brokers) and provider-managed plans. Without a clear-cut regulatory policy, private health insurance systems in Peru will have an uncertain existence despite what may occur to encourage their expansion and development.

Third, the Peruvian health insurance industry should lower its costs. This industry has seen significant growth in the past 10 years, but is currently facing competition from brokers and employers who are creating self-insurance plans in order to save on health insurance costs. This competitive threat is a clear signal to the industry that its costs are excessive, a situation

that the industry could rectify both by expanding and by becoming more efficient in its payments to health care providers and its reimbursements to policy-holders. Further growth would also increase the market power of the industry and enhance its ability to contain hospital costs.

Fourth, private health care providers should become more familiar with the concepts underlying prepaid plans of various types, especially since it is likely that in the near future any new prepayment plans will be offered by existing hospitals or physicians' groups. Private providers who have already initiated prepayment plans for individual subscribers should be encouraged to expand their coverage under these plans; there is potential demand among middle- and lower-middle income Peruvians for such coverage, as long as fees are set at a reasonably low proportion of after-tax household income -- no more than 3-5%, or approximately US \$30-50 annually per person. For this prepayment fee, providers should design a package of primary health care and essential hospitalization services that allows them to cover costs and still earn a reasonable profit. Alternatively, such prepaid provider plans should be organized by -- or in cooperation with -- private voluntary organizations that already provide primary health care.

Fifth, the administrators of existing prepaid health care organizations should develop the management skills necessary to render their organizations more efficient, particularly by instituting new incentives to control costs.

Finally, depending on the amount of increase in demand for private hospital care after direct user fees have been reduced and risk-sharing coverage of the urban middle class has been increased, the MOH may find it economically feasible, under its cost-reduction plan, to turn the operation of some public hospitals over to private providers. Since in the long run a need for more private beds is projected, lease arrangements may prove mutually beneficial to both public and private sector interests, providing a new revenue source for the MOH while reducing its expenditures, and at the same time giving private sector medical services access to hospital facilities without the need to finance the cost of purchasing them or constructing new facilities.

FOOTNOTES

1. "Private" prepaid health care systems are those provided by non-public institutions.
2. The land occupied by these hospitals continues to belong to the beneficencias.
3. Firms with private health insurance coverage for their employees have occasionally requested exoneration from IPSS contributions, but this has consistently been denied because -- theoretically at least -- the organization permits beneficiaries to seek private sector care, albeit with limited reimbursement.
4. The National Health Council was established under the Peruvian government's Ley General De Salud, Decreto Ley #22365.
5. The research team conducted a survey at four private hospitals and a medical center to test the hypothesis that dissatisfaction with IPSS and rising health care costs did lead to an increased use of private health insurance. The sample included respondents from the lower, middle, and upper income classes, with the majority coming from the middle class -- 32% lower-middle, 22% middle, and 34% upper-middle (see Technical Note 2). Of the 76 respondents, 82% had private health insurance coverage, of which 60% was obtained through the workplace. Fifty-nine percent were IPSS beneficiaries, but 93% of them had not used IPSS services during the previous 12 months.
6. An interview with insurance company representatives from El Pacifico and El Condor revealed that to remain financially viable, the companies cannot pay costs for claims in excess of 65% of total premium income. Another 30% is set aside for administrative costs and brokers' commissions, and there is a 5% profit. (The insurance companies must also charge an 11% sales tax, passed on to the consumer.) With costs of health services rising rapidly, the prices of the premiums needed to be adjusted -- at first twice a year, now on a quarterly basis. The adjustment is generally based on the claims experience of the previous quarter, with the increase calculated to fix claims at approximately 65% of total premiums.
7. Most health funds receive equal contributions from employers and employees.

