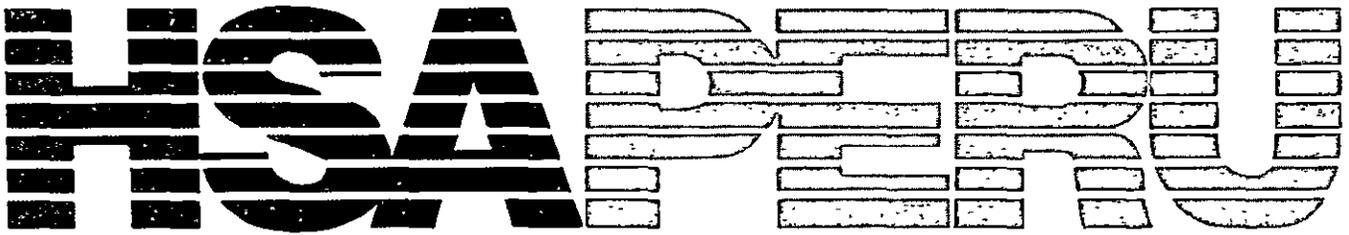


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A Health Sector Analysis of Peru Technical Report

Health Care Facilities in Peru

Ethel R. Carrillo

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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 a researcher and assistant to the project director in Peru for one year. In her research for this report, she worked closely with two Peruvian architects employed by the Ministry of Health, Maria Estrada and Maria Esperanza Castaneda. In the preparation of the original version of this report in Spanish, the author was assisted by a Peruvian economist, Jose Carlos Vera.

Prof. Ethel Carrillo is a faculty member in economics of the University of Lima, and a Ph.D. candidate in economics at Stony Brook. In the design, preparation and editing of this report, within the overall conceptual framework of the HSA-Peru, Prof. Carrillo cooperated closely with the project's senior health scientist, Dr. Luis Carlos Gomez, and with the project director. The final report in English was edited by our Stony Brook colleague, Prof. Ron Overton.

Dieter K. Zschock
Director, HSA-Peru

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I.

INTRODUCTION

Peru's health policies for the past 15 years have emphasized primary health care (PHC), and many new health centers and health posts have been built under the last three governments to extend coverage in the country's underserved regions. Yet, Peru can still be considered a country that concentrates health sector resources on curing sickness rather than maintaining its people's health.

The most compelling evidence of this is the continuing commitment to expensive and highly visible hospital building projects. In the recent past, not only have several large hospitals been built, but in several cases, due to lack of coordination among the sub-sectors providing health care, duplication of efforts has resulted in many more beds being available than a particular resident population needs. Hospitals, and hence beds, are overly concentrated in Lima and Callao, while the need for health centers and posts still exceeds their supply in both the urban and the rural areas of the country.

In assessing to what extent Peru's health facilities are distributed to effectively meet the needs of its people, the different ways in which Peru's population and geography are divided must be considered. First, 24 departments and one constitutional province (Callao) are the principal political units. Additionally, until 1985, there were 17 health regions as defined by the Ministry of Health (MOH). In an attempt to decentralize health care delivery and make it more equally accessible to the entire Peruvian population, these health regions were further divided into a total of 62 hospital areas.

In a pyramid-like referral system of health care delivery that encourages equality of access and efficiency of facility utilization, a potential patient should first seek help at a health post or center (first level). If the patient's condition justifies it, s/he is then referred to an intermediate-sized facility providing hospital services (second level). Finally, if adequate treatment is not possible on the first two levels, the patient is referred to a large hospital (third level). The main objective here is to encourage an efficient delivery of health care services. Implicit in this referral system is a need for a relatively large number of health posts, fewer health centers and proportionately fewer hospitals.

This study will analyze the real situation in Peru with reference to this pyramid-like referral system. It will pursue this comparison by examining the distribution, accessibility and potential capacity of the physical infrastructure of Peru's health care facilities, how these have evolved over the years, and the possibilities for improving access for the less favored sectors of Peru's population.

The study is organized into four sections. The first covers the geographical distribution of physical infrastructure, taking into consideration demographic density and the population's possible access

to any health service.

The second section analyzes the supply of and potential need for hospital beds in order to assess coverage at the departmental, regional and hospital-area levels.

In section three, the present availability of health facilities at the departmental level is compared with those existing in 1975 in order to identify significant changes over a 10-year period.

Finally, the results of a simplified survey of the state of physical plants, utility systems, and equipment of health facilities in the health regions of Cajamarca and Cuzco in October, 1985 are presented. This section concludes with a brief summary of prior case studies of facilities maintenance carried out by the MOH and the Peruvian Social Security Institute (IPSS).

All the data, as well as the specific indicators used in the study, are given at the regional and hospital area levels, as well as by department. It is important to point out that the data on the population density for hospital areas was estimated specifically for this study, based on information supplied by the National Institute of Statistics (INE). The individual sections of the study use as their unit of analysis either departments or health regions and hospital areas. However, the document includes a complete set of tables for both departments and health regions. Thus, readers can reach additional conclusions, according to their own interests and perspectives.

II.

CURRENT DISTRIBUTION OF HEALTH CARE FACILITIES

A. Health Care Facilities and Population Distribution

The Peruvian health sector is divided into three sub-sectors: public, private, and social security under IPSS. Of these, the first two are divided into further classifications, depending on the population group they serve.

The MOH is the main institution of the public sub-sector, directly responsible for providing health care for at least half of the country's total population (primarily the medically indigent). The public sub-sector also includes Armed Forces and Police health services which serve only their members and families. Finally, there are hospitals owned by para-statal enterprises (especially mining companies) which provide health services to their own employees and families.

The private sub-sector's facilities are divided into the following: private hospitals and clinics which, according to their category and location, serve different income groups; private mining companies' clinics for their workers and families; various cooperatives' clinics, which serve their members and families; and finally, private voluntary organizations, which offer services aimed mainly at people who have little or no access to other health care providers.

The medical care program operated by IPSS runs health facilities at all three levels, but mainly large hospitals. It serves a large proportion of the employed urban labor force and -- within limits -- their dependents.

The country's total supply of health facilities in 1985, by sub-sector, is shown below:

SUB-SECTOR	HOSPITALS	HOSPITAL BEDS	HEALTH CENTERS	HEALTH POSTS
Public	131	18,545	696	1,764
Private	186	6,712	55	128
IPSS	21	4,730	34	33
TOTAL	338	29,987	785	1,925

Table 1A (see Statistical Tables) shows the population's geographical distribution and Table 2 shows the different types of health facilities owned by the main institutions of the various sub-sectors. The concentration of hospitals (38 percent) and beds (55 percent) in the Lima/Callao area is disproportionate to the relative size of its population (31 percent of the country's total). It should be pointed out, however, that this concentration of hospitals refers not only to the MOH or IPSS, but also to the private sub-sector and the Armed Forces which together concentrate over 50 percent of their hospital beds in Lima/Callao.

However, the ratio of population to hospital beds in most of the country's departments is inversely related to the distribution of population. In fact, 19 of Peru's 24 departments have a higher population-to-beds ratio than the national average; this disproportionate distribution is particularly strong in Cajamarca and the departments within the southern mountain states. This can be observed in Table 2, using the indicator on population per hospital bed (Pop/Bed). Departments having low Pop/Bed ratios are primarily those having the major urban concentrations.

