



A Health Sector Analysis of Peru Technical Report

Coverage and Costs of Medical Care Under Social Security in Peru

Carmelo Mesa-Lago

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FOREWORD

This is one of nine reports prepared for the Health Sector Analysis of Peru (see back cover). The author served as consultant to Stony Brook and worked closely with Peruvian social security experts in the research for this report. His Peruvian collaborators have been Luis Manrique and Eduardo O'Brien. The President of the Peruvian Social Security Institute (IPSS), Dr. Jose Barsallo Burga, personally met with the author and project director to discuss the priorities of his administration, and he personally authorized access to the detailed information from IPSS internal sources that are used in this report.

Dr. Carmelo Mesa-Lago is an economist on the faculty of Pittsburgh University in Pittsburgh, Pa. He is a well-known authority on the development of social security systems in Latin America and the Caribbean. The author and project director closely cooperated in the design, preparation and editing of this report, within the overall conceptual framework of the HSA-Peru. The final version of this paper was substantially edited by a Stony Brook colleague, Prof. Homer Goldberg.

Dieter K. Zschock
Director, HSA-Peru

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I.

INTRODUCTION

This report analyzes the coverage, benefits and expenditures and financing of the Peruvian Institute of Social Security (IPSS) medical care program against the background of Peru's continuing economic crisis that has substantially reduced the institute's revenue base. The report concludes by comparing Peru with other Latin-American countries that confront similar problems developing medical care under social security programs and recommends ways to improve the program's current situation.

Medical coverage provided by the IPSS program is among the lowest and most unequally distributed in Latin America. Yet its costs are among the highest in the region. Despite legally mandated contribution rates for employers and employees exceeding the Latin American average, the program began operating at a deficit even when the Peruvian economy was relatively healthy and did so continuously from 1977 through 1984. Dramatically deteriorating real wages and widespread non-collection, especially the government's failure to pay its own employer contributions, eroded revenues while high administrative and personnel costs, inefficient hospital services and expensive outside contracting increased expenditures. By 1983, despite a pattern of regular borrowing from IPSS pension and disability programs to cover its deficits, the medical program had virtually exhausted its contingency reserve.

In its last two years in office, the previous government made some efforts to address the system's problems. In 1983, it partially acknowledged its delinquency, began paying its employer contributions, and prohibited further transfers from the other IPSS funds. In 1984, it enacted a 1.5 percent increase in contribution rates, extended coverage to children through age fourteen and increased sick pay benefits, and permitted more enlightened and profitable investment policies for the medical program's reserve funds.

Since taking over in mid-1985, the new IPSS administration has adopted measures to discourage evasion of contributions and payment delays, to improve efficiency, and to obtain more accurate information. Under the presidency of Dr. Jose Barsallo Burga, a key APRA leader, IPSS is now in a favorable political position to lower costs, expand coverage and increase the efficiency of its medical program. And indeed in 1985, the program produced a surplus for the first time in ten years. However, without substantial improvement in the organization and physical infrastructure of the program, it is doubtful that the measures taken so far will be sufficient to restore the system to a stable financial balance.

II.

POPULATION COVERAGE AND BENEFITS

A. Legal Coverage: Problematic Statistics

Peru's largely unified social security system under the IPSS, created by the merging of several funds in 1973, is legally mandated to cover all salaried workers in the public and private sectors, as well as members of cooperatives and para-statal enterprises. It does not include several groups with independent programs (the armed forces, police, fishermen, jockeys, and employees of such state-owned enterprises as Petroperu and Centromin). Until 1984, dependent coverage was confined to the spouse's maternity benefits and limited health care for children under one year old. A 1984 statute extended coverage to the 1-14 year old children of the insured, starting with preventive health services, ambulatory care and medicines. All those receiving IPSS pensions are fully covered by the medical care program. The self-employed may also now join IPSS through voluntary affiliation as may those who no longer qualify for obligatory coverage and have no right to receive a pension. There are thus five insured groups, two of them economically active (salaried workers, and the self-employed or optionally insured) and three economically inactive (spouses, children to age 14, and pensioners). Although pensioners nominally contribute to IPSS, the two economically active groups constitute the main revenue base of the program. Rough IPSS estimates presented in Table 1 indicate a 26.5 percent increase in mandated coverage from 1975 to 1985 (from about 15 percent to almost 19 percent). This extension of coverage is significant, especially during a period of severe economic recession. Nevertheless, according to a 1980 study by the Economic Commission for Latin America (ECLA), Peru ranked 12th among 20 Latin American countries in medical care coverage, far below what might be expected given its level of economic development at that time. According to the ECLA study, 61% of the Latin American population (43 percent if Brazil is excluded) was covered in 1980.(1) Moreover, several countries in the region that started their programs after Peru currently enjoy more extensive coverage.

IPSS coverage may well be even lower than Table 1 indicates. To begin with, statistics on medical care under IPSS are among the most deficient in the region. Although a unified registry of social security coverage was legally mandated in 1973 and designed with OAS assistance five years later, it has never been implemented. A 1981 census of insured persons proved defective and has not been published. Another national survey of the insured was conducted in March, 1984. This time the sample was skewed toward the larger enterprises and white-collar workers. Consequently, the survey both overestimated the number of married insured and underestimated the number of dependent children, since legal marriages and small families are more common among white-collar workers.(2)

The figures in Table 1 continue this tradition of questionable reliability. The table's distribution of coverage over the five

categories of insured implies more solid information on their distribution than the existing data warrant. Before 1979, IPSS's published data categorized the insured only into blue collar and white collar workers on the basis of the two previously separate funds (SSO and SSE). Since 1979, only those actually contributing, not dependents, have been counted, and the published data do not break these down into salaried, self-employed, and pensioners. The figures for spouses and children are usually estimated by applying fixed ratios to the insured population. Only in 1984 was the first attempt made to provide separate figures for the five categories of insured,(3) but that procedure was not sustained in a statistical synopsis published by IPSS in 1985, which reverted to the original blue-collar/white-collar classification and an aggregate figure for all contributors.(4)

The flaws of the coverage statistics became apparent in the 1984 actuarial study of IPSS. In order to calculate the number of active insured (salaried plus optionally insured), this study tried three methods. Projections from urban employment figures according to the 1981 census or from the number of IPSS identification cards were rejected in favor of a combination of the 1984 survey data on the number of insured with statistics on social security contributors. This computation gave 2.4 million active insured, a number close to the one in Table 1. However, the figures on dependents remain a focus of uncertainty and controversy. In order to estimate the number of children between 1 and 14 years of age potentially to be covered by IPSS, the actuarial study rejected the option of basing its figures on the proportion of the total population in that age group in the 1981 census and elected to follow IPSS' usual procedure, projecting a fixed ratio of 1.19 children for each male actively insured. The resultant estimate -- 2.3 million as compared to 2.5 million for the rejected method -- has since been questioned by the new IPSS President. At the end of 1985, he made a 30 percent lower estimate of 1.65 million.(5)

Even if they were accurate, these coverage statistics do not in themselves indicate the number of persons functionally entitled access to IPSS medical services, as defined by possession of an identification card for the medical care program. The 1984 National Household Survey on Health and Nutrition (ENNSA) disclosed that of family members 6 years or older, 70 percent of those nominally covered by IPSS had no identification card and 3 percent had cards that were no longer valid. The 27 percent with valid cards (and thus functionally insured) according to this survey is a much lower figure than the IPSS estimate of labor force coverage (38-39 percent), suggesting that the statistics on nominal coverage substantially overstate insured access to medical services. As if to confirm this, at the end of 1985, IPSS published an estimate of the "real" coverage as being 15.3 percent of the total population in 1985 compared with 18.6 percent in Table 1. Unfortunately, IPSS neither explained the term "real" nor the methodology used for its estimate.(6) All in all, despite compounded statistical uncertainty and confusion, a cautious observer might reasonably conclude that Peru's relatively low coverage is even lower than estimated.

The new IPSS administration has given priority to three important

measures which, if implemented, could generate accurate coverage information. The first of these, initiating and maintaining a unified registration record, has been awaiting implementation since it was first suggested in 1973. The second, updating individual records of the insured and their employers, is as self-evidently desirable. Computerization makes practicable the third: developing an integrated data base for the medical care program. To be effective, this data base should compile statistics (age, sex, salary or wage, economic activity, employer, and residence) not only for the actively insured for each IPSS program but for dependents, including whether or not a spouse is directly covered by IPSS so as to avoid duplication. Without such orderly compilation of reliable information, the factual record of IPSS coverage must remain obscure. Properly constructed, such a system would prove invaluable, providing consistent and reliable data on the five groups of insured on a permanent basis.

B. Inequalities in Coverage

IPSS medical care coverage is not only below the average level in Latin America; its distribution is also among the most unequal. Although the differences between blue and white-collar workers were reduced and coverage was extended to domestic servants and self-employed workers following the 1970's merger of funds, significant differences still remain among age groups, geographical zones, economic sectors, and occupational categories. As of 1985, IPSS essentially covered middle-income urban workers in the more developed departments of Peru. Coverage is relatively high among the salaried, especially in public utilities, financial and transportation services, and manufacturing industries, while the rural population, children in the urban marginal areas, and the self-employed (especially in agriculture and commerce) are largely excluded.

A rough estimate of IPSS coverage by age group in 1985 is shown in Table 2, which compares the age distribution of coverage with the age distribution of the total population. It is evident that up to now IPSS has concentrated its medical care coverage on the productive age group and pensioners, while dependent children have had minimal coverage, the percentage for this group being one of the lowest in the region. The inclusion of this age group by the 1984 decreed expansion from age 0-1 to 0-14 was intended to repair this glaring deficiency; the 1985 figures were not significantly affected by this legislation because very few of this age group had actually attained entitlement (see below).

Geographic location is another major source of inequitable coverage, as shown in Table 3. In fact, Peru is one of the countries in Latin America with the greatest regional differences in social security medical care coverage. Lima, the capital, had the highest rate of coverage at 27 percent -- almost twice the national average -- followed by adjacent Callao, the country's main port, with 25 percent. Their combined metropolitan area accounts for 58 percent of the total insured population of Peru. The percentages of coverage for the departments of Ica, Tacna, and Arequipa are also much higher than the

national average. All five areas are located on the coast; they have the highest urbanization (78 - 99 percent), the highest GDP per capita, and, in general, the best living standards. They account for most of the central government operations, financial and transportation services, and commercial and industrial activity. In contrast, the departments with the lowest coverage (3 to 4 percent) are located in whole or part in the less accessible highlands: Apurimac, Ayacucho, Cajamarca, Huancavelica, Puno, and Amazonas (whose population is concentrated in the highlands). These departments, where the main economic activities are agriculture and cattle raising and where the vast majority of the indigenous Indian population live, have the worst living conditions in the country.(7) This inequitable distribution has been a persistent feature of IPSS coverage. A comparison of Table 3's figures with comparable data for 1961 shows that geographic differences in the coverage remained virtually unchanged from 1961 to 1981.(8)

IPSS medical care coverage by economic sector is more difficult to calculate. Although IPSS has made this analysis for the distribution of employers, it has never estimated a sectoral classification of the insured. Table 4 attempts to fill this gap by using ENSSA data on occupation by economic sector together with data on IPSS identification card holders. The sectors with the highest coverage are electricity, gas, and water (84 percent), financial services and insurance (68 percent), mining (68 percent), transportation (44 percent), and manufacturing (39 percent). The activities with the lowest coverage are agriculture (6 percent), trade (19 percent), and construction (34 percent).