8. Some foreign companies have private insurance for their employees in Arequipa and Trujillo, but it is very limited.
9. IPSS is still contracting for private services and reimbursing enrollees for private care on a very limited basis; see App. 3.
10. It should be noted at the outset that the organizations described below serve only a very limited proportion of the Peruvian population. The extent of health care coverage in the Lima/Callao area is slightly greater than in the rest of Peru, but is far from universal; large numbers of recent immigrants and other urban poor lack access to any type of service.
11. Brokers play at least three different roles in the prepayment field: they act as agents for insurance companies, as administrators for company health funds, and as coinsurers together with company health funds.
12. This information was obtained during an interview with the insurance companies' trade association.
13. Only one instance was found in which a health fund had transferred risk to providers: a fund at Hierro Peru, under a contract with the Clinica Anglo-Americana. In this case, the HF pays the private hospital (which operates a prepayment plan of its own) a flat amount/beneficiary/month, independent of the total cost of services used. Since this arrangement is not an instance of HF participation in risk-sharing, it should be classified under providers' prepayment plans rather than under company health funds.
14. In an interview with the administrator of the Maison de Sante's Club de la Salud, we learned that this plan has no deterrent fees since, in the opinion of its management, this would defeat the purpose of the arrangement: to remove financial barriers to appropriate care.
15. Freedom of choice is strongly defended by the medical profession, but prepayment plans are accepted, according to officials, because the choice is made prior to joining the plan.
16. The benefits schedules of various plans can easily be compared, but since it is nearly impossible to access or evaluate the (real or perceived) quality of services, conclusions drawn from analyses of the prices and benefits of various plans are very subjective.
17. The Banco de la Nacion health fund's monthly premium of I/110 cannot be used in this example as it is the employee contribution for a program heavily subsidized by the employer.

18. Even SEGUS has serious difficulties in obtaining additional data from the very companies that created it.

19. For a full explanation of how this Table 12 was derived, see Technical Note 3.

20. Given the present investment environment, it is unlikely that foreign capital will be available for such ventures.

21. This prejudice is slowly disappearing as people become more familiar with the concept and advantages of insurance as a means of protecting family income.

Technical Note 1

PROTOCOLS FOR INTERVIEWS

The research team developed interview protocols for use during visits with CEOs and managers of private hospitals and medical centers; insurance companies and brokers; and employee benefits managers of company health funds.

The provider protocols explored such topics as the legal status and general organization of institutions and the degree of organization and involvement of medical groups in the administration of hospitals or medical centers. Questions concerning physical plant, administrative operations, financial status, and the determination of costs were broached, and statistical information about utilization by type of service over a five-year period was requested.

In the case of provider institutions offering prepaid plans, questions about organization, contractual relationships, the distribution of risk, costs, benefits, and services were asked. In addition, research team members inquired about marketing efforts, plans for further expansion, and the viability of this form of health insurance in the Lima metropolitan market.

The interview protocols designed for insurance company and broker representatives emphasized pricing, clientele, provider relations, and utilization statistics. In addition, certain financial and marketing information was requested.

Interviews with health fund benefits managers stressed financing, benefits and cost experience. Options for the financing and delivery of health care were also discussed, in order to assess the relative economies of different insurance models and the degree of consumer (employee) satisfaction.

While persons interviewed were generally very cooperative and seemed interested in the study as being of potential benefit to them, they were not -- with one or two exceptions -- willing or able to provide detailed statistical information. The research team was left with the impression that statistical databases are probably limited in number and inadequate for efficient management, but also that the institutions involved are very reluctant to share information due to unspecified fears that this would be to their disadvantage.

Technical Note 2

CONSUMER SURVEY

The patient survey attempted to determine the economic and social status of the respondents and their principal means of financing of private health care services. Preferences for IPCS, MOH, and private providers were determined and compared to the patients' "ability to pay," whether directly out of pocket or by means of a private sector prepayment arrangement. Detailed questions were asked about private health insurance coverage, membership in company health funds, provider-sponsored health plan participation, including purchasing arrangements, benefits, extent of coverage, and freedom of choice among providers. In addition, information was sought regarding the perceived quality of care in the private sector.