Health centers are more equally correlated to population distribution than hospitals, but they still show substantial variation among departments. There are six departments whose population percentages are much larger than their share of health centers; these are Apurimac, Ayacucho, Cajamarca, Cuzco, Huanuco, and Puno -- all typically highland and disadvantaged areas. Finally, it can be seen from Table 3 that the geographical location of health posts is considerably more equitable than health centers or hospital beds in relation to the population distribution. Since health posts, however, depend on health centers and hospitals for referral services, supplies, and supervision within the pyramidal structure of PHC delivery, the disequilibrium in the availability of the respective facilities suggests that health posts may not function very effectively in areas where they are not within ready access to higher levels of care.

The MOH is clearly the most important institution at the sub-sector level. It manages 35 percent of all the sector's hospitals and 54 percent of all hospital beds, as well as 78 percent and 89 percent, respectively, of the health centers and posts (see Table 2). As with the other sub-sectors, the Ministry's hospital infrastructure is highly concentrated in Lima (45 percent of all its beds). But the distribution of its health centers and posts, as described above for the entire sector, better corresponds to the population distribution.

B. Physical Infrastructure and Distribution Network

The above gives an overall view of the present health infrastructure. It allows for comparisons among departments, to see which are better off relative to others in terms of available facilities with respect to population size. A simple overview, however, does not provide any information on the adequacy of infrastructure, or whether or not health facilities are easily

accessible to the population for whom they were planned and constructed. In order to answer these questions, what follows is an analysis of the distribution of health facilities by health regions and hospital areas. Its aim is to compare the government's plan for a health care network -- presumably based on a pyramid-like referral system -- with the real distribution of available health facilities. First of all, the health sector is reviewed as a whole; this is followed by a more detailed look at the distribution of MOH facilities, since it is the institution principally responsible for implementing an efficient network.

According to WHO's standards (Hogart, 1978) the role played by the different types of health facilities is defined by the diversity and complexity of the health care services they offer. At the sectorial level, there are three types of facilities: hospitals, health centers, and health posts. The first two are further classified according to their size and complexity, and their location. For example, hospitals can be general or specialized, as well as regional or local. Health centers can be divided into centers with or without beds, as well as urban, suburban, or rural.

The regional hospital is located in the region's largest city and provides general medical, surgical, gynecological-obstetrical, and pediatric care to the resident population. It is also supposed to have highly specialized departments, such as neurosurgery, plastic surgery, radio-therapy, etc., with enough capacity to serve the entire region. The local hospital offers only the four basic final services mentioned above to patients of a specific hospital area.

The health centers should be functionally related to either a local or regional hospital, acting as satellites providing medical consultations, minor surgery, odontological care, vaccinations, and environmental hygiene. Some have beds for emergency hospitalization.

Finally, around the health centers, and located mainly in disadvantaged urban, suburban, and rural areas, there are health posts. They should provide preventive medical care, health education, and emergency treatment.

Ideally, the patient referral system should work as follows. If a person feeling ill decides to seek care, s/he goes for consultation to a health post or center (first level). After a brief diagnosis, s/he is treated and/or referred to an intermediate-sized facility (second level). If adequate treatment is not possible on the first two levels, the patient is only then referred to a larger hospital (third level). In order for this system to function properly, the health care delivery network must consist of a carefully distinguished array of hospitals, health centers, and health posts in each region.

The following analysis compares the infrastructure needed for this hypothesized ideal patient referral system with the actual distribution of health care facilities. In order to do this, consideration has been given to not only the geographical distribution of physical infrastructure but also to data on population and population density. Indices have been calculated to compare all these

variables at the departmental, regional and hospital area levels.

With the above mentioned network in mind, hospitals have been classified by size -- that is, by number of beds -- and by health regions and hospital areas. The implicit assumption about the distribution of health facilities is that for each health region there is at least one regional hospital, one or more local hospitals, several health centers and a larger number of health posts. The hospital type has been determined by number of beds as follows:(1)

Type 1	up to 50 beds
Type 2	51 to 150 beds
Type 3	151 to 300 beds
Type 4	301 and more beds

Indices are then presented which relate the number of available hospital beds to health centers (Hosp.Bed/HC), hospital beds to health posts (Hosp.Beds/HP) and health posts to health centers (HP/HC). The objective is to identify and compare the existing facility networks in all geographic areas.

Additionally, three other indices have been drawn up that compare demographic density with the number of hospital beds, the number of health centers, and the number of health posts. This was done in order to standardize the data on each department or health region and hospital area, thus making more precise comparisons possible. Altogether the analysis will give a panoramic view of the geographic distribution of health care facilities with reference to population concentration. The above indices are given in Table No. 4A for the entire health sector, and in Table No. 5A for the MOH.

Hospital Network

An analysis of the distribution of hospitals by types, at the sectorial level, shows that in 12 of the 17 health regions there are no hospitals with more than 300 beds. Larger hospitals are found only in the coastal cities and concentrated mostly in Lima and Callao, (which have 16 of the country's 19, with an average of 657 beds each). On the other hand, there are no Type 3 or Type 4 hospitals at all in three health regions: Cajamarca, Ayacucho and Moyabamba. There is at least one hospital having between 20 and 100 beds in all the hospital areas. However, just as with Type 4 hospitals, the largest concentration of small hospitals (Type 1) is in the metropolitan Lima area (48 out of a total of 209 throughout the country). In contrast, 19 hospital areas have only one hospital of any type.

While there is some evidence of a structured network of different types of hospitals for the country as a whole in that there are fewer large hospitals relative to smaller ones, this balance differs greatly

among regions. For example, the ratio of Type 1 to Type 2 hospitals is in some cases equal or close to 1, whereas in other areas it is 5 or more. This shows that no standard criteria were used in building hospitals in all health regions.

Looking only at MOH facilities, we notice that the Ministry runs at least one hospital in all the hospital areas. However, the ratio of Type 1 to Type 2 hospitals is less coherent than for the entire health sector, since in some cases it is less than 1; that is to say, there are more large hospitals than small ones under the Ministry's aegis. All the above leads to the conclusion that a fairly consistent network of hospital facilities exists for the sector as a whole, but not for each sub-sector.

Network of all Health Facilities

Examining the overall network, including health centers and posts, provides some interesting additional information. In Table No. 3, it can be seen that the number of health centers is larger in all the central hospital areas (those considered as regional headquarters) than in the other areas. However, the analysis is more meaningful if these figures are related to demographic density. The health center by demographic density indicator (HC/Population/Km.2) confirms the scarcity or absence of health centers in some hospital areas. For example, there are more centers in the Sullana area than in Piura (19 to 17); nevertheless, when comparing the ratios HC/Pop./Km.2, it can be seen that Piura is indeed better off -- its ratio is 0.59 vs. 0.32 in Sullana.

A frequency distribution of this indicator (HC/Pop/Km.2) per hospital area is presented in Graph 1. It can be seen that in the first two deciles, ranging from 0 to 1.3, there are 48 hospital areas, representing 76% of the total. This means that, considering demographic density, these areas may require more health centers relative to the ones showing higher indices (subject to other relevant considerations). It is interesting to note that the index for metropolitan Lima (shown as "Rimac" in both Tables No. 4A and 4B, which includes hospital areas 17, 19, 20, 21 and 22) and the index for Callao are the lowest in the country. This indicates that the population of these areas has a limited choice; many people must seek medical care at hospitals, since there are not enough health centers.

On the other hand, it is important to note that the jungle has the highest indices, due partly to the fact that the population is very widely dispersed in that geographic area. In a comparison at the regional level,(2) five regions are found in the first two deciles (0-1.4): Cajamarca (where all indices show a need for more infrastructure), Trujillo, Lima, Ayacucho and Callao. An analysis at the MOH level, leads to the same conclusions. Although the indices here are lower, the same regions and areas mentioned above are shown to be in greatest need of more facilities.