Underlying these disparities is the more fundamental inequality between the so-called "formal" sector of the economy (consisting of government agencies and enterprises offering relatively stable working conditions) and the rural and urban informal sectors which comprise most of the country's working population. 1981 census data suggest that the formal sector then accounted for about 40 percent of the Peruvian labor force. Comparing IPSS nominal coverage data for that year with these census data (Table 5) suggests that 90 percent of those employed in the formal sector were legally covered. That is, they were entitled to care under the program and employers were supposed to belong to IPSS and transmit employer and employee contributions to the medical care fund. On the other hand, the table shows that enrollment among the self-employed was only about 2 percent and the unemployed were almost completely excluded from coverage. The figures in Table 4 and the ENNSA data (see above) imply that there are still a sizable number of formal sector workers - legally covered according to Table 5 - who lack the IPSS identification card required for access to medical benefits; nevertheless this segment of the economy (except for dependents) is substantially covered by the program. In effect, the minority share of the labor force encompassed by the formal sector (which is most amenable to an orderly and supervisable system of employer/employee contributions) constitutes a serious obstacle to further extension of coverage under the established financing procedure.(9)

C. Projected Coverage Extensions

The preceding analysis indicates that inequalities in distribution by age and economic sector account for Peru's overall low level of coverage. Thus the major needs and opportunities for broader coverage lie in the expansion of dependent benefits for the already insured and the extension of the program into the ill-defined informal sector of the economy: the self-employed, occasional workers, and agricultural laborers. At the end of 1985, IPSS was planning to extend full medical coverage to spouses and children up to age 18, and to include occasional workers and peasants in the program.(10) Of these projections, the most readily implementable is the expansion of dependent coverage, since the program already provides some services for spouses and children. It is the logical next step following the recent extension of coverage to children through age 14. Coverage for occasional and agricultural workers and their dependents will be far more difficult to administer. Not only do they tend to have unstable and generally low incomes, but, like the self-employed, they are also difficult to identify and reach. Occasional workers include marginal urban workers (mostly peddlers) employed by concessionaires; participants in the current government program of massive employment creation (100,000 in 1985, and approximately 200,000 to 300,000 in 1986); and the so-called "golondrinos," workers who go from one harvest to another, or work irregularly in the mines. Although they are usually salaried, they either lack permanent coverage because of their irregular status or they have no coverage at all because they do not make the minimum required financial contribution to the system. Providing coverage for these groups will be very difficult because of the unsteady nature of their work.

Covering the rural sector will be even more difficult because most peasants and their families are widely dispersed, they have very low incomes, and they lack the employer's portion of the social security contribution. Moreover, even if legal coverage were implemented, actual benefits would be severely limited by the lack of health services infrastructure in rural areas. The impediments to rural expansion are illustrated by the fate of a 1966 pilot project for peasant social security (Seguro Social Campesino) launched in three communities in the Department of Junin chosen for their relatively advanced socio-economic and political development. The project provided health education, sanitary measures, maternal and child care, and general medical services through health posts, each amply staffed with one physician and five assistants. Intended for beneficiaries of agrarian reform in Indian communities and cooperatives which contributed land, labor to build the health posts, and a nominal fee, the project failed because of high costs, inadequate financing (the government did not contribute its share), and wavering community support.(11) A more ambitious IPSS project now being designed to strength the rural infrastructure is described in Section III.B.3, below.

D. Health Benefits

In the medical care program, the contributing insured (salaried, self-employed and pensioners) are entitled to outpatient medical care and hospitalization, dentistry, designated basic medicines, rehabilitation services, prostheses, and orthopedic aids, as well as sick pay and a funeral allowance. In addition, women employees are entitled to paid maternity leave, plus an infant nutritional subsidy. Blue-collar workers are covered for occupational accidents and diseases, for which they receive benefits similar to those of the medical-care program.

Spouses of the insured are entitled only to maternity care. Until recently, only children under 1 year of age received selected health services such as vaccination and preventive care. Since 1985, children through age 14 are entitled to preventive and ambulatory care and medicines, but not hospitalization. White-collar employees can choose between the services offered by IPSS facilities and contracted public or private services. If the latter are chosen, the insured pays for the service and claims a refund from IPSS according to pre-determined allowances.

Relative to other Latin American programs, the legal provisions for medical care in Peru are very strict regarding the qualification period for monetary benefits, very liberal in dispensing sick pay (100% of wages versus a Latin American average of two-thirds pay), and average or slightly above average in the duration period of the benefits granted. When the new entitlement to the 1-14 age group is fully implemented, medical benefits for children will be similar to those under social security elsewhere in Latin America. However, spouses' benefits will still be limited to maternity care. Although the Peruvian salary contribution rate is high for the region, these benefits are with few exceptions only average or below average.

Moreover, actual benefits fall far short of legal entitlements. To qualify children through 14 for the recently extended coverage, insured parents must register them. By the end of 1985, the first year of this expanded coverage, only 40,000 to 60,000 dependent children (about 1.7 percent to 3.6 percent of the total) had been registered, and only about 2500 children in Lima had actually enjoyed these benefits. More generally, stipulated services are not always available to the insured. Medicines are very scarce, sick pay takes two months to process, the infant nutrition subsidy is minimal, and prostheses and orthopedic aids are rarely supplied.⁽¹²⁾ Yet, despite this lack of basic services, the law provides for an extravagant benefit that has been afforded to a small number of the insured, namely treatment abroad when it is not available in Peru (see below).

III.

HEALTH SERVICES AND EXPENDITURES

A. Health Status and Health Service Inequalities

Table 6 shows the evolution of health services and health status in Peru from 1960 to 1984. The accuracy of these figures is again questionable. (Ministry of Health data for 1982, for example, are more favorable than those shown here based on INE data.) Still, allowing for error, these figures indicate that inputs (health services) are not matched by output (health status). Health services in Peru, as measured in available physicians and hospital beds, are just above average for the region. Peru ranks tenth in hospital beds per 1,000 inhabitants, and ninth in physicians per 1,000 inhabitants.(13) Yet despite a gradual improvement over the quarter century in all standard health indicators except number of hospital beds, the evolution of health care in Peru has not kept pace with advances in the more developed countries in the region. The 1984 indicators of health status were still among the worst in Latin America. Peruvian life expectancy is fifth lowest, general mortality is third highest, and infant mortality is fifth highest. In 1983, 40 percent of deaths were due to respiratory diseases and 32 percent to infectious-contagious diseases. These were also the first and second causes for hospitalization, respectively. From 1978 to 1983, typhoid and paratyphoid fever increased significantly and substantial increases were also reported for tuberculosis, malaria, dysentery, infectious hepatitis, and measles.(14)

One possible explanation of this disparity lies in the unequal distribution of the available health services. Indeed it is estimated that about 30 percent of the population has no access to organized medical care. Table 7 compares the health services provided by IPSS with those of the Ministry of Health, the armed forces, and the private sector. As of 1982, the Ministry was responsible for half the population (those with the lowest incomes), while 17 percent of the population -- in the middle income range -- were covered by the IPSS medical program. The two programs had about the same ratio of hospital beds to covered population; however, IPSS had more than twice the Ministry's ratio of doctors to population. An even greater imbalance between the two programs is disclosed by the comparison of 1984 expenditures in Table 8. The bottom line of that table shows that IPSS spends fivefold more per insured than the Ministry does per non-insured citizen.

Table 8 also shows the marked geographic inequalities in distribution of health services. When the data on both IPSS and the Ministry of Health are combined, Lima has 79 percent more coverage than the national average while the north and south-central/southeast regions receive little more than half the national average. Grouping the departments by regions obscures to some extent the differences in health indices between departments with relatively high and relatively low levels of development. The northern region, for instance,

includes Lambayeque (high) and Cajamarca (low). The south-central region includes Ica (high) and part of Huancavelica and Ayacucho (low), and the southern region has Arequipa (high) and Puno (low). Table 9 shows even more strikingly the heavy concentration of health services in Lima-Callao. With 31 percent of the total population, this region has 58 percent of the IPSS insured and receives from 52 to 75 percent of its various services. The available data show a positive relationship, in departments and regions, between level of development on the one hand, and coverage, expenditures, and health services on the other hand.

Although a definitive evaluation would require further analysis, the available data suggest that the IPSS medical care program functions regressively in the distribution and financing of its services. It not only covers a very small part of the population with significantly higher resources than the national average and excludes those with the lowest income. It also fixes salary ceilings which allow the insured with higher incomes to contribute proportionately less than those with middle to low income, except for those who do not earn the minimum (see below).

B. Expenditures

1. Lack of Adjustment to Basic Health Needs

Another source of Peru's poor health status relative to its health services is the mismatch of the medical program to the country's basic health needs. Despite the fact that 56 percent of all deaths in Peru are registered in the 0-14 group, and that Peru has one of the highest infant mortality rates in Latin America, as recently as 1985 IPSS covered only 1.4 percent of this age group. Furthermore, although most causes of child mortality could be significantly reduced by health education and preventive measures, the medical care program of IPSS is oriented primarily toward curative medicine. In 1982, only 25 percent of children under one year of age were immunized against diphtheria, poliomyelitis, whooping cough, measles, and tetanus. At the same time 65 percent of all houses lacked basic sanitation and 51 percent did not have running water while 58 percent of pregnant women did not receive prenatal care.⁽¹⁵⁾ A proposed rural health care pilot project which would begin to address some of these basic care needs is described on p. 12.

2. Inefficient use of Facilities

A third source of Peru's poor health results is the way the IPSS program makes use of its facilities. At approximately 73 percent in 1982-83, hospital bed occupancy rates in IPSS facilities are average for Latin-America. However, this figure is inflated by the excessive length of hospital stays within the system. Thus, in 1983, the Lima region, which had the highest average bed occupancy in the country (84

percent fluctuating from 51 to 90 percent) also had the longest average hospital stay (12.5 days). Conversely, the northern region, which maintained an average hospital stay below the national level (7.4 days), had the lowest bed occupancy percentage (56.7 percent). In 1981-84 the average stay at all IPSS facilities was 11.5 days, one of the highest in Latin America, and far above the desired level of 4 to 6 days (see Table 10). In 1984, the average stay varied from 5.7 days in the eastern region to 17.4 days in Lima's Almenara Hospital. These averages, shown in Table 10, are excessively high and seem to indicate inefficient control. Reportedly, many patients are unnecessarily hospitalized, laboratory tests are not promptly done, and the postoperative period is prolonged unnecessarily.

By another measure of efficiency, number of checkouts divided by number of beds, hospitals within the system vary widely across regions. In 1983 the average output per bed in the Central region was only 14, with the Hospital Zonal de Huariaca posting a low of 11.5. At the opposite extreme, the highest average (28.5) was found in the northern region, where the Centro de Salud Jaen-Bagua reached a peak of 50 checkouts per bed during the year. Thus the region with the lowest occupancy rate makes the most efficient use of its beds, while hospitals with high occupancy rates are allowing what may be unnecessarily prolonged stays.