The socio-economic level of each respondent was determined by assigning points to variables such as home ownership, car ownership, size of home, other types of insurance coverage held, and absence or presence in the home of certain services (telephone, credit, bank accounts, etc.).

Technical Note 3
(see Table 12)

CALCULATIONS OF THE DEMAND MODEL

Two demand alternatives are developed in Table 12. The first is for family enrollment; the second is for group enrollment, hypothesizing a 50% employer contribution towards the cost of premiums.

A. Family Enrollment

1. Determination of the maximum, minimum, and average cost of annual premiums for health insurance (column 1) for a typical family size of 4.5 persons. On average, the most costly prepaid health insurance plans found in Lima were those offered by general insurance companies. Therefore, in the model, a typical group policy offered by one of the largest insurance companies with 25% of the market share was used. The lowest monthly premium used in the model was drawn from the premiums charged by a prepaid plan offered by a clinic which permits both group and family enrollment. This clinic has the advantages of low operational costs and efficiency in the delivery of care. The average premium used in the model is a conservative estimate of 20% below the typical insurance company premium, in order to reflect the administrative cost savings companies can obtain when they are able to administer their own sick funds, or hire a broker as an administrator.

2. Minimum income necessary in order to afford the premium (column 2). Both the ENNSA survey and the Encuesta Nacional de Consumos de Alimentos (ENCA) showed that the average Peruvian family spends approximately 5% of its disposable income on health care expenditures (this figure does not include the IPSS contribution of 3%.) The figures in column 2 represent the minimum family income necessary in order to purchase the types of health insurance which appear in column one. These family plans do not have the benefit of employer contribution; the family must assume 100% of the cost of the premium.

3. Maximum potential demand (column 3). These figures represent the number of people in each income group that could be enrolled in the respective health insurance plans. The income and population figures were obtained from the ENNSA survey of 1984, and adjusted by the INE estimated growth rate for 1985 (Govt. of Peru 1984-85).

4. Determination of actual demand (column 4). Since the entire population would not necessarily be interested in purchasing health insurance, this column represents a more realistic estimate of the number of potential enrollees. The 55.7% figure is based on the results of a market survey of middle and upper middle class heads of households interviewed in 1985 about their disposition towards prepaid health insurance and/or clinic plans.

B. Group Enrollment with 50% Employer Contribution

The figures in columns 5 and 6 are half those of columns 1 and 2, as the employer contribution takes effect. The figures in columns 7 and 8 represent the number of workers and their families in blue- and white-collar households who could be enrolled in a health insurance plan. Given the fact that they work in companies, there is a higher probability that they would be disposed (because of the employer contribution) towards purchasing health insurance. Column 9 represents the sum of columns 7 and 8: the total possible demand, with employer contribution, for high, medium, and low cost insurance. In column 10 it is assumed that 80% of employees who could afford group affiliation will obtain health insurance through group enrollment. The size of this part of the market, using the figures in column 10, thus ranges from 343,000 (based on a high-cost policy) to almost 1 million (based on a low-cost policy).

Technical Note 4

HOSPITAL BED ESTIMATES

The following model was developed to determine the number of beds necessary to meet potential growth in demand in the private sector as prepaid health care arrangements expand (see Table 13). The bed demand calculations are based on the private sector insurance demand model. The figures that are of significance to the model are the market size estimates for low-priced and medium-priced premiums. For each one, a range is provided, since the overlap between individual and group affiliation could not be estimated.

The following generally-accepted health planning standards were employed in the bed demand model:

- 1) Bed to population ratio: 2 acute care beds per thousand inhabitants.
- 2) Two standard bed-day utilization rates are recognized:
 - a) 450 bed-days per thousand enrollees per year, which represents an efficient use of bed resources; and
 - b) 900 bed-days per thousand enrollees per year, more typical of the performance in the health insurance industry.