Looking at health posts at the sectorial level, a different distribution pattern can be seen. The HP/HC ratio shows that the

central hospital areas are not always the most favored. This is as it should be since health posts have been constructed mainly in the disadvantaged periurban and rural areas. The data also show that the hospital areas of Lima and Callao have the lowest indices, further increasing the relative importance of hospital-based services for the population of the nation's major metropolitan region.

When demographic density is taken into consideration (HP/Population/Km.2), the situation is somewhat different.(3) This indicator demonstrates that most central hospital areas are in a better situation than the largely rural hospital areas, in contrast to what the HP/HC ratio suggests. This is true in Piura, Cajamarca, Huaraz, Puno, San Martin and Iquitos. Hospital areas having the worst situations relative to others (that is, having an HP/Pop/Km.2 index less than 0.5) are: Chota, Pacasmayo, Pomabamba, Lima, Tarma, Junin and Callao. Again it can be seen that Chota (Cajamarca), Lima and Callao may need a larger number of health posts. At the next level (0.5 - 1.0), we find Sullana, Lambayeque, Jaen, Chimbote, Chincha, Islay, Andahuaylas, Pasco and Tingo Maria. In third position, in the 1.0-1.5 range, are the areas of Tumbes, Cajamarca, Trujillo, Huamachuco, Canete, San Ramon, Canchis, Huancavelica, Huancayo, Jauja, La Union, Moyobamba and Chancay. The reader can find the subsequent priorities and draw other conclusions from Tables No. 4A and 5A.

However, it is important to point out that the first decile of the frequency distribution of HP/Pop/Km.2 for health regions goes from 0 to 1.9. Consequently, all the areas mentioned above fall within this range, as well as those of Callao, Canchis and Piura. Altogether 30 hospital areas are included in the first decile, which illustrates the inadequate distribution of posts throughout the country. In other words, factors such as distance, access, existing infrastructure and population density were not considered when planning the construction of health posts. The overall analysis presented above indicates that in the areas of Sullana, Jaen, Chota, Cajamarca, Canchis, Andahuaylas, Junin and Moyobamba there is a need for all types of health facilities.

III.

SUPPLY OF AND POTENTIAL DEMAND FOR HOSPITAL BEDS

There has been a lot of speculation in Peru that too many large hospitals have been built and that the services offered by these tertiary facilities exceed the demand. Such would be true if we assumed that the population of Peru has access to properly located and equipped smaller hospitals, health centers and posts. Obviously this assumption is incorrect. Large urban hospitals will remain crowded as long as there is no network of physical facilities to support a referral system in the major population centers, particularly Lima and Callao. A systematic analysis of the current supply of hospitals is important because of their enormous concentration in a few hospital areas and because of the uncoordinated actions of the three sub-sectors offering tertiary-level care. The following analysis concentrates on the number of hospital-bed-days available in the health sector as a whole and in MOH facilities. The supply of bed-days was determined by multiplying the number of available hospital beds by 365 days.

Potential demand for hospital bed days was calculated by multiplying the population size, first by 0.05 (5 percent) and then by 10 days. The two latter figures are based on observations of population behavior over various years and the results of the National Nutrition and Health Survey (ENNSA). The first figure indicates that 5 percent of the population of Peru is hospitalized once a year,⁽⁴⁾ the second shows the average stay per patient. All estimates have been made for health regions and hospital areas existing in July 1985, and the results are given in Tables No. 5 and No. 6. These indicate that, at the sectorial level, there are five regions having an excess supply of hospital beds -- Lima, Callao, Ica, Arequipa, and Tacna. At the other extreme are the regions of Cajamarca, Cuzco, Puno, and Piura where the demand greatly exceeds the supply of beds. As can be seen in Table No. 6, in some of the regions where there is excess demand, the shortage of beds is minimal and does not justify the construction of new large hospitals.

At the hospital area level, additional information more accurately illustrates the situation and its complexities. For example, the Ica and Arequipa regions show an excess supply of beds; but, the most depressed areas within these regions (Lucanas and Castilla) have a shortage. Still, the need for additional beds is small and manageable, based on a 10-day hospital stay.

Comparing the Peruvian average with those of other Latin American countries, it was found that Colombia and several others had achieved an average hospital stay of five days (Panamerican Health Organization, 1982). This suggests an inefficiency in the administration and utilization of hospitals in Peru. If this situation could be improved and the average hospital stay could be shortened to 5 days, Peru would have an excess of 17,000 beds, and most regions would have a surplus of available beds. However, it is important to note that this analysis does not take into account the likelihood that a proportion of the total number of available hospital

beds may not in fact be available because of serious maintenance problems.(5)

The excess of beds is less if we look solely at MOH facilities. (Table No. 7). Only four regions have a substantially larger supply than potential demand (Lima, Callao, Ica, and Arequipa), assuming a 10-day hospital stay. At the hospital area level, the result of excluding the private sub-sector and IPSS is most evident; the sectorial bed surpluses diminish and the deficits increase. Obviously, if the average hospital stay in MOH facilities could be shortened to 5 days, the situation would improve; the improvement, however, would not be as significant as for the entire sector (see above and Tables No. 6 and 7).

All this demonstrates, that with better coordination, some of the public sub-sector's need for beds could be met by the private sub-sector and IPSS facilities. The MOH would thus have to exercise greater influence over the other institutions in the sector to provide more hospital services in proportion to the great quantity of beds they control.

IV.

EVOLUTION OF PHYSICAL FACILITIES, 1975-1985

The preceding section has shown that in the aggregate there are enough hospital beds in Peru, but that they are not well distributed according to the potential demand of each particular hospital area. While all hospital areas have at least one hospital, there is a shortage of beds in many of these areas. The present facilities network does not correspond to the population's geographical distribution, mainly because of a shortage of smaller hospitals, health centers and health posts in many hospital areas, and because of the heavy concentration of large hospitals in the major urban areas.

When comparing the present data (1985) with that of 10 years ago at the departmental level (see Tables No. 8 and 9), it is clear that in several cases the situation has improved in some sense. First of all, using the same parameters to calculate the supply and demand of hospital beds, it can be seen that in 1975 as well as 1985 there is a surplus of beds -- in both years badly distributed throughout the country. However, the excess supply of beds in 1975 was 62 percent larger than in 1985, and currently there are three more departments with a "bed shortage" than 10 years ago.

The departments having regressed significantly are: La Libertad, Junin, Madre de Dios, Tumbes, Amazonas, Cuzco, Piura and San Martin. Additionally, the Pop/Bed ratio in 1985 was greater than in 1975 for all departments except Ancash, Puno, Huancavelica and Loreto. In the latter two, the main cause was the reduction of their population, and in Ancash it is due to the government response to the earthquake of 1970. Nevertheless, the fact that the situation improved in these departments does not mean that it has reached an optimal level, since it is precisely in these departments that there is a large shortage of beds.

Regarding first level health facilities, at the national level the situation has improved with respect to population. In fact, from 1975 to 1985 there has been a 47 percent increase in the number of health centers and a 73 percent increase in health posts. Three quarters of the new centers are administered by the MOH and they were built throughout the country. All the new health posts were built and/or implemented by the Ministry as well. There has been great expansion in the departments of Lima-Callao, Huancavelica, Junin and La Libertad. In the case of Lima-Callao, the construction of many new health posts responded to the large migrations to the capital and the consequent emergence of marginal urban settlements. However, according to the results mentioned in the preceding section, there are not nearly enough centers and posts to provide uniform coverage for all Peruvians in terms of a pyramidal referral structure.