Measured by a third standard of efficiency, "unit cost" (the average cost of a given service), IPSS hospitals are expensive and again widely at variance. In 1981, the average cost per consultation was U.S. \$31 and a one day hospital stay cost U.S. \$100, both very high figures given the income levels in Peru.(16)

The services of the program are also not appropriately apportioned between hospitals and lower-level health clinics. Clinics are underutilized. With 75 to 80 percent of capacity considered a desirable rate of use, the national average in 1983 was only 49 percent and the northern region registered a low of 34.9 percent. (The highest use, 83.9 percent, was in the central region).(17) As a consequence, two-thirds of all IPSS consultations are in hospitals. Clinics' deficient plant and equipment and limited supplies and hospitals' disproportionate concentration of medical personnel lead patients to resort unnecessarily to hospitals for primary care. In 1984, 60 percent of the visits to the Almenara Hospital -- a highly specialized facility -- were for treatment of minor respiratory and gastrointestinal problems that could have been treated by ambulatory services at health clinics. Repeated visits by patients seeking diagnoses are another misuse of some IPSS hospitals. In 1983, 81 percent of all consultations at the Rebagliati Hospital failed to result in a diagnosis, against eight percent at the Hospital Almenara.(18)

3. Inadequate and Inefficient Infrastructure

Until recently IPSS has concentrated on building major hospitals (third level), devoting only limited resources to primary care health

posts. In the last few years, it has built more intermediate facilities, polyclinics equivalent to smaller MOH hospitals, but most current infrastructure investment is still in the construction of four new hospitals (see Table 11). According to a Bicameral Commission of the Peruvian Congress, the planning and execution of these four projects were undertaken hurriedly, without public bids, and without taking program priorities into account. In fact, the project for the Arequipa hospital was approved against the recommendations of a feasibility study.(19)

The original estimated cost of these four projects was U.S. \$21 million. It is now estimated that completing only three (omitting Arequipa) will cost U.S. \$123 million, 72 percent of which has already been spent, virtually all of it in 1980-82. The total number of new beds planned is 1,015, equivalent to 20 percent of the total number of IPSS hospital beds (4,966), at an estimated cost per bed of U.S. \$121,200. The construction status of these four projects in late 1985 was as follows:

- Cusco - almost completed with only minor work remaining;
- Huancayo - work interrupted with the project almost completed;
- Pucallpa - work interrupted with substantial work still required and unused rental equipment continuing to generate expenses.
- Arequipa - work interrupted since 1981 with some wards finished but the main buildings not yet started.

The new IPSS administration believes that these excessively large, sophisticated and expensive hospitals are not adapted to the program's real needs. In light of this, and given the high outlays required to finish, equip and maintain them, they will probably remain unfinished, at least in the near future.

Indeed, in view of the underutilization of the available hospital capacity and the pressing needs of primary health care, further investment in these hospitals would be a waste of scarce resources. This is particularly true of the hospital in Arequipa, a department which ranks second to Lima in hospital beds. Arequipa has the fifth highest social security health coverage in Peru, far above the national average, yet its average bed occupancy rate is only near the national average despite an extremely high average length of hospital stay. Even the Huancayo and Pucallpa hospitals are located in departments (Junin and Ucayali) with higher population coverage and higher ratios of hospital beds to inhabitants than most other departments and some of the lowest regional hospital occupancy percentages. (Huancayo also has one of the highest regional averages for hospital stay.) Cusco is the only one of the four projects that seems justified because of its low bed-to-inhabitant ratio, although more information about other indicators is needed to make an accurate judgement (see Tables 3 and 11).

When one considers the inefficient pattern of use for various

IPSS facilities described above, it is evident that the resources invested in these grandiose projects would have been better spent on constructing and adequately equipping, supplying and staffing primary care posts, as well as in better maintaining, managing and re-equipping the existing hospital infrastructure. Turning from past mistakes to productive future efforts, it would be eminently sensible and highly desirable for IPSS to coordinate the development of its health infrastructure with those of the Ministry of Health and other public entities. Developing a joint investment plan could avoid duplicating efforts in some locations and neglecting others and thus facilitate the extension of real coverage.

The current political situation is propitious to implement these necessary changes, and one newly contemplated IPSS project embodies some of them. Focusing on primary health care, promotion of preventive medicine and out-patient consultation, it is planned to start in 14 rural locations which have some health-care infrastructure in place. The project would be a joint effort of IPSS with the MOH, the Ministry of Agriculture, and leaders of the affected communities. It would be financed by a special government contribution equal to one percent of its payroll, increased regular contributions for all currently insured through elimination of the salary ceiling, community contributions of land, labor, and maintenance services, contributions by the beneficiaries of half of one month's minimum wage, and international aid. IPSS believes these measures should generate 355 billion soles per year (U.S. \$37 million), equivalent to 20 percent of IPSS total medical care fund income in 1985.(20) Although IPSS authorities are aware of the project's difficulties, they believe it is vitally important to implement it at this time. The project's success depends on close coordination between IPSS and the MOH, a low-cost approach to primary health care, active participation of the community, and government funding. The failure of a similar more modest project (see above) and the government's history of outstanding debts to IPSS are bad precedents, but IPSS authorities believe they will obtain an effective state commitment using the enormous accumulated debt as a bargaining tool.

4. High Administrative, Personnel, and Contractual Costs

The costs of medical care under IPSS are among the highest in Latin America. From 1975 to 1983, health services expenditures increased from 40 to 62 percent of total IPSS expenditures, as shown in Table 12. The combined percentage of health expenditures by IPSS and the Ministry of Health in relation to the GDP grew from 1.5 percent in 1975 to 3 percent in 1982, although it had decreased to 2.4 percent by 1984. As a proportion of central government expenditures, IPSS-MOH health expenditures increased from 7.1 percent in 1975 to 11.3 percent in 1982, before declining to eight percent in 1984. In U.S. dollars, combined health expenditures per capita more than doubled between 1975 and 1982, from \$14 to \$29, but then declined to \$18 in 1984, as shown in Table 13. The reason for the decline in 1984 is not readily apparent, but a decline is possible, given the recent and projected expansion of coverage with less than corresponding

increases in expenditures.

IPSS has estimated that the coverage extension to the 1-14 age group at the end of 1984 would cost 129,600 million soles, or U.S. \$32.8 million at the official exchange rate. According to a legally mandated 1984 IPSS actuarial study, this additional cost would have increased IPSS health expenditures in 1984 by 18 percent. With the current service structure, it is doubtful that the report's estimated addition of 2.3 million insured (an increase in mandated population coverage from 18 to 30 percent, or a 65 percent increase over the population covered in 1984) would only entail an 18 percent increase in expenditures, even if the marginal cost of child coverage should be lower because services would be limited to preventive and ambulatory care and basic medicines.

As noted in Section IV, the ILO questioned the feasibility of meeting the new expenditure of this expanded coverage and enlarged sick pay along with the system's accumulated financial burdens through the 1984 1.5 percent contribution rate increase. This scepticism appears to be entirely justified in view of the remaining persistent causes of the IPSS medical program's high costs in administration, personnel, and contracted services.

Administrative costs of social security in Peru are among the highest in Latin America. Although the most recent international survey of the ILO excludes Peru, one can draw a rough comparison using an 11.5 percent estimate for 1981 (Table 14, 3rd column), though it should be kept in mind that Peruvian figures exclude personnel costs, and therefore this 11.5 percent estimate significantly underestimates total administrative expenditures. Of the 12 Latin American countries in the 1980 ILO survey, three had social security systems with significantly higher administrative costs, two had similar cost structures, and seven had lower costs than Peru. Given that social security administration costs in Latin America are among the highest in the world (those in the U.K., U.S., West Germany, and France range from 2.8 to 3.6 percent), Peru's figures become even more extravagant.(21)

Salaries and fringe benefits also account for a high proportion of IPSS health care expenditures, increasing from 38.5 percent in 1982 to 50.3 percent in 1985. All other costs have proportionately decreased except medical supplies, which showed a slight increase in 1985 (see Table 15). Although we lack comparable information on the number of employees in the medical program, Table 16 shows the total number of IPSS employees (in all programs) per 1,000 insured. Between 1968 (not shown in the table) and 1982, there was a 136 percent increase in the number of employees -- from 13,000 to 30,791 -- while the number of insured increased by only 92 percent (from 1.6 to 3.1 million).(22) Despite a two-year drop in the ratio of employees to insured since 1982, personnel costs as a percentage of total expenditures continued to climb, declining only marginally from their 1983 high of 30.5 percent to 29.6 percent in 1984. The Bicameral Commission found several glaring causes of these soaring costs. Not only were workers inadequately skilled and personnel control and supervision inefficient, but many employees received salaries without

working. In addition, the Commission cited problems of labor discipline and union interference in the hiring of personnel.(23)

In 1983, there were 20,429 employees in the medical care program, representing 67.6 percent of all IPSS employees. Although physicians constitute perhaps at most a sixth of this number, they account for a major share of IPSS wage costs. A powerful association and frequent strikes have positioned IPSS doctors among those groups least affected by the decline in real wages during recent years. For employees of all kinds, personnel recruitment and retention seem to be independent of medical need or economic viability. Thus, in 1976-80, for example, the number of medical personnel at the Hospital Rebagliati, one of the most important hospitals in Peru, increased by 50 percent even as the number of daily consultations dropped by 30 percent and hospital income declined by 20 percent.(24)

A third expensive component of the program has been its purchase of medical services. Since IPSS does not have facilities in all locations where it has beneficiaries, and since it sometimes lacks the capability to provide specific services, it contracts for these services with the MOH or private clinics. While these contracted services could conceivably be a lower-cost alternative to expansion of direct care by the IPSS, they have proved otherwise. Reimbursement for private sector care is determined arbitrarily. There are no reliable estimates of the average cost of IPSS health care that could be used as a base from which to set or compare private sector rates. These rates are also raised every six months according to the inflation rate. Because contracts typically do not specify the medical care to be provided and neither inspections nor evaluations of the services contracted are required, private clinics frequently get by with inadequate facilities, insufficient and unqualified personnel, and too many patients per office hour.(25)

Table 10 shows the high costs of contracted services: in 1981 the average hospital stay in a contracted facility was 18 days, 6.2 days above an already high national average. The situation worsened in 1984, when figures for average hospital stays were nine days over the national average. While these services are mainly used by the chronically ill, these extended stays are also in part the result of inadequate control and inefficiency. Moreover, since there is no unified clinical record-keeping system, many insured even receive double medical care -- in IPSS facilities and through contracted services.

Probably the most extravagant expenditures for what amounts to contractual services have been the program's payments for medical care abroad. From 1978 to 1982, 326 beneficiaries were treated in the United States, Canada, the United Kingdom, and Spain at a total cost of U.S. \$7.25 million. In 1982 alone, 131 insured benefited from this service at a cost of U.S. \$5 million -- a figure equivalent to 1.6 percent of total IPSS medical care expenditures for that year. The average cost of this benefit was U.S. \$38,168 per beneficiary.(26)

In the last few years, the system has begun to reduce its dependency on contracted services. The use of these services for

outpatient consultations, ambulatory services, and dentistry has rapidly declined from its 1982 peak as IPSS has expanded its own polyclinics. In 1985, except for the chronically ill, contracted private services were required only outside of Lima. However, for this considerable number of people, the cost management problems noted above persist.