The two bed-day utilization rates were chosen to represent each extreme of the market in Peru: 450 bed-days/1000 per year for efficient plans and 900 bed days/1000 per year for less efficient insurance mechanisms.

TABLE 1
 CONSUMER AND HEALTH CARE PRICE INDICES
 (base year 1979)

Year	Consumer price index	Health care price index
1960	4.65	N/A
1965	7.12	N/A
1970	11.32	N/A
1975	20.50	N/A
1979	100.00	100.0
1980	159.15	168.3
1981	279.20	308.4
1982	452.20	551.8
1983	969.30	1262.5
1984	2038.04	2969.5
1985	5368.18	7704.2

Source: BCRP: Memoria 1960 - 85, Lima: BCRP.
 INE: "Compendio Estadístico 1985," Lima: INE.

TABLE 2

PRIVATE HEALTH INSURANCE SALES, 1977 - 84
(in thousands of constant 1980 soles)

	1977	1978	1979	1980	1981	1982	1983	1984
All Policies								
Gross Insurance Sales	63,809	55,251	54,699	60,961	62,803	62,100	59,100	60,613
Reinsurance Costs	39,409	33,517	33,673	36,757	37,069	31,693	32,574	31,938
Net Sales	24,399	21,734	21,026	24,204	25,734	30,407	26,526	28,676
.....								
Health Policies								
Gross Insurance Sales	1,117	1,206	1,811	2,430	3,231	3,929	3,262	3,511
Reinsurance Costs	89	45	0	0	0	22	22	27
Net Sales	1,028	1,161	1,811	2,430	3,231	3,907	3,240	3,484
.....								
Health policies as % of total	1.86	2.45	3.61	4.31	5.53	6.79	6.05	8.80

Source: Government of Peru 1977-84.

TABLE 3

INSURANCE COMPANIES AND THEIR MARKET SHARES, 1984

Insurance company	Market share
Internacional	4.8
Rimac	6.8
Atlas	2.7
Sud America Vida	0.5
Popular y Porenir	5.6
La Nacional	3.5
La Fenix Peruana	2.2
Italo Colmena	1.0
El Pacifico	1.0
La Positiva	24.5
Peruano Suiza	6.6
La Vitalicia	3.8
El Sol	11.4
La Universal	5.6
Sud America	0.1
Panamericana	17.6
Condor	1.2
La Real	1.1

	100.0

TABLE 4
HOSPITALS AND HOSPITAL BEDS BY SUBSECTOR
PERU, 1985

Subsector	Hospitals		Hospital beds		Average size (beds/hospital)
	No.	%	No.	%	
MOH	117	34.6	16,183	54.0	138.3
IPSS	21	6.2	4,730	15.8	225.2
Other public	14	4.1	2,359	7.9	168.5
Private	157	46.4	5,384	18.0	34.3
Other	29	8.6	1,328	4.4	45.8
Total	338	100.0	29,984	100.0	88.7

TABLE 5
HOSPITALS AND HOSPITAL BEDS BY SUBSECTOR
LIMA/CALLAO, 1985

Subsector	Hospitals		Hospital beds		Average size	% of total beds in Peru
	No.	%	No.	%		
MOH	28	21.5	8,060	49.0	287.9	49.8
IPSS	7	5.4	2,675	16.3	382.1	56.6
Other public	6	4.6	1,861	11.3	310.2	78.9
Private	86	66.2	3,655	22.2	42.5	67.9
Other	3	2.3	198	1.2	66.0	14.9
Total	130	100.0	16,449	100.0	126.5	54.9

Source: HSA-Peru 1986e.

TABLE 6
 PERFORMANCE OF HOSPITALS BY SUBSECTOR
 PERU AND LIMA/CALLAO (1)

Subsector	Length of stay		Occupancy rate		Discharges per bed	
	Peru	Lima/Callao	Peru	Lima/Callao	Peru	Lima/Callao
MOH	9.7	9.7	68.7	75.1	23.0	31.0
IPSS	11.0	15.4	71.9	84.1	24.7	20.1
Other public	N/A	14.1	N/A	87.3	17.0	23.0
Private	N/A	6.1	N/A	57.2	33.0	32.7

Source: Information at the national level from MOH 1983 and IPSS 1983. Information for Lima/Callao was obtained from MOH 1985.