Other relevant indicators which show the evolution of the physical infrastructure in more detail are: beds/1000 inhabitants (indicating availability), discharges/bed/year, average days of hospital stay, and percentage of occupancy of beds.

The indicator on availability is the inverse of the Population/Bed ratio which has already been explained. This shows that over a period of 20 years (1964 - 1983) the availability of beds per inhabitant has decreased, which agrees with our previous analysis (see Table No. 10 and Graph 3). However, it is important to note that for IPSS the reduction has been even larger -- which shows that the number of insured workers has increased faster than the availability of beds. This is clearly reflected in the 48 percent decrease in bed availability for the social security sub-sector, which is much higher than the national level decline of 27 percent.

The reduced availability of beds has undoubtedly influenced their performance (measured in discharges/bed/year), as shown in Table No. 10. Thus, all the related indicators show a more "efficient" use of this resource. For example, the discharges per bed/year indicator for the MOH increased from 13.2 in 1963 to 22.7 in 1974 and 23.0 in 1983; and for the IPSS facilities, this indicator has increased from 18.7 to 22.5 and to 25.0 for the same three years (see Graph 4). There are two interesting points to note here. The first is that, in general the improvement has been greater in the MOH, and secondly, that the improvement was slower in the second period (1974-1983).

The same results can be seen when analyzing the percentage of occupancy (see Graph 5). In this case, too, both institutions have made better use of their beds. IPSS began with a lower level than the MOH but in the final year reached a higher occupancy. This suggests that IPSS has been making increasingly more intensive use of its beds over the past 20 years. The usage level shown by the indicator average-days-of-stay-per-patient is notable because in this case it shows that there has been a significant improvement, especially by the MOH, which has reached an average of 9.7 days of hospital stay (see Graph 6). Nevertheless, as mentioned above, this figure is still far from reaching that of other Latin American countries.

V.

HEALTH FACILITIES: BUILDINGS, UTILITY SYSTEMS AND EQUIPMENT

In the previous sections, the distribution of health facilities has been analyzed, but without considering any aspects of their equipment inventories or state of repair. This is because, at the sectorial level, there is not sufficient information about the functional characteristics of facilities. Consequently, there also is no basis for defining or maintaining a national system of maintenance for buildings and equipment. In an attempt to solve this problem, health sector authorities have tried several times to carry out a nationwide equipment census. However, due to the excessive cost, scarcity of specialized personnel, and frequent changes of administration, this still has not been done.

Aware of the above and in accordance with the present administration's priorities, the HSA team proposed -- as a feasible alternative to a census -- carrying out a simplified survey on the state of health facilities' buildings, utility systems, and equipment. Although this alternative does not provide comprehensive information, it yields enough information on the present situation to enable some immediate action to be taken. The simplified survey was carried out in the regions of Cuzco and Cajamarca, and it has provided valuable information. Given the experience gained in conducting these two case studies, the survey could easily be extended to the rest of the country at a relatively low cost.

A. Simplified Survey of Buildings, Utility Systems, and Equipment of Hospitals, Health Centers and Posts in Cuzco and Cajamarca

The main objective of the survey was to generate basic information to be used in designing a systematic program for maintaining the physical infrastructure of MOH facilities. The survey provides:

- A simplified inventory of buildings, utility systems, and equipment, and their present state of repair;
- Data bases to facilitate periodic updating of this inventory; and,
- Global indicators for estimating the cost of repair and preventive maintenance of buildings, utility systems, and equipment.

To this end, three questionnaires were designed -- two of them for both hospitals and health centers, and the third for health posts.

Data obtained on hospitals lead us to conclude that their denomination bears no relation to their equipment -- hence, to the services they can offer. For example, there are hospitals classified

as "general" in all the hospital areas studied; however, their equipment, building size and bed count vary enormously. For example the General Hospital in La Convencion has 63 units of equipment, while the General Hospital in Cuzco II has 379 units. The above suggests that administrative consideration rather than functional characteristics are deciding the classification of hospitals.

What follows are other important findings of this survey. All of the information collected and processed is presented in a separate document on this matter (ANSSA-Peru, Bolivar, 1986).

Hospitals and Health Centers

The results in Table No. 11 show that, in all the hospitals in both regions, the infrastructure has deteriorated by more than 50 percent. This deterioration is particularly evident in the building walls and in the surgery areas. Administrative offices appear to be in relatively best repair.

Regarding utility systems, it was found in both Cuzco and Cajamarca that the situation of the hospitals located in the central hospital areas is quite acceptable. But for those hospitals located in rural areas, the level of deterioration is between 10 and 50 percent, with some showing even more than 50 percent deterioration. This is particularly true of the water, electrical, and communications systems in the hospital in Chota; the water and sewage systems in La Convencion; and all the hospital utility systems in Canchis (Tables No. 12A - 12H).

With regard to equipment, it is striking to find that in both Cajamarca and Cuzco only 50 percent of it is working normally, and about 17 percent is useless. This means that all the health facilities can, at best, only offer services at 50 percent of their potential capacity. Worst in this respect is the regional hospital of Cuzco, which has only 27 percent of its equipment working properly. In Cajamarca, the most deteriorated equipment is that used for sterilization, its power plants, and its stoves. The main reason for equipment disrepair in this case is damage, and to a lesser degree, obsolescence. In general, the most serious problems found in the Cuzco region are in pediatric, laundry, and x-ray equipment; and the main reasons for malfunctioning are age and partial damage.

In the health centers' buildings and equipment the situation is similar to that of the hospitals, except for their utility systems, which generally are in better condition. Still, there is some degree of deterioration in the water, sewage, and electrical systems.

The deterioration of the hospitals' and health centers' equipment is due, among other factors, to the lack of replacements and to the great diversity of brands. All the Cuzco and Cajamarca hospitals have equipment dating from the time the buildings were constructed, with the exception of Canchis and Andahuaylas, which have renewed some of their instruments. (The surveyed hospitals average 35 years of age.)

At the same time, there is a wide variety of different brand names for the same types of equipment, most of it imported, and in some cases to the extreme that each hospital has a different brand of the same type of equipment. Some documentation of this, gathered from the 10 surveyed hospitals, is shown below.

<u>EQUIPMENT</u>	<u>NUMBER OF BRANDS</u>
X-Ray equipment	11
Surgical tables	7
Microscopes	12
Sterilizers	13
Dental Units	6
Electrocardiographs	7

This situation makes it extremely difficult to carry out good maintenance. Many pieces of deteriorated equipment remain unused for years waiting for spare parts to arrive from abroad.

Health Posts

In all the Cuzco and Cajamarca areas (with the exception of Canchis, Andahuaylas and La Convencion), few of the primary level health facilities were built for that purpose. Some have been donated by the inhabitants of the rural areas. Yet, the overall situation of these buildings is fairly acceptable, with the exception of Canchis, where the majority of the posts (80 percent) are in bad condition. It was alarming to see that 75 percent of the health posts in the Cajamarca region and 41 percent in Cuzco have no water or sewage systems. Moreover, 96 percent of the posts in Cajamarca and 66 percent in Cuzco have no electricity (see Tables No. 13, 14A and 14B).

In general, the majority of the health posts surveyed have the minimum requirement of medical instruments for this type of health facility; however, many posts lack sterilization and refrigeration equipment. This is especially serious in the Cuzco region (see Tables No. 15 and 16).

B. Diagnosis of the State of Maintenance Units for Metropolitan Lima Hospitals

A different study, carried out in 18 metropolitan Lima hospitals, attempted to review their state-of-repair. It found that 78 percent of them are over 20 years old, and many have problems related to physical and functional obsolescence (Ministerio de Salud y PNUD,

1984).