In contrast to contracted services, the option of alternative services available to the white-collar insured has not incurred high costs for IPSS. Because the reimbursement rate has not been readjusted since 1980, the insured absorbs most of the cost of the private services. Moreover, considerable time elapses between the reimbursement application and its payment, and inflation thus reduces its real worth. Perhaps because the patient bears much of the cost, in 1983 the average hospital stay in the free choice system was 8.1 days, considerably shorter than in both the IPSS and contracted services. In 1984, the former IPSS administration announced that it would reinvigorate this part of the program by registering doctors, private hospitals, and pharmacies, readjusting rates on an actuarial basis, and expediting refunds. However, this plan has not been implemented.

IV. FINANCING

A. Social Security Contributions

During the period 1975-1984, 93 percent of the revenue of the IPSS medical care program came from social security contributions. At the end of 1984, the combined employers' and employees' contribution rate, which had been equivalent to 7.5 percent of employees' pay since the end of 1979, was increased to nine percent. As shown in Table 17, within established minimum and maximum limits, salaried and wage-earning employees pay three percent of their total earnings and employers pay twice that amount. The self-employed and other optionally insured pay nine percent of their earned incomes. Pensioners pay four percent of their pensions and the pension fund contributes five percent. At the end of the 1970's, the 7.5 percent contribution rate was near the Latin American average. The 1984 increase, together with a comparable increase in pension fund contribution rates, currently places Peru among the countries in the region with the heaviest social security burden. At least four Latin American countries cover a much higher proportion of their population in return for a lower percentage contribution.

In addition to providing disproportionately low coverage for high contribution rates overall, the financing system also favors higher income workers over those with lower earnings. Beside the regressive salary ceiling effect noted above, the method of determining this contribution ceiling is inequitable. Until the beginning of 1983, the minimum wage (SMV) of Lima (where about two-thirds of total IPSS medical care program revenue is collected) was the reference point for national minimum and maximum levels. Since 1983, a standard "reference unit" has been used, which periodically adjusts the SMV to inflation. Because this adjustment has lagged behind the rapid increase in the cost of living, the real maximum wage has been substantially reduced: in July, 1985, it was only 52 percent of the July, 1981 level, at constant 1979 prices.(27) Thus, although the nominal contribution maximum has gradually increased, the real ceiling has been reduced. This has worsened the regressivity of the established ceiling because lower-income workers pay a higher proportion of their wages in social security tax than do higher-income workers. This inequity is redressed only to some extent by the effect of the established minimum wage, since the contribution for an employee whose salary falls below that minimum is fully paid by the employer.

B. Government Debt

At the end of 1985, the total debt owed to the IPSS by the public and private sectors was conservatively estimated at 1,232 billion soles, equivalent to U.S. \$130 million. Because of inflation, this

amount is only a fraction of what the debt would be if calculated at constant prices. Nearly two-thirds of this debt is owed by the public sector. The government not only has regularly failed to pay its social security contribution as employer but has also neglected to transfer to IPSS of contributions collected from its employees. Nor did the government ever pay a constitutionally mandated equivalent of an additional one percent contribution to extend IPSS coverage to the poor before this stipulation was eliminated in the early 1980's. Yet, despite the state's debt, IPSS has provided health services to the insured in the public sector, aggravating the deficit of the medical care program. Thus, in effect, revenue from private sector contributions has subsidized coverage of public sector employees. Table 18 shows the total debt, including the interest charges for payment delay or mora, of the public sector to all IPSS programs for several periods between 1969 and 1985. The data on central government debt for 1969-79 include only the city of Lima. Preliminary IPSS estimates for 1983 showed even greater debts than those in this table(28). It is therefore safe to say that the debt estimates in Table 18 are conservative.

The real cost of the government's default is even greater when one assesses the impact of Peruvian currency devaluation. One may assess this impact by calculating the debt in dollars at the official exchange rate when it was incurred and again at the official rate of 1985. The last column of Table 18 estimates the accumulated loss to IPSS resulting from the devaluation of the sol at U.S. \$194 million. Had the estimates been made on a yearly basis, instead of in periods of 10 to 15 years, the figures would reveal an even greater loss.

In 1983 the government for the first time attempted to redress its IPSS debt, but the result so far has fallen considerably short of success. That year it paid 80 percent of its annual contribution as employer, including wage deductions for the insured, and it has continued partial payment since. It also acknowledged a debt to IPSS of 80 billion soles for 1980-82 and decided to pay this debt with bonds at 56 percent interest. However, since banks then paid 60 percent interest and the inflation rate was 125 percent, the yield of these state bonds was negative. And of course the payment of anything less than the full mandated employer contribution (in 1985 the government paid only 67 percent) itself contributes to the ongoing accumulation of debt.

At the end of 1985, IPSS accepted an agreement by which the central government contracted to pay off 10 percent of its accumulated debt with new Argentine equipment for 21 hospitals, worth a total of U.S. \$21 millions. IPSS preferred this type of payment to more of the bonds which had proven so unrewarding.(29) Despite this step in the right direction, the remaining central government debt continues to devalue with continuing inflation.

Of the remaining debts recorded in Table 18, some are less collectible than others. The debts of local governments and cooperatives are practically irrecoverable: the budget deficits of municipal administrations are so great that some have stopped paying their employees; and accumulated debts have caused many cooperatives

to disband. Public enterprises, such as Pesca Peru, Banco Popular, and the Empresa Nacional de Transporte Urbano, are in a much better position to pay their debts, but they still remain substantially in default.(30)

C. Private Sector Evasion and Mora

In similar fashion, private employers have increasingly evaded social security contributions during the 1980's. Moderate estimates for 1985 show that 65 percent of employers either completely evaded their contributions, or paid less than the amount required by law, so that 35-40 percent of mandated contributions remain uncollected. The employers' accumulated debt (including their employees' contributions) rose from 60 billion soles to 204 billion soles during 1983, and from 360 billion to 437 billion from the end of 1984 to mid-1985. Since these figures only take into account known evaders, they again significantly underestimate the real debt.(31)

One of the main causes of evasion by employers is IPSS's lack of an employer registry and individual employee accounts, installations of which are first priority objectives of the new IPSS administration. From 1968 to 1974, IPSS maintained monthly control of employers' contributions through computerized individual accounts for all of Peru except Lima. Since this system was discontinued in 1975, it has been extremely difficult to reproduce individual accounts for employers and impossible to track the individual accounts of the insured.(32) As in the public sector, spiraling inflation also encourages payment delays, since it is to the employers' advantage to pay the debt with devalued money. Other causes of contribution evasion reported by the Bicameral Commission investigating this problem are a deficient supervision system, illegal agreements between inspectors and debtors, chaotic and often corrupt legal proceedings to collect outstanding debts, and low initiative and efficiency of IPSS lawyers.(33)

From 1975 to 1983, renegotiated payment arrangements were granted on six occasions to those in default, but lack of control made them ineffective. Starting in 1984, IPSS has taken additional steps to address the problem. A moratorium on penalties and interest was decreed, allowing up to five years for debt payments, and computerization has made possible more efficient control. Recognizing that these measures will not necessarily cause those in default to pay up, the administration has also refused to provide health services to the insured workers whose employers still owe contributions, forcing these employers to negotiate payment agreements with IPSS. Delinquent employers are currently billed for health services furnished to their employees.

Under PROSIR, a revised program for social security registration and tax collection, the previous IPSS administration initiated a more ambitious campaign against tax evasion and employers' default by creating a unified registration record for employers and employees, maintaining up-to-date accounts for both groups, and carrying out efficient inspections of employers' records and automatic coercive

actions against debtors.(34) Employing a newly computerized version of a program in use from 1967 to 1974 and again from 1978 to 1979, PROSIR will institute a national census of employers and employees and national registration prior to its commencement.

The system will work as follows:

1. Each month IPSS will issue a form on which the employer must record changes in the payroll before returning it to IPSS.
2. Upon receipt of this statement, IPSS will send a bill to the employer who must pay the full amount owed at a bank which will provide a receipt.
3. In return for this receipt, IPSS will issue a card entitling each insured employee to social security services.
4. All contributions will be registered in the individual accounts of both employers and employees.

This new system will provide coverage more promptly and continuously, eliminating the current one month processing lag between the employer's payment and the issuance of the card entitling the employee to medical services for three months. PROSIR will also invoke more stringent sanctions against delinquent employers. An employer who retains the social security contribution of the insured instead of transferring it to IPSS is subject to a prison sentence. If an employer is in default, IPSS will institute collection procedures that may include seizure of property. IPSS will also impose a monthly eight percent interest charge on outstanding debt the first month, doubling the charge each succeeding month the debt remains unpaid.

To insure efficiency and to economize, IPSS plans to replace its current computer rental system (costing one million U.S. dollars per year) with a lease-purchase arrangement under which it will own its equipment after four years. When this equipment becomes obsolete, it will be transferred to smaller IPSS units and a new lease-purchase contract will be drawn up to provide these services.

Although its procedures are cumbersome and the sequence of six transactions outlined in steps 1 to 3 above could be simplified, this new system offers substantial promise of improvement. Its predecessor (which covered 90 percent of white-collar insurance [SSE] and 15 percent of blue-collar insurance [SSO] funds then extant) generated a significant increase in revenues. Moreover, a three year experimental run of PROSIR itself has produced satisfactory results.

D. Investments

In the past, the real return on IPSS investments of disability and especially of pension funds has been negative, as Table 19

illustrates. In 1981, 31.4 percent of IPSS investments were in construction, mainly of facilities for the medical care program. In 1983, the second largest IPSS investment (21.8 percent) was in interprogram loans, particularly from the other two funds to the medical care program.(35) Because their basic objective is to maintain a contingency reserve to correct temporary imbalances, the financial investments of the medical care program itself are very small. It is not possible to analyze separately investments of the three IPSS funds nor their respective returns, since the only available data lump together all investments and interest accumulated at the end of each year. These aggregate data indicate a negative real rate of return on investments until 1984, followed by a dramatic shift to a positive rate of return by mid-1985, when investments were transferred from domestic bank deposits and bonds to bank certificates denominated in foreign currency. This change appears to have been made on the recommendation of the Bicameral Commission in response to the loss in real value of U.S. \$258,000 from June 1980 to July 1982 on deposits at the Banco de la Nacion.(36)

E. Financial Equilibrium

Incomplete and inconsistent documentation and inadequate accounting procedures make IPSS accounting balances from 1973 to 1980 less than fully reliable. For what they are worth, they do show that IPSS generated an annual surplus in 1975-84, although this surplus declined from 18.6 percent of total income to 10.3 percent during this time. However, according to the balance sheet, this surplus was produced consistently by the pension fund; the medical care fund since 1977 shows a deficit through 1984. Analysis of this deficit is complicated by different series of revenue and expenditure data. Table 20 tries to deal with this complexity. It includes all medical care revenues and expenditures (current and capital). Revenues include transfers from other programs -- pension fund and occupational risks (disability) -- and expenditures include the costs of these transfers. The sole exclusion is the indeterminable portion of central administration expenditures attributable to the medical care program. Hence expenditures are somewhat underestimated and the medical fund deficit is actually higher than the table indicates.