Note: (1) - Information for Lima and Callao is based on a sample of hospitals from this area. They represents 45% of the total number of beds in Lima and Callao. Production data for these hospitals was only available for the month of October 1985.

TABLE 7

DISTRIBUTION OF PHYSICIANS BY SUBSECTOR
PERU AND LIMA/CALLAO, 1983

Subsector	Peru		Lima/Callao		% of physicians practising in Lima/Callao (by subsector)
	No.	%	No.	%	
MOH	4,972	31.1	3,104	26.5	62.4
IPSS	2,902	18.1	1,795	15.3	61.9
Other public	3,035	19.0	N/A	--	--
Private	5,100	31.9	N/A	--	--
Total	16,009	100.0	11,719	100.0	73.2

Source: Human Resources Division, MOH 1984.

TABLE 8

DISTRIBUTION OF NURSES BY SUBSECTOR
PERU AND LIMA/CALLAO, 1983

Subsector	Peru		Lima/Callao		% of nurses practising in Lima/Callao (by subsector)
	No.	%	No.	%	
MOH	4,136	32.5	1,932	26.5	46.7
IPSS	2,950	23.2	1,819	24.9	61.7
Other public	2,778	21.8	N/A	--	--
Private	2,859	22.5	N/A	--	--
Total	12,723	100.0	N/A	100.0	57.3

Source: Human Resources Division, MOH 1984.

TABLE 9

EXPENDITURES ON HEALTH CARE BY THE MINISTRY OF HEALTH
AND INSTITUTE OF SOCIAL SECURITY IN RELATION TO
CENTRAL GOVERNMENT EXPENDITURES AND GDP, 1980 - 84

Year	(1) MOH/ Centr. Govt.	(2) Soc. Sec./ Centr. Govt.	(1) + (2)	(3) MOH/ GDP	(4) Soc. Sec./ GDP	(3) + (4)
1980	4.91	4.91	9.82	1.35	1.35	2.70
1981	4.95	6.34	11.29	1.33	1.70	3.03
1982	4.58	6.47	11.05	1.18	1.66	2.84
1983	4.46	5.09	9.55	1.29	1.47	2.76
1984	4.19	5.02	9.21	1.23	1.50	2.73

Source: HSA-Peru 1986i.

TABLE 10

PRIVATE HOSPITAL: EXAMPLE OF FEE SCHEDULES FOR DIFFERENT USERS
(prices in intis as of July 1986)

	Rates	
	Preferred (insurance rate)	Regular
Hospital room:		
New building: Private, with phone	250.00	275.00
Private, without phone	220.00	240.00
Old building: Private, without phone	200.00	220.00
Semi-private (shared bath)	160.00	180.00
Wards (4 or 6 beds)	130.00	150.00
Intensive care (per 24 hours)	540.00	600.00
Operating room:		
Initial half hour	250.00	280.00
Second half hour	230.00	250.00
Each additional half hour	120.00	140.00
Physician: Medical assistant		
Surgery: less than half hour	120.00	200.00
Surgery: upto one hour	130.00	250.00
Surgery: over one hour	150.00	300.00
Surgical procedures:		
Tonsilectomy - operating room	250.00	300.00
Medical assistant	120.00	150.00

Source: A private hospital with lower than average rates.