Age of General and Specialized MOH Hospitals in
Metropolitan Lima, 1984

<u>AGE</u>	<u>NUMBER</u>
1 - 10 years	2
11-20	2
21-30	3
31-50	4
50 and over	7
<hr/>	
TOTAL	18

The main conclusions of the study are the following:

- Equipment -- 11 hospitals had insufficient equipment to carry out maintenance tasks, and six hospitals had practically none at all.
- Spare Parts - 8 hospitals had insufficient spare parts, and 10 had practically none.
- Tools - 17 hospitals had insufficient tools, and one had practically none.

C. Sample Evaluation of MOH Health Centers and Posts

In a 1983 evaluation of the physical condition of 21 health centers and 12 health posts, it was found that 50 percent of the buildings showed deterioration (Ministerio de Salud y PNUD, 1984, Febrero). Only 21 percent of these buildings had sanitary and electrical systems in good conditions, and the rest were deteriorated. In 27 percent of the facilities the equipment was in good condition; in the remainder it was incomplete or showed deterioration. Seventy-three percent of all these facilities had no running water, and 69 percent had no permanent electricity. Only 31 percent had generators and, due to scarcity of fuel, these could only be used in a dire emergency.

D. Obsolescence in IPSS Hospitals

The levels of obsolescence at IPSS health facilities are high -- in terms of their physical infrastructure (functional), as well as their equipment (instrumental).(6) The average age of IPSS hospitals

is 34 years. Overall, there is a shortage of space per bed in these hospitals, which was estimated to be between 2 and 9 square meters per bed. Fifty percent of the obsolescence of all hospitals surveyed is related to problems with their utility systems and general services. A longitudinal evaluation carried out in 13 of the 24 IPSS hospitals between 1974 and 1985 shows that nine of them have functional problems caused by physical obsolescence. Moreover, seven have severe equipment repair problems in their general services, (power plant, laundry, cooking, and transportation equipment), and in support technology (radiology, laboratory and surgical equipment). There are problems in 43 percent of the hospitals with regard to equipment that needs to be replaced.

As can be seen from the results shown in all the case studies mentioned in this section, the existing physical infrastructure for health care is in very bad condition. This suggests that the Ministry, IPSS and private sector health care providers should not only work toward a more equitable distribution of new health facilities, but that they must also take immediate action to repair and maintain existing facilities.

VI.

CONCLUSIONS

Peru, like many other developing countries, is characterized by an unequal distribution of income among its population and an excessive concentration of industrial production, commerce, and population in the capital city and a few other large urban areas. This maldistribution of resources is reflected also in the health sector. Under the country's Constitution, every citizen is entitled to health care for whose provision the government is responsible. So it can be assumed that the Ministry of Health's first priority should be to deliver health care especially to the low income groups located in the most disadvantaged areas of the country. Unfortunately this is not yet the case, as can be seen by examining the present distribution of Peru's health care infrastructure. This study shows the following:

1) The structure of existing health care facilities bears little relation to the distribution of the population. Hospitals and beds are heavily concentrated in the metropolitan area (Lima has 55 percent of all hospital beds for only 31 percent of the population). Just the opposite is true in the most disadvantaged areas of the country -- especially in Cajamarca and other departments in the Andean Trapezoid zone.

2) The concentration of large hospitals in the coastal areas is especially remarkable. All the largest hospitals (those having more than 500 beds) are found in this geographic region; in fact 84 percent of these are in the metropolitan Lima-Callao area. Although this concentration is alarming, it was found that all the hospital areas in Peru have at least one hospital with 30 beds or more. However, there is no proportioned array of hospitals in all health regions, indicating that there has been no clear overall plan used in their construction. For example, in some regions there are hospitals of similar size run by the MOH, IPSS, and the private sub-sector. This is most true of Lima, where there is an extreme duplication, but much the same is true in such regions as Arequipa, Tacna, Cuzco and Iquitos.

3) Perhaps the most important conclusion of this study is that an efficient structuring of health care facilities for Peru -- the central responsibility of the MOH -- can only be seen if one views the health sector as a whole. Private clinics have compensated for shortcomings in the public sub-sector. When looking only at the MOH, we find that there are too many large hospitals and too few medium-sized ones, preventing the network from functioning efficiently and equitably.

4) Health centers and posts are better distributed than hospitals, yet this distribution is not optimal. The features and locations of these health facilities are not adequately related to the population's potential demand for health care. More centers and posts, ceteris paribus, are needed in rural areas, particularly in the regions of Cajamarca, Lambayeque, Cuzco and Huancayo, and more are needed in Lima and Callao as well -- especially in their marginal

areas, which are characterized by rapid population growth.

5) This analysis indicates that Peru does not need to build more large hospitals. What is required is better coordination among institutions that offer hospital facilities. In fact, the current supply of hospital beds in Peru, in the aggregate, exceeds the potential demand. But this is misleading since this excess is concentrated in the main hospital areas of Lima, Callao, Ica, and Arequipa -- another indication that there is an excessive concentration of health facilities in a few urban areas.

6) A comparison, at the departmental level, of the present situation with that of 10 years ago shows the following: in 1975 there was a larger excess supply of beds than at present; there were fewer health centers and posts; and, considering demographic density, their distribution was worse than it is now. The overall situation has improved. Health centers and posts have been built at a higher rate than the population growth rate and they are better distributed, although shortages are still evident, including ones in the large urban areas.

7) The simplified survey on the state of the physical infrastructure for health care and equipment in the Cuzco and Cajamarca regions has shown the following:

- There is no relation between a hospital's functional classification and its equipment inventory.
- Hospital buildings show a high degree of deterioration. Ironically, the greatest deterioration is found in the operating rooms and the least in the administrative offices.
- The hospital and health center utility systems showing the most deterioration are water, sewage and electricity.
- The health facilities function at less than 50 percent of their capacity due to deteriorated equipment. With few exceptions, this equipment is as old as the buildings themselves, which on the average were built 35 years ago.
- Repair and maintenance of equipment is compromised by the excessive variety of brands of available equipment.
- Perhaps the most alarming finding is that 80 percent of the health posts in the Cajamarca and Cuzco regions do not have water or sewage facilities, and 60 percent do not have electricity. Furthermore, the majority of these buildings do not have the absolute minimum amount of equipment required to operate properly.

8) Considering all of the above, it is clear there is a need for a data processing system on physical infrastructure, utility systems, and equipment, so that the overall state of each of these can be seen at a glance when administrative decisions need to be made. Consequently, one by-product of the HSA research in this case is to

have provided the basic elements for developing that essential data system.

FOOTNOTES

1. Hospitals have been divided by number of beds according to MOH standards (Ministry, 1982), rather than by using the administrative classifications, because we have observed that there is little or no relation between the denomination of hospitals and their actual characteristics.
2. The frequency of distributions for both indicators (HC/Pop/Km.2 and HP/Pop/Pop/Km.2) per health regions, which are not presented here, can easily be calculated from Table 4A; again the Iquitos region should not be included for the aforementioned reasons.
3. As in the study at the health center level, the data on the Iquitos hospital area has been excluded.
4. A more complete analysis would require the use of different percentages per department or health region/hospital area, considering their diverse characteristics.
5. The results of the Simplified Survey on Health Facilities in Cuzco and Cajamarca (presented in Section V) illustrates this problem.
6. Based on the unpublished draft reports by IPSS hospital directors -- presented at their First Annual Meeting in Huampani, 1985.

BIBLIOGRAPHY

Bustios Romani, C.
1985, Enero.

El Sistema de Atencion Medica en el Peru: 1963-1983.
Washington, D.C.: Organizacion Panamericana de la Salud (PAHO).