For the years 1975 - 1984, the table shows a cumulative deficit equivalent to U.S. \$181 million. Between 1977 and 1982 this deficit increased almost continuously. The one exception to this pattern, 1980's shrinking deficit, was the result of an increase in contribution rates and salary ceiling at the end of 1979. After reaching its peak in 1982, the deficit declined to the point where, in 1985, a surplus was achieved for the first time in a decade. Both the 1983-84 deficit reductions, and the 1985 surplus were probably the result of more regular employer payments by the government as well as a gradual reduction of the costs of contracted services and other measures taken to control expenditures. The change from deficit to surplus in 1985 was also the result of the 1984 increases in contribution rates and salary ceiling, and further actions taken to control expenditures.

Table 20 also shows the dramatic erosion of revenues suffered by the medical care program as the result of inflation. Real revenue in 1978 was half that of 1975 and, after increasing in 1981, it fell again in 1982-84. In spite of the slight recovery of 1985, real revenues for this year were 21 percent below those of 1975 and 45 percent below 1981 revenues. On the income side, the erosion of the real value of wages and the aggravation of the central government debt are the principal causes of the deficit. Causes for the deficit from the expenditure side have been discussed in Section III, above.

IPSS has traditionally covered the deficits of its medical care program by borrowing from its pension and disability programs. As previously noted, in 1983 these loans constituted about one fifth of IPSS's total investments. Although further such loans were prohibited in that same year, by July 1985, the indebtedness of the medical program to the pension fund still amounted to 173 billion soles.(37) This figure does not include the pension program's tacit subsidy of the medical program by assuming most of their common administrative services expenses.

F. Actuarial Equilibrium

The medical care program uses a pay-as-you-go financing method with a mandated contingency reserve equivalent to at least 12 percent (but not exceeding 30 percent) of the fund's previous annual gross income after deducting administrative expenses. Table 21 shows that the legal reserve was maintained until 1979 when it started to run an increasing deficit that had reached 102.5 billion soles in 1985. According to IPSS staff estimates recorded in the table, the reserve had practically disappeared by 1981, especially if calculated in constant prices. The legally mandated 1984 IPSS actuarial study of the program painted an even grimmer picture, maintaining that the reserve "had already been used up and showed a deficit, giving rise to a negative reserve."(38)

On top of this mounting deficit, statutes adopted in 1984 required IPSS to assume increased expenditures: coverage was extended to children between one and fourteen years old, and sick pay benefits were increased from 70 to 100 percent of the insured's salary. Estimates differed as to what additional assessments would be required to offset these new and old financial demands. In March 1984, IPSS officials thought an increase in salary contribution rates for the medical care program from 7.5 percent to 10.5 percent would be necessary just to re-establish financial equilibrium, without rebuilding the legal reserve, or extending coverage.(39) The 1984 actuarial report, on the other hand, calculated that the existing deficit and the additional expenditures could be covered by an increase in the salary contribution of only 1.5 percent to a total of nine percent, together with an increase in the salary ceiling. The report also estimated that about one-third of the additional contribution (0.48 percent) could be used to rebuild the contingency reserve and that another 0.67 percent might support a patrimonial fund

for the acquisition and maintenance of equipment and for construction.

Despite serious reservations about these IPSS calculations and disapproval of 100 percent sick pay as an unjustified encouragement to absenteeism, the International Labour Organization (ILO) supported these increases.(40) The ILO estimated that of the nine percent, 6.78 percent would be needed to maintain the original program, 1.64 percent would be required for the new benefits, and 0.58 percent to establish a "modest contingency reserve." Thus it argued that the additional patrimonial fund was not economically viable and recommended waiting two or three years to see if reducing the program's expenditures might make it feasible.(41) Meanwhile, the ILO found the 12 percent legal reserve requirement "totally unrealistic" and suggested instead a more feasible 10 percent. Even these more cautious estimates of the ILO are open to question. Before it was increased to nine percent, the 7.5 percent contribution did not cover expenses, much less maintain the reserve. Considering that the 6.78 percent which the ILO estimates sufficient to finance the original benefits is actually 0.72 percent less than this previous contribution rate, and that deficit-covering transfers from the pension fund are now prohibited, the ILO's expectations are probably over-optimistic.

In view of the medical program's persistent and mounting budgetary problems, the policies already being considered by the new IPSS administration to increase its income should probably be supplemented by some or all of the the following measures: 1) eliminating the salary ceiling, and instituting progressive contribution rates according to earned income; 2) forging an enforceable agreement between the government and the IPSS on payment of the state debt; 3) requiring the government as employer to include in its budgets the needed funds to pay contributions to IPSS; 4) committing the Congressional Bicameral Commission on Budget to allocate the amounts required to pay the state's current debt and contributions; 5) auditing all the files in default, taking legal action against employers in default, and fining delinquents no less than the interest rate of bank deposits plus an additional penalty; 6) allowing IPSS the freedom to place contingency fund investments at money market rates of return; and 7) studying forms of financing other than payroll deductions of contributions for extension of coverage to the informal sector and rural population.

V.

PERU'S SOCIAL SECURITY HEALTH CARE PROGRAM: COMPARATIVE STANDING AND FUTURE PROJECTS

Now that various financial dimensions of the IPSS medical care program have been examined, it may be helpful to compare it systematically with other Latin American programs. Tables 22-24 compare Peru with seven other Latin American countries: Brazil, Chile, Costa Rica, Cuba, Ecuador, Mexico, and Panama. All these countries rank in the medium high income group, except for Ecuador, which is classified with Peru in the medium-low income group. All except Ecuador have more developed social security systems than Peru. Of the remaining twelve Latin American countries, all but two (Argentina and Uruguay) have less developed social security systems than Peru's.(42) Of the eight countries tabulated, Table 22 shows only Ecuador has lower coverage of the total population and labor force than Peru; the gap between the population coverage in Peru and that of the next highest country (Panama) is 37 percentage points. Three countries -- Costa Rica, Mexico and Panama -- who legislated medical care programs after Peru's was first mandated, currently have much higher population coverage. Moreover, Peru's geographic and occupational inequalities in population coverage are exceeded only in Ecuador and Mexico.

If one compares benefits, Peru's program again delivers less than all other countries' but Ecuador's. According to the 12 indicators recorded in Table 23, Peruvian entitlement conditions are more strict (except for the average length qualifying period for sick pay) and Peruvian benefits are less generous (except for sick pay percentage and maternity leave) than the other countries. The worst disparity is in dependents' entitlement. Although Peru has the third youngest population (i.e., third highest percentage of children 0-14 years old) it shares the worst coverage of dependent children with Ecuador, at least until this mandated coverage is substantially implemented.

Paradoxically, Peru's limited benefits and low and maldistributed coverage have not been compensated for by a correspondingly light financial burden for the program. Table 22 shows the opposite. The medical care social security salary contribution in Peru is greater than Chile's, equal to Mexico's and Panama's, and given the undetermined medical proportion of Brazil's and Ecuador's assessment, only clearly lower than that of Costa Rica, a country almost full population coverage and twice the benefits of Peru. Peru's total salary contribution rate for all social security programs at the end of the 1970's was higher than those of eleven other Latin American countries.(43) Furthermore, Table 22 shows that Peru has the second largest proportion of social security expenditures devoted to medical care (exceeded only by Costa Rica), and the greatest deficit in the medical care program. The Peruvian ratio of health care costs to GDP is fifth highest (exceeded by Brazil, Costa Rica, Cuba, and Panama, all of which have greater population coverage). Both Chile and Mexico have lower ratios, yet their population coverage is at least three times that of Peru.

A major source of these high costs is administrative inefficiency. According to Table 24, only two countries have a higher percentage of administrative expenditures; if personnel expenses are included, Peru probably has the highest percentage. Although Peru's hospital occupancy rate is average, it has the highest average length of hospital stay. Comparing Peru with Mexico, the latter has less than half Peru's average length of hospital stay, with 67 percent hospital occupancy versus 72 percent for Peru. If the Peruvian average stay (11.5 days) were reduced to the Mexican average (4.6 days) Peru's percentage of hospital occupancy would fall to 30 percent.

The health services and health status obtained by these high expenditures leave much to be desired. Peru ranks sixth and seventh respectively in its ratio of physicians and hospital beds to population (Table 24). And although Brazil and Ecuador have proportionally fewer hospital beds, both have higher health levels than Peru, which has even higher general and infant mortality rates and lower life expectancy than Ecuador (Table 24). Peru has relatively more health services than nearly all the countries in Latin America, but with few exceptions it has lower health levels. Of the multiple sources of Peru's poor health performance noted in Section III, two basic reasons affected by IPSS policy deserve reiteration. One is the relative neglect of mothers and children and the rural population who are more vulnerable to illness than the productive urban group on which IPSS concentrates its services. The other basic weakness is the scarce attention given to preventive medicine and to those illnesses that cause the greatest number of deaths.

In summary, the tables show that Peru devotes relatively large resources to health care, but they are not assigned to the most urgent needs, and are concentrated on curative medicine for the sector of the population affected by the least risk. Moreover the resources are administered very inefficiently. A reassignment of resources to the highest risk populations with emphasis on primary health care and the leading causes of illness and death, as well as greater efficiency in administering those resources, would increase the scope of coverage and improve health levels.

After a decade of IPSS deterioration, the new administration offers hope for the medical care program. If that hope is not to be disappointed, fundamental shifts or expansions in the direction and emphases of the medical care program -- from curative to preventive care, from large urban hospitals to more widely accessible clinics and polyclinics, from insured workers to their dependents, from the formal sector to the rest of the economy -- must be accompanied by equally essential administrative measures. The government must make good on its long-standing debt to the system and private sector evasion must end if the program is to operate from a secure financial base. The administration must impose practicable controls on contribution collection, record-keeping, financial accounting, and hospital management if it is truly to oversee that operation. Above all, it must follow through on its proposals and implement its plans, if they are not to continue the tradition of unfulfilled expectations described in this report.