TABLE 11

PRICE OF PREMIUM AND MAXIMUM COVERAGE FOR SELECTED
HEALTH INSURANCE MECHANISMS - LIMA, PERU, 1986
(prices in Intis as of July 1986)

	Premium Cost of Policyholder	Premium Cost of Policyholder + 1 dependent	Premium Cost of Policyholder + 2 dependents	Maximum Coverage	Ratio (%)*
HEALTH INSURANCE COMPANIES					
ItalSeguros	51	130	171	10,000	1.7
Segusfa	59	92	131	7,800	1.6
Financiera Progreso	95	275	350	30,000	1.2
El Pacifico (1)	27	75	122	10,000	1.2
BROKER'S POLICIES					
Inti (A)	195	326	387	30,000	1.3
Inti (E)	425	682	772	80,000	1.0
Inti (F)	450	734	832	100,000	0.8
HEALTH FUND					
Banco de la Nacion	110	220	330	8,700	3.8
HOSPITAL SPONSORED PLANS					
Anglo - Americana	95	190	285	9,500	3.0
Maison Sante (A)	48	83	110	Unlimited	N/A
Maison Sante (B)	82	136	180	Unlimited	N/A
San Borja (A)	98	146	204	10,400	2.0
San Borja (B)	112	224	336	15,400	2.2

Source: Company brochures, 1986.

Note: (1) Data for May 1985

(2) The amount contributed as "premium" by the beneficiaries of the Health Fund is only 20% of the total premium cost. Thus, the total cost per beneficiary per month is used in the table.

* Ratio of Policyholder and 2 dependents to maximum coverage.

TABLE 12

DEMAND ESTIMATES FOR PRIVATE HEALTH INSURANCE: FAMILY AND GROUP ENROLLMENT
(U.S. Dollar equivalents)

Cost level of plan	Family Enrollment				Group Enrollment (with 50% employer contribution)					
	Annual premium cost	Annual income needed	No. of people in income level (thousands)	55.7% of population at income level (thousands)	Premium cost	Income needed	People in blue collar households (thousands)	People in white collar households (thousands)	People in both categories (thousands)	80 % of population (thousands)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
High	300	6,000	591.0	329.0	150	3,000	36.4	392.8	429.2	343.4
Medium	240	4,800	900.3	501.4	120	2,400	50.2	547.6	597.8	478.2
Low	180	3,600	1,463.7	815.2	90	1,800	192.2	1,032.6	1,224.8	979.8

Source: Prepared by research team according to Technical Note No. 3.

Note: The total population of Lima, as projected by INE for 1985, was 5,523,600 people.

TABLE 13
HOSPITAL BEDS NEEDED FOR AN EXPANDED
HEALTH INSURANCE MARKET

Enrollees (in thousands)	Bed requirement		
	At 2 beds/1,000	At 450 bed- days/1,000	At 900 bed- days/1,000
Mid-priced premium 500 - 1,000	1,000 - 2,000	800 - 1,600	1,600 - 3,200
Low-priced premium 800 - 1,800	1,600 - 3,600	1,160 - 2,600	2,320 - 5,200

Note: Elaborated by research team. See Technical Note No. 4.

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Appendix 2

PROVIDER-MANAGED PREPAID HEALTH CARE PLANS IN LIMA/CALLAO

At the time of the research team's fieldwork in Lima/Callao, four health care delivery institutions were offering prepaid health care plans in the metropolitan area:

1. Clinica San Borja
2. Clinica San Felipe
3. Clinica Anglo-Americana
4. Clinica Maison de Sante

The Clinica San Borja and the Clinica San Felipe act as health care financing entities separate from the physicians who provide health care services to enrollees at these institutions. The Clinica Anglo-Americana is a financing entity with ties to a physicians' association, whose members provide health care services to its health plan enrollees. The Club de Salud is the mechanism that offers prepaid health care through the Clinica Maison de Saute.

Appendix 3

IPSS HEALTH SERVICES

The Peruvian Social Security Institute provides health care services to enrollees in several different ways.

First, beneficiaries can obtain services directly from centers operated by IPSS, paying nothing.