Hogart, J.
1978.

Glossary of Health Care Terminology. In - Public Health in Europe, No. 4, pp 194-196.
Copenhagen Regional Office for Europe, World Health Organization (WHO).

Instituto Nacional de Estadistica (INE).
1978.

La Poblacion del Peru en el Periodo 1970-2000.
Boletin de Analisis Demografico No.19.
Lima, Peru: INE.

Instituto Nacional de Planificacion.
1985, Julio.

Demarcacion Politica del Peru por Departamentos, Provincias y Distritos.
Lima, Peru.

Instituto Peruano de Seguridad Social (IPSS).
1981.

Infraestructura Administrativa y Asistencial del IPSS.
Lima, Peru: Direccion de Programacion y Racionalizacion.

Ministerio de Salud.
1965.

Plan Nacional de Salud, 1966-1970: Primera Aproximacion al Plan Sectorial de Salud, Integrante del Plan de Desarrollo Economica y Social de 1967-1970.
Lima, Peru: Ministerio de Salud Publica y Asistencia Social.

Ministerio de Salud.

1975, 1978, 1980 y 1982.

Informacion Basica Sobre Infraestructura Sanitaria, Peru.
Lima, Peru: Oficina General de Informacion y Estadistica.

Ministerio de Salud.
1981.

Plan Nacional de Acciones Coordinadas de Salud, PNACS 1982/85, Vol.2: Diagnostico.
Lima, Peru.

Ministerio de Salud.
1982.

Oficina de Infraestructura Fisica: Normas y Guias Tecnicas. Vol.I.
Lima, Peru: Oficina de Infraestructura Fisica.

Ministerio de Salud.
1984, Agosto.
Proyecto Desarrollo de la Infraestructura Fisica de Locales de Salud. Boletin No.6.
Lima, Peru: Oficina de Infraestructura Fisica.

Ministerio de Salud y PNUD.
1983.
Plan de Capacitacion. Proyecto Desarrollo de la Infraestructura Fisica de los Servicios de Salud.
Lima, Peru: Oficina de Infraestructura Fisica.

Ministerio de Salud y PNUD.
1984, Febrero.
Informe Final de Evaluacion Muestral en Centros de Salud y Puestos Sanitarios en 9 Regiones del Peru. Lima, Peru: Oficina de Infraestructura Fisica.

Ministerio de Salud y PNUD.
1984.
Diagnostico Situacional de los Servicios de Mantenimiento en Hospitales de Lima Metropolitana. Proyecto Desarrollo de Infraestructura Fisica de Servicios de Salud.
Lima, Peru: Oficina de Infraestructura Fisica.

National Institute of Statistics (INE).
1984.
Population of Peru 1980-2025: Its Growth and Distribution. Bulletin of Demographic Analysis No.26.
Lima, Peru: INE.

Organizacion Panamericana de la Salud.
1982.
Las Condiciones de Salud en las Americas 1977-1980. Publicacion Cientifica No.427.
Washington, D.C.: PAHO.

TABLE No. 1A

 DISTRIBUTION OF POPULATION AND GEOGRAPHIC AREA
 BY DEPARTMENTS - PERU, 1985

DEPARTMENT	POPULATION	GEOGRAPHIC AREA (KM. 2)	POP/KM.2
Amazonas	296,700	41,297.12	7.18
Ancash	907,400	36,669.31	24.75
Apurimac	354,900	20,550.36	17.27
Arequipa	833,200	63,527.62	13.12
Ayacucho	543,500	44,181.04	12.30
Cajamarca	1,157,500	34,930.46	33.14
Cusco	942,700	76,329.09	12.35
Huancavelica	368,200	21,078.96	17.47
Huanuco	546,900	34,563.57	15.82
Ica	486,500	21,251.39	22.89
Junin	988,700	43,384.42	22.79
La Libertad	1,094,000	23,241.32	47.07
Lambayeque	803,500	13,736.90	58.49
Lima y Callao	6,246,400	33,968.79	183.89
Loreto	574,900	379,900.06	1.51
Madre de Dios	41,500	78,402.71	0.53
Moquegua	116,400	15,709.35	7.41
Pasco	254,500	23,566.07	10.80
Piura	1,297,800	36,403.48	35.65
Puno	959,100	72,382.44	13.25
San Martin	385,500	52,309.20	7.37
Tacna	174,300	15,231.93	11.44
Tumbes	123,400	4,731.52	26.08
Ucayali	200,000	97,868.49	2.04
TOTAL	19,697,500	1,285,215.60	15.33

SOURCE: "La Poblacion del Peru en el Periodo 1970-2000"
 Boletin de Analisis Demografico No. 19, Lima-Peru,
 Instituto Nac. de Estadistica, 1978.
 "Division Politica del Peru por Departamentos,
 Provincias y Distritos", Lima-Peru, Instituto Nac.
 de Planificacion, July 1985.

TABLE No. 1B

DISTRIBUTION OF POPULATION AND GEOGRAPHIC AREA BY HEALTH REGIONS
AND HOSPITAL AREAS - PERU, 1985

REGION	HOSP. AREA CODE	LOCATION	POPULATION 1985	GEOGRAPHIC AREA (in km.2)	POP./ KM.2
REGION I	01	TUMBES	119,400	4,731.52	25.24
PIURA	02	SULLANA	995,212	16,703.10	59.58
	03	PIURA	632,101	21,907.74	28.85
			1,746,713	43,342.36	40.30
REGION II	04	LAMBAYEQUE	824,824	15,377.41	53.64
CHICLAYO	05	JAEN	261,415	10,257.94	25.48
	06	AMAZONAS	289,273	41,297.12	7.00
			1,375,512	66,932.47	20.55
REGION III	07	CHOTA	346,547	7,698.56	45.01
CAJAMARCA	08	CAJAMARCA	518,902	16,747.76	30.98
			865,449	24,446.32	35.40
REGION IV	09	PACASMAYO	118,463	2,057.85	57.57
TRUJILLO	10	TRUJILLO	788,359	13,510.36	58.35
	11	HUAMACHUCO	145,690	6,244.16	23.33
			1,052,512	21,812.37	48.25
REGION V	12	CHIMBOTE	346,870	12,217.10	28.39
HUARAZ	13	POMABAMBA	76,467	3,820.08	20.02
	14	HUARAZ	506,135	26,198.84	19.32
			929,472	42,236.02	22.01
REGION VI	17,19-22	RIMAC (*)	4,065,689	3,701.68	1,098.34
LIMA	23-24	CHOSICA	158,700	4,487.41	35.37
	25	CANETE	180,041	11,029.34	16.32
			4,404,430	19,218.43	229.18