FOOTNOTES

- (1) El Desarrollo de la Seguridad Social en America Latina (Santiago: Estudios e Informes de la CEPAL, No 43, 1985)
- (2) Interview with Homero Gutierrez, Assistant Manager of Statistics, IPSS, December 12, 1985.
- (3) See IPSS, Boletin de la Gerencia de Salud, No. 5-6 (September-December 1984).
- (4) IPSS, El Instituto Peruano de Seguridad Social, Periodo 1975-1984 (Lima, September 1985), Table 1.3.
- (5) Jose Barsallo Burga, "Ponencia sobre Financiamiento de las Prestaciones de Salud en el IPSS," Lima, October 1985, Table 1.
- (6) Ibid., Table 2.
- (7) INE (National Statistics Institute), Producto Interno por Departamentos (Lima, June 1983); and Banco Central de Reserva del Peru, Mapa de Salud del Peru (Lima, 1984).
- (8) Carmelo Mesa-Lago, Social Security in Latin America: Pressure Groups, Stratification and Inequality (Pittsburgh: University of Pittsburgh Press, 1979), pp. 136-141.
- (9) El Desarrollo de la Seguridad Social.
- (10) IPSS Direction of Planning and Budget, Lineamientos de Politica de Seguridad Social (Lima, August 1985).
- (11) IPSS "Evaluacion Plan Piloto Seguro Social Campesino," Lima, 1983.
- (12) Comision Bicameral Investigadora del Sistema de Seguridad Social, "Dictamen Final," November 16, 1984; and Mario Cordova Cossio, Technical Advisor Central Management IPSS, "Seminario sobre Reforma de la Seguridad Social en Peru," Universidad del Pacifico, Lima, July 9-10, 1985.
- (13) Comparisons based on ECLA, Statistical yearbook of Latin America (Santiago, Chile 1984) and El Desarrollo de la Seguridad Social, op cit.
- (14) Carlos Bustos Romani, Atencion Medica y su Contexto, Peru 1963-83 (Lima: Escuela de Salud Publica del Peru, 1985).
- (15) Ministry of Health, "Proyecciones de Poblacion por Regiones de Salud y Utilizacion de Indicadores del Sector; Periodo 1980-1985," Lima, 1983, pp. 5-51; and IPSS, "Convenio de Cooperacion Tecnica con OPS/PMS/para el Desarrollo y Operacion de los Servicios del IPSS,"

- Lima, 1984, pp. 9-10.
- (16) Calculations based on IPSS data in El Instituto, opcit.
- (17) IPSS. "Convenio...", pp. 2,4, 13.
- (18) Staff Interview.
- (19) "Dictamen Final," op cit.
- (20) Interview with Jose Barsallo Burga, Executive President of IPSS and Angel Saltachin, Planning and Budget Manager, Lima, December 10, 1985.
- (21) OIT. El costo de la seguridad social: Undecima encuesta internacional, 1978-1980 (Geneve).
- (22) El Desarrollo de la Seguridad Social, op cit.
- (23) "Dictamen Final," op cit.
- (24) El Desarrollo de la Seguridad Social, op cit.
- (25) "Dictamen Final," opcit. and "Conclusiones y Recomendaciones segun el Estudio de Clinicas Contratadas," Boletin de la Gerencia Central de Salud, No. 1-2. (1985).
- (26) Estimates based on IPSS, Boletin de la Gerencia Central de Salud, No. 1 (1984), pp. 32-34.
- (27) INE, Informe Estadistico: Segundo Trimestre de 1985 (August 1985).
- (28) "Dictamen Final," opcit. p.22; and El Desarrollo de la Seguridad Social, op cit.
- (29) Interview with Jose Barsallo Burga and Angel Saltachin (see note 20).
- (30) Interview with Pablo Concha, Office of Registration, Assessment, and Collection, IPSS, Lima, December 12, 1985.
- (31) Interview with Carlos Bockos, Central Manager for Registration, Assessment, and Collection, IPSS, and Cesar Zambrano of the same office, Lima, December 11-12, 1985.
- (32) Mario Cordova Cossio, Technical Advisor, Central Management, IPSS, "Seminar sobre Reforma de la Seguridad Social en Peru," Universidad del Pacifico, Lima, July 9-10, 1985.
- (33) "Dictamen Final," opcit.
- (34) This part of the report is based on IPSS, "Sistema de Inscripcion y Recaudacion," Lima, June 1985; and "Proyecto SIR PROSIR," Lima, August 1985.

- (35) IPSS "Estudio Financiero Actuarial Regimen de Pensiones D.L." Lima, November, 1984.
- (36) "Dictamen Final," opcit. pp.30 and 47; IPSS, "Aspectos Financieros Actuariales: Sistema Nacional de Pensiones, n.d."
- (37) Interview with Rosa Lopez, Economic Counselor, Executive Presidency, IPSS, Lima, December 12, 1985.
- (38) IPSS, "Informe Financiero Actuarial del Regimen de Prestaciones de Salud," 1984.
- (39) El Desarrollo de la Seguridad Social, op cit.
- (40) "Nota Tecnica de la OIT: Regimen de Prestaciones de Salud," Lima/Geneva, October 1984.
- (41) "Nota Tecnica de la OIT," ibid.
- (42) The classification of countries according to the development of social security was taken from El Desarrollo de la Seguridad Social, op cit. Note that "development" does not necessarily mean the system is "superior."
- (43) Carmelo Mesa-Lago, "Financing Health Care in Latin America and the Caribbean," World Bank, 1983; and El Desarrollo de la Seguridad Social, op cit.

TABLE 1

ESTIMATED POPULATION COVERAGE BY THE
PERUVIAN SOCIAL SECURITY MEDICAL-CARE PROGRAM, 1975-1985

Year	Contributing Insured			Dependents			Total A+B	Total population	
	a		b Sub-total A	c	d	Sub-total B			
	Salaried	Self-employed	Pensioners		Spouses	Children			
(in thousands)									
1975	1,562	17	146	1,725	--507--		507	2,232	15,161
1980	2,014	39	211	2,264	546	66	612	2,876	17,295
1981	2,093	50	230	2,373	554	68	622	2,995	17,755
1982	2,167	61	243	2,471	572	70	642	3,113	18,226
1983	2,243	74	256	2,573	705	102	807	3,380	18,707
1984	2,321	87	270	2,678	734	105	839	3,517	19,198
1985	2,403	101	283	2,787	765	109	874	3,661	19,698

(in percentages of total population)

1975	10.3	0.1	1.0	11.4	--3.3--		3.3	14.7	100
1980	11.6	0.2	1.2	13.1	3.2	0.4	3.5	16.6	100
1981	11.8	0.3	1.3	13.4	3.1	0.4	3.5	16.9	100
1982	11.9	0.3	1.3	13.6	3.1	0.4	3.5	17.1	100
1983	12.1	0.4	1.4	13.8	3.8	0.5	4.3	18.1	100
1984	12.1	0.5	1.4	13.9	3.8	0.5	4.4	18.3	100
1985	12.2	0.5	1.4	14.1	3.9	0.6	4.4	18.6	100

a Includes domestic workers. Excludes independently covered armed forces, police, fishermen and jockeys.

b Includes old age disability-survivor and occupational-risk pensioners in private and public sectors. Excludes pensioners from armed forces, police, fishing and racetracks.

c Spouses of active and passive insured entitled only to maternity care.

d Children under one year old entitled to out-patient care. 1984 extension to age 14 not yet widely implemented.

Source: 1983-1985, IPSS estimates, as reported to author; 1975-1982 HSA estimates based on IPSS figures.

TABLE 2

IPSS MEDICAL CARE COVERAGE DISTRIBUTION
BY AGE GROUP: 1985

Age Group	Percent of total population	% of IPSS insured	Percent of age group covered ^a
0-14 ^b	40.2	3.0	1.4
15-59	54.4 ^c	87.2 ^c	29.9
60 and over	5.4	9.8	33.8
Total	100.0	100.0	18.6

^a Number of insured divided by total population in age group.

^b Almost exclusively 0-1 year olds, because of limited implementation of extension to age 14.

^c Includes spouses entitled only to maternity care. Number of spouses estimated at 90% of insured.

Sources: Population, World Bank estimate for 1985; insured, Table 1.

TABLE 3

IPSS MEDICAL CARE COVERAGE DISTRIBUTION
BY DEPARTMENT: 1981

Department	Percent of population covered ^a
Amazonas	3.1
Ancash	9.8
Apurimac	2.5
Arequipa	17.4
Ayacucho	2.8
Cajamarca	2.7
Callao	24.6
Cusco	4.7
Huancavelica	3.7
Huanuco	4.7
Ica	20.5
Junin	9.5
La Libertad	12.0
Lambayeque	15.0
Lima	26.7
Loreto	2.5
Madre de Dios	6.1
Moquegua	16.9
Pasco	13.1
Piura	8.3
Puno	3.7
San Martin	5.0
Tarma	19.6
Tumbes	8.6
Ucayali	7.5
National Average	14.0 ^b

^a Excludes the armed forces.

^b Difference from figure in Table 1 (16.9 percent) attributable to different sources.

Source: Instituto Nacional de Estadística, Peru: *Compendio Estadístico 1982* (Lima: June, 1983); and Banco Central de Reserva del Peru, *Mapa de Salud del Peru* (Lima: December, 1984).

TABLE 4

IPSS MEDICAL COVERAGE DISTRIBUTION BY ECONOMIC SECTOR:
1984
(In thousands)

Branch ^a	Total survey	Hold IPSS card	Percent of
			labor force covered
Agriculture, livestock forestry, and fishing	201.1	11.0	5.5
Mines and Quarries	9.7	6.6	68.0
Manufacturing	71.6	28.1	39.2
Construction	21.6	7.2	33.6
Electricity, gas & water	2.6	2.2	83.5
Transport, warehousing and communications	23.6	10.3	43.7
Trade, restaurants and hotels	107.8	20.2	18.7
Financial services, insurance, etc.	13.7	9.3	67.7
Communal, social, and personal services	111.7	54.9	49.1
Not specified	.8	.4	45.6
Total/Average	564.2	150.1	26.6

^a Percentage based on unadjusted expansion figures.

Source: INE, and Encuesta Nacional de Nutricion y Salud, 1984.

TABLE 5

IPSS MEDICAL COVERAGE DISTRIBUTION BY OCCUPATIONAL CATEGORY: 1981

Occupational Category	Labor force (thousands) %		Insured (thousands) %		Percent covered
^a Salaried (Formal Sector)	2,324	40	2,093	98	90.1
Self-employed	2,150	37	^b 50	2	2.3
Unpaid family worker	^c 440	8	0	0	0
Unemployed	392	7	0	0	0
Not specified	^c 461	8	0	0	0
	-----	---	---	---	
Total Average	5,770	100	2,143	100	37.1

^a Includes blue and white-collar and domestic workers.

^b Optionally insured.

^c Figure given by the National Statistical Institute adjusted with figures from ILO.

Sources: Civilian Labor Force from INE, *Compendio Estadístico 1984* adjusted with ILO, *Yearbook of Labor Statistics 1983*; insured workers from Table 1.

TABLE 6

HEALTH SERVICES AND HEALTH STATUS IN PERU: 1960-1984

Year	Hospital beds per 1,000 inhab.	Doctors per 10,000 inhab.	Mortality rates		Life expectancy
			a General	b Infant	
1960	2.4	4.5	18.4	140.9	48.0
1965	2.4	4.7	16.5	130.6	50.4
1970	2.1	4.8	14.0	116.2	54.0
1975	1.9	6.1	12.2	106.6	56.3
1980	1.7	7.2	11.3	101.5	57.8
1981	1.6	7.6	11.1	100.2	58.2
1982	1.6	8.4	10.9	98.6	58.6
1983	1.6	8.7	10.6	96.8	59.1
1984	1.8	9.0	10.3	94.9	59.6

a
Deaths per thousand population.

b
Deaths in first year of life per thousand births.

c
Preliminary estimate.

Sources: *El desarrollo de la seguridad social en America Latina*, updated with Peru: *Compendio Estadístico 1984* (Lima, July 1985).