Second, ambulatory care and certain kinds of hospital care can be delivered indirectly, through providers under contract with IPSS. Again the patient pays nothing, since providers are paid directly by IPSS. (In the late 1970s and early 1980s, IPSS had contracts with several private hospitals to provide acute care for its beneficiaries, but these arrangements ended in 1982-83 due to dissatisfaction on both sides. Because IPSS payments were chronically late, providers felt they were being unfairly treated. At the same time, IPSS sustained heavy losses due to abuses of the system by providers. At present, the contract method of services delivery is used only for chronic care, such as geriatric and psychiatric hospitalizations.)

The third method, restricted to a small proportion of beneficiaries whose enrollment in IPSS is voluntary, involves limited reimbursement to beneficiaries for services provided by private providers. There is, however, a wide gap between the level of reimbursement established by the IPSS and the prevailing fees of private providers; the research team learned, for instance, that while fees for an office visit to a private physician varied from 50-200 Intis, the reimbursement obtainable by IPSS beneficiaries was recently as low as I/1.36. There has also been a history of problems and administrative delays in obtaining authorizations for care from outside providers, and in reviewing claims presented for reimbursement.

Since it allows some beneficiaries to seek care in the private sector, IPSS can claim that it maintains an "open" system. In reality, however, the only acute care services obtained free of charge are those offered at IPSS facilities or through private contractors.

Only a part of the labor force is enrolled in the IPSS, and until recently the system provided no health coverage for dependents. Coverage has recently been extended to include spouses as well as children up to 14 years of age, with certain limitations, but these dependents' access to services has not yet been fully implemented. At present, it is estimated that 18.6%

of the population is entitled to IPSS coverage -- a figure that may be unrealistic, since many beneficiaries either have no access to IPSS health care or do not use it. Except for those covered by the Armed Forces and Police or mining company health services, the rest of the population (including many dependents of IPSS enrollees) obtains health care either from the MOL or the private sector (HSA-Peru 1986h).

Appendix 4

THE PRIVATE HOSPITAL SECTOR

The research team interviewed the Chief Executive Officers and, when they were available, the business managers of eight private hospitals, whose 844 beds account for 37% of the private sector beds in metropolitan Lima. These were the Maison de Sante, San Felipe, Javier Prado, Anglo-Americana, Internacional, San Borja, Stella Maris, and Ricardo Palma hospitals (the interview at San Borja was with the Prepaid Hospital Plan division only). The average physician-to-bed ratio of these hospitals was .8, although many physicians enjoyed privileges at more than one hospital.

Of these eight private hospitals, three were non-profit -- two operated by beneficencias and one by a Catholic religious group. The remaining hospitals were for-profits, and (with one exception) were majority owned by shareholders who were physicians practicing in these same hospitals, or members of their families. In most cases the shareholders were medical department heads. In some cases the medical equipment they used belonged to the hospital; in others, they owned it themselves.

The physical plant of one private hospital was 30% owned by a commercial insurance company and 70% owned by physicians, nurses, and other hospital personnel. In another case, the hospital entity simply managed the facility, as it did not own the physical plant, land, or fixed medical equipment. For the most part, the non-profit hospitals' physical plants and equipment belonged to the beneficencias (or in one case the religious order) administering the hospital. In one instance, the physical plant and equipment were rented to the beneficencia, at minimum price, from a private entity.

The diversity of medical services offered by the eight private hospitals and their associated physicians was extensive, and high-technology specialty equipment was frequently shared among them.

A. Management and Organization

All the hospitals but one (the religious order's clinic) were managed by physician/administrator CEOs who also served as their hospitals' Medical Directors. In three, they were administrators only; in the others, they practiced in the hospital. In the Catholic hospital, an administrator/nurse was chosen from the order. In four of the hospitals visited, the

business managers were responsible for physical plant maintenance and all accounting functions, although the maintenance of the physical plant was subject to the administrative decisions of the physician/administrator.