REGION	HOSP. AREA CODE	LOCATION	POPULATION 1985	GEOGRAPHIC AREA (in km.2)	POPULATION KM
: REGION VII	26	CHINCHA	156,848	5,997.19	26
: ICA	27	PISCO	315,048	16,638.13	18
:	28	LUCANAS	225,334	34,197.98	6
:			697,230	56,833.29	12
: REGION VIII	29	CASTILLA	75,684	17,794.39	4
: AREQUIPA	30	CAMANA	61,077	17,582.63	3
:	31	AREQUIPA	622,477	23,157.10	26
:	32	ISLAY	49,362	4,993.50	9
:			808,600	63,528	12
: REGION IX	33	MOQUEGUA	113,000	15,709.35	7
: TACNA	34	TACNA	167,400	15,231.93	10
:			280,400	30,941	9
: REGION X	35	PUNO	389,661	16,586.32	23
: PUNO	36	SAN ROMAN	272,192	12,273.10	22
:	37	AZANGARO	184,473	18,936.13	9
:	38	MELGAR	100,374	19,590.61	5
:			946,700	67,386.16	14
: REGION XI	39	CANCHIS	270,349	16,478.60	16
: CUZCO	40	MADRE DE DIOS	34,956	54,025.48	0
:	41	CUZCO 1	246,961	33,210.63	7
:	42	CUZCO 2	194,622	13,361.65	14
:	43	LA CONVENCION	176,762	40,121.62	4
:	44	ABANCAY	149,414	12,587.43	11
:	45	ANDAHUAYLAS	159,743	5,536.75	28
:			1,232,807	175,322.16	7
: REGION XII	46	AYACUCHO	463,275	17,917.73	25
: AYACUCHO					
: REGION XIII	47	HUANCAVELICA	181,726	7,139.18	25
: HUANCAYO	48	HUANCAYO	535,997	11,131.55	48
:	49	JAUJA	200,586	6,482.50	21
:	50	TARMA	115,930	3,104.54	37
:	51	SELVA CENTRAL	259,133	42,251.04	6
:	52	JUNIN	31,725	2,090.99	13
:			1,325,097	72,199.80	1

REGION	HOSP. AREA CODE	LOCATION	POPULATION 1985	GEOGRAPHIC AREA (in km.2)	POP./ KM.2
REGION XIV	53	PASCO	184,351	6,416.93	28.73
HUANUCO	54	HUANUCO	349,142	22,738.35	15.35
	55	LA UNION	57,240	1,863.05	30.72
	56	TINGO MARIA	95,146	4,395.46	21.65
	57	PUCALLPA	194,400	102,517.18	1.90
			880,279	137,930.97	6.38
REGION XV	58	HUALLAGA	122,949	32,477.80	3.79
MOYOBAMBA	59	SAN MARTIN	151,005	13,861.50	10.89
	60	MOYOBAMBA	97,546	5,969.90	16.34
			371,500	52,309.20	7.10
REGION XVI	61	YURIMAGUAS	97,258	67,106.99	1.45
IQUITOS	62	IQUITOS	462,542	312,793.07	1.48
			559,800	379,900.06	1.47
REGION XVII	15-16	CHANCAY	441,640	12,811.51	34.47
CALLAO	18	CALLAO	443,413	147.85	2,999.07
			885,053	12,959.36	68.29
			18,824,829	1,285,215.60	14.65

NOTE: (*) We have considered all hospital areas in the metropolitan Lima area as one unit because of their proximity to each other. This suggests that population in these areas potentially has access to all the existing facilities.

SOURCE: "La Poblacion del Peru en el Periodo 1970-2000" Boletin de Analisis Demografico No. 19, Lima-Peru, INE, 1978.
 "Division Politica del Peru por Departamentos, Provincias y Distritos", Lima-Peru, Instituto Nacional de Planificacion, July 1985.

TABLE No 2
HEALTH CARE FACILITIES IN PERU
1985

DEPARTMENT	HEALTH SECTOR				MINISTRY OF HEALTH								IPSS				ARMED FORCES				PRIVATE				OTHERS																	
	HOSP	HC	HP	OTHER	Total No of Beds(*)	No. Plann. Beds	Avail. Beds	HC No. Avail. Beds	HP	OTHER No Beds	HOSP. No. Plann. Beds	Avail. Beds	HC No. Avail. Beds	HP	HOSP No. Plann. Beds	Avail. Beds	HC No. Avail. Beds	HP	HOSP No. Plann. Beds	Avail. Beds	HC No. Avail. Beds	HP	OTHER No. Plann. Beds	Avail. Beds	HC No. Avail. Beds	HP	OTHER No. Plann. Beds	Avail. Beds														
Ancash	1	14	77	0	120	1	124	100	11	20	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
Arequipa	21	33	86	0	1,016	11	848	575	31	138	81	0	0	0	1	224	140	0	0	0	0	0	8	112	116	1	13	0	1	12	12	1	20	5	0							
Ayacucho	2	16	56	0	211	2	215	185	11	26	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Ayacucho	23	59	107	0	1,935	5	1,302	1,146	41	12	68	0	0	0	2	430	430	10	0	15	0	0	0	3	0	7	15	342	312	4	0	17	0	1	35	35	1	0	0	0		
Cajamarca	4	24	89	0	246	4	325	161	24	85	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Cusco	5	30	126	0	948	4	1,076	849	22	52	124	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Huancavelica	7	23	86	0	218	1	120	110	21	20	84	0	0	0	0	0	0	0	0	0	0	0	1	0	0	6	94	88	1	0	2	0	0	0	0	0	0	0	0			
Huanuco	7	14	83	0	467	3	325	341	10	49	83	0	0	0	0	0	0	1	0	0	0	0	3	0	0	4	92	17	0	0	0	0	0	0	0	0	0	0	0	0		
Ica	12	24	30	2	1,018	6	726	671	23	12	29	2	0	0	2	272	266	0	0	0	0	0	0	0	0	4	147	139	0	0	0	0	0	0	0	0	0	0	0	0		
Junin	22	37	135	0	1,363	8	883	735	37	60	133	0	0	0	1	130	149	0	0	2	1	12	12	0	0	0	4	98	93	0	0	0	0	0	0	0	0	0	0	0		
La Libertad	17	38	115	2	1,075	6	584	438	27	23	100	2	0	0	2	208	234	2	0	3	0	0	0	3	0	0	4	83	111	0	0	1	0	0	5	306	268	7	0	11	0	
Lambayeque	18	22	29	1	1,152	3	392	325	20	0	29	1	30	25	1	500	422	0	0	0	0	3	107	86	0	0	0	5	102	60	1	0	0	0	0	6	218	234	1	0	0	0
Lima y Callao	130	221	199	13	16,862	28	8,602	8,080	119	63	125	6	104	104	7	2,635	2,675	6	0	4	6	2,745	1,851	11	238	0	86	3,978	3,655	21	0	58	5	3	212	198	4	0	12	2		
Loreto	10	35	112	0	959	3	626	298	13	82	98	0	0	0	1	56	56	0	0	0	2	325	288	22	123	16	3	67	103	0	0	0	0	0	0	0	0	0	0	0	0	
Madre de Dios	2	4	14	0	50	2	50	50	2	0	14	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Moravia	5	7	26	0	376	2	244	191	5	21	21	0	0	0	0	0	0	0	2	0	0	0	2	0	0	2	3	184	184	0	0	0	0	0	0	0	0	0	0	1	0	
Pasco	10	17	59	6	524	2	91	88	8	24	59	0	0	0	2	220	170	6	4	0	0	0	1	0	0	0	5	157	157	2	0	0	0	0	0	0	0	0	0	0	0	
Piura	16	51	94	0	1,237	3	491	404	38	75	93	0	0	0	1	128	157	2	0	0	1	85	180	11	43	1	9	207	239	1	0	0	0	0	0	0	0	0	0	0	0	
Puno	10	33	121	0	598	8	555	407	30	120	100	0	0	0	1	31	31	1	28	3	1	23	12	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
San Martin	4	34	113	0	239	4	216	216	28	13	109	0	0	0	0	0	0	0	0	0	0	0	0	5	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tarma	1	15	23	0	286	1	366	258	18	12	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Tumbes	1	11	29	0	114	1	124	92	6	16	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ucayali	2	9	23	0	175	2	210	175	8	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL	338	785	1,925	18	31,635	117	18,022	16,183	612	177	1,712	11	134	129	24	4,826	4,730	34	32	33	14	3,291	2,359	84	424	52	157	5,678	5,384	38	69	81	5	29	1,383	1,328	17	20	47	2		

NOTES: Hospitals (HOSP.)- include hospitals and clinics
Health Centers (HC)- include polyclinics, medical centers and medical posts
Health Posts (HP): include sanitary posts
Other Facilities (OTHER): include orphanages and nursing homes
Planned Beds (Plann. Beds)- are also called architectonic beds and they represent the maximum number of beds a hospital can hold
Available Beds (Avail. Beds): shows the number of existing beds in each type of facility
(*) Includes hospital beds, health center beds and those from other facilities

SOURCE: Office of Statistics and Information, Ministry of Health.
Health Regions, Ministry of Health.
Projections on Population by Departments, THE 1989.