TABLE 7

HEALTH SERVICES/POPULATION RATIOS FOR IPSS
MDH, ARMED FORCES, AND PRIVATE SECTOR: 1982

Groups	Population nominally covered		Hospital beds			Doctors ^a		
	(in thousands)	%	Total	%	Per 1,000 population	Total	%	Per 10,000 population
Social Security (IPSS)	3,113	17	4,856	16	1.6	2,800	21	11.1
Ministry of Health and others	9,113	50	16,744	57	1.6	4,698	35	5.1
Armed Forces and Police	912	5	2,093	7	2.3	1,860	14	20.4
Private Sector ^b	5,088	28	5,786	20	1.1	3,984	30	7.8
	----- ^c	---	-----	---	---	-----	---	---
Total	18,226	100	29,479	100	1.6	13,342	100	7.3

^a 1981 data.

^b Private profit-making and non-profit entities and enterprises, agro-industrial cooperatives, agricultural societies and other non-governmental bodies.

^c HSA-Peru project estimates. This total probably includes substantial overestimates of MDH and IPSS coverage, since other sources indicate approximately 30% of the population have no access to organized health care.

Sources: *El desarrollo de la seguridad social en América Latina* up-dated with figures from IPSS and MDH.

TABLE 8

IPSS AND MDH HEALTH EXPENDITURES PER CAPITA BY REGION: 1984

Per capita health expenditures (in thousands of Soles)				
a Regions	b IPSS	c Ministry of Health	d Both	e Index
Lima	178	62	102	179
North	140	19	29	51
North central	136	22	50	88
Central	123	24	37	65
South	174	48	66	115
South central	181	f	f	f
South east	99	19	30	53
East	117	23	36	63
Average	163	33	57	100

a
Regions cover the following departments: Lima: Lima and Callao; North: Tumbes, Piura, Lambayeque, Cajamarca, Amazonas and San Martin; North central: La Libertad and Ancash; East: Loreto, Ucayali and Huanuco; Central: Pasco, Junin and parts of Huancavelica and Ayacucho; South central: Ica and parts of Huancavelica and Ayacucho; South east: Apurimac, Madre de Dios and Cusco; and South: Arequipa, Moquegua, and Tacna.

b
IPSS health expenditures divided by the number of insured in each region.

c
Ministry of Health expenditures divided by total regional population minus IPSS insured. Since some non-IPSS population may be covered by other public or private bodies, MOH figures are underestimated.

d
Combined IPSS and MDH health expenditures divided by the total region population.

e
Based on both IPSS and MDH spending. National Average = 100.

f
Combined South east and South central figures.

Source: HSA estimates based on IPSS, El Instituto... and ANSSA.

TABLE 9

CONCENTRATION OF IPSS HEALTH SERVICES IN LIMA: 1983

Lima	% of Peru total
Total Population (Lima-Callao)	31.0
IPSS Insured (Lima-Callao)	57.8
Health Expenditures (Region)	63.5
Hospital Beds	56.0
Clinics	55.0
Doctors	70.0
Nurses and Technicians	68-75
Out-Patient visits	60.6
Surgical interventions	57.0
Hospital expenditures	56.0
Attended births	62.2
Vaccinations	58.0
Laboratory tests	67.0
Dental care	52.0

Sources: IPSS, Boletín de la Gerencia Central de Salud, No.2 (March 1984); IPSS, "Convenio de cooperación técnica [con GPS/DMS] para el desarrollo, mejoramiento y operación de los servicios del IPSS," Lima, 1984; and primary data obtained directly from IPSS.

TABLE 10
 LENGTH OF HOSPITAL STAY (1981-84)
 AND PERCENTAGE OF OCCUPANCY (1982-83)

REGIONS	Average hospital stay (days)				Hospital bed occupancy (%)	
	1981	1982	1983	1984	1982	1983
Lima	...	12.4	12.5	12.9	86.9	84.1
General	10.8	10.5	10.7	10.9	...	...
Rebagliati Hospital	12.2	11.8	11.2	12.4	...	...
Almenara Hospital	17.5	16.5	16.2	17.4	...	...
North	8.1	7.9	7.4	8.0	59.6	56.7
North central	9.2	8.9	9.1	9.1	70.3	54.7
Central	12.1	11.8	12.4	13.5	61.9	45.9
South central	8.8	8.9	8.4	8.5	67.8	58.4
South	11.8	11.7	11.5	11.4	84.0	71.0
East	...	...	8.0	8.7	...	49.3
National Services						
IPSS Service	11.8	11.4	11.0	11.8	73.5	71.9
Contracted Services	15.0	15.3	18.8	20.8	...	...

^a Since 1984 privately contracted services in Lima limited to chronically ill.

Source: IPSS, Gerencia de Salud, *Boletín de la Gerencia Central de Salud*, No.2 (March 1984); IPSS, Oficina de Actuario y Estadística, *Boletín Estadístico de Prestaciones de Salud 1982 y 1983*; and Barsallo, "Ponencia sobre financiamiento de las prestaciones de salud..."

TABLE 11

IPSS HEALTH INFRASTRUCTURE INVESTMENT: 1985

(in thousands of dollars)

Hospitals	Investment		Beds		Department indices ^a		Region indices ^b	
	Estimated	%	Number	Cost per bed	% coverage	Beds per 1,000 inhab.	% Beds occupied	Average days stay
	Cost	spent						
^c Cusco	53,197	88.6	300	177.3	4.7	1.1	...	...
^c Huancayo	39,429	70.1	500	78.9	9.5	1.6	45.9	12.4
^c Pucallpa	30,392	33.5	215	141.4	7.5	1.1	49.3	6.0
^d Arequipa	...	...	...	...	17.4	2.8	71.0	11.5
Total	123,018	71.6	1,015	121.2	14.0	1.7	71.9	11.0

^a Figures for 1981.^b Figures for 1980.^c Regional hospitals.^d Hospitals for non-acutely ill.

Source: Barsallo, "Ponencia sobre financiamiento de las prestaciones de salud...";
IPSS, "Estudio de la situación financiera del IPSS"; and Tables 1,3, and 10.

TABLE 12

PROPORTION OF TOTAL IPSS EXPENDITURES
ALLOTTED TO HEALTH CARE: 1975-1984

Year	Total expenditures (in billions of Soles)	^a Health expenditures	Health Expenditures as percentage of total expenditures
1975-76	31.1	12.5	40.2
1977	22.1	10.4	47.0
1978	33.3	16.9	50.8
1979	61.2	33.0	53.9
1980	128.2	67.3	52.5
1981	233.2	144.1	61.8
1982	380.0	235.4	61.9
1983	630.2	389.9	61.8
1984	1,188.2	636.4	53.7

^a

Includes monetary and medical-hospital benefits of the Medical Care Program and medical-hospital benefits of the occupational risks program.

Source: HSA estimates based on IPSS, El Instituto..., and Table 9.

TABLE 13

COST OF PUBLIC SECTOR HEALTH CARE IN PERU: 1975-1984

(in billions of Soles and in percentages)

Years	GDP	Central Government expenditures	a Health Costs				Percentage distribution			% of GDP			% of Government Expenditures		
			IPSS	MOH	Total	Per capita in US\$	IPSS	MOH	Total	IPSS	MOH	Total	IPSS	MOH	Total
1975	627.4	131.4	5.4	3.9	9.3	13.97	58	42	100	0.9	0.6	1.5	4.1	3.0	7.1
1976	1,842.2	...	16.9	16.3	33.2	12.29	51	49	100	0.9	0.9	1.8	...	...	...
1979	3,398.3	...	33.0	29.8	62.8	16.12	53	47	100	1.0	0.9	1.8	...	...	...
1980	4,851.8	1,370.1	67.3	49.0	116.3	22.38	58	42	100	1.4	1.0	2.4	4.9	3.6	8.4
1981	6,353.7	2,273.1	144.1	93.2	227.3	28.81	63	37	100	1.7	1.0	2.7	6.3	3.7	10.0
1982	10,386.1	3,560.0	235.4	166.3	401.7	29.04	59	41	100	1.8	1.2	3.0	6.6	4.7	11.3
1983	26,043.0	7,346.0	383.9	341.5	731.4	21.91	53	47	100	1.5	1.3	2.8	5.3	4.6	10.0
1984	57,023.0	17,026.0	638.4	725.6	1,364.0	18.01	47	53	100	1.1	1.3	2.4	3.7	4.3	8.0

a
Excludes the Armed Forces and some minor public agencies.

b
At the official exchange rate.

Sources: GNP and government expenses from ANSSA estimates based on El Instituto... and El desarrollo...
Health Costs from table 20 and HSA figures.

TABLE 14

IPSS ADMINISTRATIVE COSTS: 1975-1984

(in billions of Soles)

Years	Total IPSS Expenditures	a		Health Care Expenditures	b	
		IPSS Administrative Expenditures			Health Care Administrative Expenditures	
		Total	%		Total	%
1975-1976	31.1	c	...	12.4	1.3	10.5
1977	22.1	...	...	10.1	1.0	9.9
1978	33.3	...	...	16.8	1.6	9.5
1979	61.2	...	...	31.0	2.5	8.1
1980	128.2	...	...	62.6	5.0	8.0
1981	233.2	26.8	11.5	125.6	6.4	5.1
1982	380.0	43.4	11.4	207.0	13.5	6.5
1983	630.2	75.8	12.0	350.9	19.8	5.6
1984	1,188.2	131.5	11.1	575.5	50.7	8.8

a Excludes personnel expenditures.

b Excludes personnel and central administrative expenditures attributable to the medical care program.

c Before 1981, administrative expenses were lumped with personnel costs and "provisiones del ejercicio" as "operating expenses."

Source: Estimates based on IPSS, *El Instituto...*, and internal IPSS figures, December 1985.

TABLE 15

DISTRIBUTION OF IPSS MEDICAL CARE
EXPENDITURES BY BUDGETARY ITEM: 1981-1985
(in percentages)

ITEM	1981	1982	1983	1984	1985
Salaries and fees	39.5	38.5	43.5	48.2	50.3
Medical supplies	20.0	20.0	21.8	20.9	24.3
Contracted and free-choice services	20.7	21.9	18.1	18.0	15.0
Monetary benefits	17.1	18.0	16.0	12.8	10.4
Capital goods	2.7	1.6	0.6	0.1	0.0
Total	100.0	100.0	100.0	100.0	100.0

Source: HSA estimates based on Barsalio, "Ponencia sobre financiamiento de las prestaciones de salud...."

TABLE 16

IPSS EMPLOYEES AND SALARIES: 1975-1984

Year	No. of IPSS Employees	^a No. of insured (thousands)	IPSS employees per 1,000 insured	Remuneration as percentage of total social security expenditures
1975	21,598	2,232	9.4	21.6
1976	22,000	...	...
1977	23,503	...	...
1978	23,900	...	...	25.8
1979	24,136	...	...	26.4
1980	26,850	2,876	9.3	26.4
1981	27,151	2,996	9.1	27.3
1982	30,791	3,113	9.9	27.4
1983	31,200	3,380	9.3	30.5
1984	28,604	3,517	8.1	29.6

^a In medical care program.

Source: Employees and remuneration from IPSS, *El Instituto...*; insured figures from Table 1.