In only one hospital did the business manager seem to operate with more autonomy. In this case, the Board of Directors hired the manager and gave him greater authority in the administration of the hospital. In another exception to the general rule, one hospital's business manager was the legal representative of the stockholders' interests, while the physician/administrator served as the legal representative of the hospital and as Medical Director. Consequently, the physician's role in the management of the hospital was greatly reduced. In five cases, the physician/administrator was both a shareholder and a member of the board.

B. Medical Group Organization

Only four of the hospitals had formally-organized medical groups representing the interests of the physicians with privileges at the hospital. Generally, their participation in the day-to-day operation of the hospital was limited, despite the fact that many were shareholders in the hospital corporation. In three of the hospitals, the medical group had an active committee structure, with regularly-scheduled meetings. Most medical committees at the hospitals functioned, however, on an ad hoc basis, at times when issues of a clinical nature arose. In the hospitals without a formal medical group, the physician/administrator (also the Medical Director) was generally responsible for resolving issues of this nature, sometimes appointing a committee to assist him.

C. Private Hospital Sector Performance

Private hospital performance indicators were obtained from the MOH and from one private hospital. Performance indicators for the four principal health subsectors (MOH, IPSS, Military, Private) do not compare favorably. A one-month sample (October, 1985), made available to the research team by the MOH Division of Statistics, showed that the lowest ALOS during the month was 6.1 days in private hospitals, while the longest stays occurred in the IPSS and military hospitals. Similarly, occupancy rates were lowest for that month in the private hospitals (a 57% average OR among the seven private hospitals sampled).

The (1985) volume of billing and collections for a private clinic in Lima was provided by the clinic's accounting division. For this clinic, hospitalization costs comprised between 50% and 60% of the total health bill, and physicians' fees 25% to 36% of

the bill.

The volume of sales for hospitalization at a private clinic over a one-year period was also examined. Approximately 42% of services were billed to insurance companies, brokers, or other risk-taking institutions.

D. Medical Centers

Medical centers in Lima/Callao provide ambulatory services and some minor surgical procedures, principally to the privately-insured population. Their emergence and growth over the last five years is attributed to the encouragement of health insurance companies seeking a more economical alternative to traditional hospital care. Most medical centers are located in the San Isidro and Miraflores districts, where the upper and middle classes reside. Physical plants range from converted older houses to modern buildings such as Los Pinos, Medex, and MEDICSA.

Physicians are reimbursed by the medical centers' administrations by fee-for-service, salary, retainer, or according to their shareholding status. Fee-for-service is by far the most common means among specialists, while general practitioners are usually on salary at the medical centers. Physicians benefit by sharing in overhead and administrative expenses, and are relieved of the burden of billing and collecting. In addition, referrals to specialists are usually made within a center's medical group.

There are eleven major medical centers in Lima/Callao. Three -- Medex, Los Pinos (Miraflores), and MEDICSA -- have modern facilities with 13-15 physicians' offices/examination rooms each, and offer a wide range of specialty services. All three have computerized accounting systems. The medical centers Juan Pablo I, Marconi, and Los Pinos (Callao) are slightly smaller in size, and occupy houses refurbished to serve as medical centers. The number of physicians participating in these groups is smaller, and administrative functions have not yet been computerized. The remaining five medical centers are, in reality, small groups of physicians who share offices in the same building. Each physician practices independently of the others, and billing, collections, medical archives, equipment and furniture are not shared.

E. Provider-managed Health Plans

Private hospital and medical center health plans compete effectively with commercial health insurance plans in Lima because of the wider coverage and benefits they offer compared with health funds, commercial health insurance, and brokers'

policies.

Inflation has eroded the real value of health insurance coverage. When the rise in premium prices and coverage for one of the provider-sponsored plans, the Plan Asistancial Medico at the Clinica Anglo-Americana, was examined over a three-year period from January 1983 - August 1986 and adjusted to reflect real prices, it was evident that the real price of the premium had fallen to 43% of its original value and real coverage to 60% of its value at the beginning of the period.

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