TABLE 17

LEGALLY MANDATED CONTRIBUTIONS TO IPSS: 1985

(as percentage of insured's salary or income)

Programs	Employee	Employer	Total	Self-employed	Pensioners
Medical Care	3.0	6.0	9.0	9.0	4.0 ^a
Pensions	3.0	6.0	9.0	9.0	0
Occupational risk	0	4.0 ^b	4.0	0	0
Total	6.0	16.0	22.0 ^c	18.0	4.0

^a Pension program contributes additional 5%.

^b National average; premium varies from 1 to 12.5% according to risk.

^c Within specified minimum and maximum earnings limits.

Source: Current legislation.

TABLE 18

PUBLIC SECTOR DEBT TO IPSS AND ITS DEVALUATION: 1969 - 1985

Sector	Period	b			
		Debt in current soles (billions)	Debt in dollars (millions)	Debt in 1985 dollars	Devaluation loss in current Dollars (millions)
Central Government	1969-79	13.8	59.7	1.4	58.3
	1980-82	23.2	30.6	2.4	28.2
	1983	92.7	52.0	9.8	42.2
	1984	240.9	61.0	25.4	35.6
	1985 ^e	272.5	28.7	28.7	0
Sub-Total	1969-85	643.1	232.0	67.7	164.3
Public Enterprises	1969-84	98.5	25.0	10.4	14.6
Local Governments	1969-84	50.0	12.7	5.3	7.4
Parastatal enterprises	1975-81	3.6	8.1	0.4	7.7
Total		795.2	277.8	83.9	194.0

a Including delinquency (mora).

b Based on official exchange rate at end of debt period.

c Includes central government, central public institutions, national university and CORDES.

d Metropolitan Lima only.

e Preliminary estimate.

Sources: Estimated from IPSS sources provided by the Gerencia Central de Inscripción, Acotación y Recaudación, Grupo Central de Adeudos, December 12, 1985.

TABLE 19

ANNUAL YIELDS ON FINANCIAL INVESTMENTS MADE BY
THE IPSS-MEDICAL CARE PROGRAM: 1980-1985

Type of Investment	Yields (percent)											
	1980		1981		1982		1983		1984		1985	
	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real	Nominal	Real
Deposit												
Certificates	40.5	-20.3	65.9	-6.8	67.4	-5.5	79.6	-45.5	79.6	-31.9	73.7	-92.4
Parastatal bonds and internal debt	6.0	-54.5	6.0	-66.7	6.0	-66.9	6.0	-119.1	6.0	-105.5	6.0	-160.1
Mortgage bonds	.	.	.	.	.	.	.	.	19.5	-92.0	19.5	-146.6
Bank Certificates (US dollars)	.	.	.	.	.	.	.	.	10.1	10.1	10.3	10.3
Rate of Inflation	60.8		72.7		72.9		125.1		111.5		166.1	

a Nominal yield minus inflation rate.

b Annual forecast, based on September 1985.

c Average; fluctuated from 9.6% to 10.3%.

Source: Estimates based on IPSS, "Estudio de la situación financiera del IPSS," Lima, September 1985, and information from Asesoría Económica de la Gerencia de Finanzas, December 12, 1985..op

TABLE 20

INCOME AND EXPENDITURES OF THE IPSS MEDICAL CARE PROGRAM, 1975-1985

Year	Billions of Soles at current prices			Billions of Soles in 1975 constant prices			Balance (Percent)	Balance (in millions of dollars)
	a Income	b Expenditures	Balance	Income	Expenditures	Balance		
1975	6.9	5.4	1.5	6.9	5.4	1.5	21.7	34.2
1976	8.4	7.1	1.3	5.9	4.9	0.9	15.5	22.7
1977	9.0	10.4	(1.4)	4.7	5.4	(0.7)	(15.6)	(16.0)
1978	12.9	16.9	(4.0)	3.9	5.1	(1.2)	(31.0)	(24.3)
1979	23.7	33.0	(9.3)	4.3	5.9	(1.7)	(39.2)	(40.2)
1980	63.6	67.3	(3.7)	7.1	7.5	(0.4)	(5.8)	(12.3)
1981	127.9	144.1	(16.2)	8.3	9.4	(1.1)	(12.7)	(36.4)
1982	175.5	235.4	(59.9)	6.6	8.8	(2.2)	(34.1)	(78.9)
1983	349.8	385.3	(40.1)	5.8	6.5	(0.7)	(11.5)	(22.5)
1984	608.3	636.4	(20.1)	4.8	5.0	(0.2)	(4.9)	(7.6)
1985 ^d	1,338.6	1,654.3	184.3	5.4	4.9	0.5	10.0	19.4

a Includes current and capital income of the Medical Care Program, pension fund contributions for pensioners, and current and capital income transferred from occupational risks fund (excluded 1975-79).

b Includes operational and capital expenditures but not central administrative costs of the Medical Care Program and Occupational Risks Program (the latter is excluded in 1975-79).

c Estimates based on annual average official exchange rate.

d Preliminary estimates based on figures at the beginning of December.

Sources: Estimates based on IPSS "Estudio de la situación financiera del IPSS," Lima, September 1985. IPSS, *El Instituto...*; and information from the IPSS, Planning and Budget Agency, December 12-23, 1985.

TABLE 21

FINANCIAL RESERVES OF THE IPSS MEDICAL CARE PROGRAM: 1975-1985

Year	a			Inflation Index (1975=100)	Actual Reserve (in 1975 Soles) (millions)	Actual Reserve b (in current US\$)
	Legal Reserve (in current Soles) (millions)	Actual Reserve (in current Soles)	Surplus or (Deficit)			
1975	.	6,685		100.0	6,885	153.0
1976	1,890	8,322	6,432	144.7	5,751	120.0
1977	2,310	9,287	6,977	191.6	4,847	71.2
1978	2,400	9,530	7,130	332.8	2,864	45.8
1979	3,390	10,524	7,134	554.7	1,900	41.7
1980	6,360	5,941	(419)	892.0	666	17.3
1981	15,420	239	(15,181)	1,540.5	16	0.5
1982	30,510	317	(30,193)	2,663.5	12	0.3
1983	42,270	105	(42,165)	5,935.7	2	0.05
1984	89,700	290	(89,410)	12,680.9	2	0.05
1985	117,240	14,734	(102,506)	36,723.9 ^c	40	1.3

a Estimated by calculating 30% of remainder of previous year's income minus administrative expenses.

b At current market exchange rate.

c Based on the inflation rate in September 1985.

Source: Reserve at current prices and in dollars from Jose Barsallo Burga, "Ponencia sobre financiamiento de las prestaciones de salud en el Instituto Peruano de Seguridad Social," Lima, October 22-25, 1985. Legal reserve, inflation, and reserves at 1975 prices from IPSS staff estimates.

TABLE 22

SOCIAL SECURITY MEDICAL CARE FINANCING AND COVERAGE IN EIGHT LATIN AMERICAN COUNTRIES^a

COUNTRY	with medical coverage (1980-1983)		Percentage of salary contribution for medical care (1982-84)				% of total social security expenditure for medical care (1960-82)	Reserve balance as percentage of revenue of medical care (1980-82)
	Total	^b EAF	Employee	Employer	State	Total	(1960-82)	(1980-82)
Brazil	96	96	8.0	8.0	0	16.0 ^e	24.3	...
Chile	77	68	5.0-6.5	0	0	5.0-6.5 ^d	21.7	24 ^e
Cuba	100	100	0	10.0 ^g	g	10.0 ^c	42.3	0 ^g
Costa Rica	67	62	5.5	9.25	1.25	16.0	74.8	(9)
Ecuador	11	23	5.0-7.0	6.0-7.0	0	11.0-14.0 ^c	34.3	...
Mexico	60	42	2.25	5.625	1.125	9.0	64.9	(10)
Panama	55	54	1.0	8.0	0	9.0	54.6	(23)
Peru	18	38	3.0	6.0	0	9.0	66.9	(53)

^a Social Security and Ministry of Health expenses; some countries include other public sector agencies.

^b Economically active population.

^c Contribution to all social security programs; no separate medical care contribution.

^d New system, 6%, old system, 5.6 to 6.5%.

^e Old system (1980).

^f According to law rather than coverage statistics.

^g State finances all health care but enterprises pay a contribution of 10% on salaries for monetary benefits, including sickness and maternity subsidies.

Sources: *El desarrollo de la seguridad social*; ECLA, *Anuario 1984*; and information from the different social security institutes in the different countries.

TABLE 23

SOCIAL SECURITY MEDICAL CARE BENEFITS IN EIGHT LATIN AMERICAN COUNTRIES

COUNTRY	Monetary Payments						Medical-Hospital services					
	Sickness			Maternity			Contribution Weeks			Entitled Dependents		
	Weeks Required	% of salary	Weeks duration	Weeks requir.	% of salary	Weeks duration	Sick.	Matern.	Weeks duration	Wife	Children	Parent
Brazil	52	70-90	52	52	100	12	^a 0	^a 0	e	x	x	...
Chile	13	100	26	13	100	13	^a 0	^a 0	...	x	x	
Costa Rica	4	50	26	26	50	8	4	13	52	x	x	x
Cuba	^a 0	60-90	52+	11	100	18	0	0	e	x	x	x
Ecuador	26	66-75	26	26	75	8	26	26	26		c	
Mexico	6	60	52-78	30	100	12	^a 0	^a 0	52-104	x	x	x
Panama	26	70	28-52	39	100	14	^a 0	^a 0	26	x	x	x
Peru	13	100	52	39	100	12	13	26	52	d	c	

^a Immediate entitlement for all insured (or all workers in Cuba).

^b Generally up to 18 years; some countries include students or handicapped over 18.

^c Less than one year of age.

^d Maternity only.

^e Indefinite.

Source: Mesa-Lago, "Financing Health Care in Latin America and the Caribbean", World Bank, 1983; *El Desarrollo...*; and legislation of the countries.

TABLE 24

SOCIAL SECURITY HEALTH SERVICES AND HEALTH STATUS IN EIGHT LATIN AMERICAN COUNTRIES

COUNTRY	Hospital	Doctors	Mortality rate		Life	Administrative	Average	Average
	beds per 1000 inhab. (1980-82)	per 10,000 inhabitants (1980-82)	General (1980-82)	Infant (1980-85)	Expectancy at birth (1980-85)	proportion(%) of social security expenditures (1980-83)	hospital occupancy(%) (1979-83)	hospital stay (days) (1981-83)
Brazil	4.2	7.8	8.4	70.6	63.4	12.1	...	...
Chile	3.3	9.7	6.2	27.0	69.7	7.5	76	8.8
Costa Rica	3.4	10.0	3.9	18.0	73.0	6.9	78	...
Cuba	4.5	16.7	6.0	18.5	73.5	...	81	9.6
Ecuador	1.8	7.8	7.1	63.9	61.3	28.0	58	8.2
Mexico	1.2	9.3	6.4	38.8	65.7	19.5	67	4.6
Panama	3.8	9.3	4.0	20.0	71.0	5.4	...	....
Peru	1.6	8.1	10.3	98.6	58.6	12.0	72	11.0

a Projection 1980-1985.

b 1977.

c Excludes personnel expenses.

d IMSS-COPLAMAR (social security medical care program) only

Sources: ECLA; Anuario Estadístico 1984; El Desarrollo...; OIT, El costo de la seguridad social 1978-1980 (Geneva, 1985); and tables on Peru.