TABLE No. 3

PARTICIPATION OF THE MINISTRY OF HEALTH IN THE OVERALL SUPPLY
OF PHYSICAL INFRASTRUCTURE FOR HEALTH CARE - 1985

DEPARTMENT	HEALTH SECTOR				SECTORIAL INDICATORS				MINISTRY OF HEALTH							
	HOSP CENTERS	HEALTH POSTS	HEALTH POSTS	AVAIL. HOSP. BEOS	POP./ HOSP. BEO	POP./ HC	POP./ HP	HOSP	PLANN. HOSP. BEOS	AVAIL. HOSP. BEOS	% OF SECTOR TOTAL HOSP.	% OF SECTOR TOTAL BEOS	HEALTH CENTERS	% OF SECTOR TOTAL HC	HEALTH POSTS	% OF SECTOR TOTAL HP
Amazonas	1	14	77	100	2,967	21,193	3,853	1	124	100	100.00	100.00	11	78.57	64	83.12
Ancash	21	33	86	845	1,074	27,497	10,551	11	848	575	52.38	68.05	31	93.94	81	94.19
Apurimac	2	16	56	185	1,918	22,181	6,338	2	215	185	100.00	100.00	11	68.75	55	98.21
Arequipa	23	59	107	1,923	433	14,122	7,787	5	1,302	1,146	21.74	59.59	41	69.49	68	63.55
Ayacucho	8	13	93	326	1,667	41,808	5,844	7	325	317	87.50	97.24	11	84.62	93	100.00
Cajamarca	4	24	89	161	7,189	48,229	13,006	4	325	161	100.00	100.00	24	100.00	89	100.00
Cusco	5	30	126	858	1,099	31,423	7,482	4	1,076	840	80.00	97.90	22	73.33	124	98.41
Huancavelica	7	23	86	198	1,860	16,009	4,281	1	120	110	14.29	55.56	21	91.30	84	97.67
Huanuco	7	14	83	418	1,308	39,064	6,589	3	325	341	42.86	81.58	10	71.43	83	100.00
Ica	12	24	30	1,076	452	20,271	16,217	6	726	671	50.00	62.36	23	95.83	29	96.67
Junin	22	37	135	1,303	759	26,722	7,324	8	883	735	36.36	56.41	37	100.00	133	98.52
La Libertad	17	39	115	1,052	1,040	28,051	9,513	6	584	439	35.29	41.73	27	69.23	100	86.96
Lambayeque	18	22	29	1,127	713	36,523	27,707	3	392	325	16.67	28.94	20	90.91	29	100.00
Lima y Callao	130	221	199	16,449	380	28,264	31,389	28	8,602	8,060	21.54	49.00	179	81.00	125	62.81
Loreto	10	35	112	754	762	16,426	5,133	3	626	299	30.00	39.56	13	37.14	96	85.71
Madre de Dios	2	4	14	50	830	10,375	2,964	2	50	50	100.00	100.00	2	50.00	14	100.00
Moquegua	5	7	26	355	328	16,629	4,477	2	244	191	40.00	53.80	5	71.43	21	80.77
Pasco	10	17	59	496	513	14,971	4,314	2	91	88	20.00	17.74	8	47.06	59	100.00
Piura	16	51	94	1,119	1,160	25,447	13,806	3	491	404	18.75	36.10	36	70.59	93	98.94
Puno	10	33	121	450	2,131	29,064	7,926	8	555	407	80.00	90.44	30	90.91	100	82.64
San Martin	4	34	113	216	1,785	11,338	3,412	4	216	216	100.00	100.00	28	82.35	109	96.46
Tacna	1	15	23	256	681	11,620	7,578	1	368	256	100.00	100.00	10	66.67	22	95.65
Tuacba	1	11	29	92	1,341	11,218	4,255	1	124	92	100.00	100.00	6	54.55	19	65.52
Ucayali	2	9	23	175	1,143	22,222	8,696	2	210	175	100.00	100.00	6	66.67	22	95.65
TOTAL	338	785	1,925	29,984	657	25,092	10,232	117	18,822	16,183	34.62	53.97	612	77.96	1,712	88.94

TABLE No. 4A

 REFERRAL NETWORK OF HEALTH FACILITIES BY HOSPITAL AREAS AND HEALTH REGIONS
 TOTAL HEALTH SECTOR - PERU, 1985

REGION	HOSP. AREA CODE	LOCATION	HOSPITALS										INDICATORS									
			No. Plann. Avail.			TIPE 1		TIPE 2		TIPE 3		TIPE 4		HEALTH CENTERS	HEALTH POSTS	HP/HC	Avail. Hosp. Beds/HC	Avail. Hosp. Beds/HP	HC/Pop./km.2	HP/Pop./km.2	Pop / Hosp. Avail. Beds/1,000 inhab	
			Hosp.	Beds	Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds									
REGION I	01	TUMBES	1	124	92	0	0	1	92	0	0	0	0	11	29	2.64	8.36	3.17	0.44	1.15	1,298	0.77
PIURA	02	SULLANA	7	388	445	4	110	3	335	0	0	0	0	30	41	1.37	14.83	10.05	0.50	0.69	2,236	0.45
	03	PIURA	9	688	674	5	127	2	151	2	396	0	0	21	53	2.52	32.10	12.72	0.73	1.84	938	1.07
			17	1,200	1,211	9	237	6	578	2	396	0	0	62	123	1.98	19.53	9.85	1.54	3.05	1,442	0.69
REGION II	04	LAMBAYEQUE	18	1,319	1,127	13	265	3	206	1	234	1	422	22	33	1.50	51.23	34.15	0.41	0.62	732	1.37
CHICLAYO	05	JAEN	1	30	30	1	30	0	0	0	0	0	0	3	25	8.33	10.00	1.20	0.12	0.98	8,714	0.11
	06	AMAZONAS	1	124	100	0	0	1	100	0	0	0	0	14	74	5.29	7.14	1.35	2.00	10.56	2,893	0.35
			20	1,473	1,257	14	295	4	306	1	234	1	422	39	132	3.38	32.23	9.52	1.90	6.42	1,094	0.91
REGION III	07	CHOTA	1	126	60	0	0	1	60	0	0	0	0	8	20	2.50	7.50	3.00	0.18	0.44	5,776	0.17
CAJAMARCA	08	CAJAMARCA	2	169	71	2	71	0	0	0	0	0	0	14	46	3.29	5.07	1.54	0.45	1.48	7,300	0.14
			3	295	131	2	71	1	60	0	0	0	0	22	66	3.00	5.95	1.98	0.62	1.86	6,606	0.15
REGION IV	09	PACASMAYO	2	250	132	1	42	1	90	0	0	0	0	4	16	4.00	33.00	8.25	0.07	0.28	897	1.11
TRUJILLO	10	TRUJILLO	14	883	887	9	271	4	402	1	214	0	0	32	67	2.09	27.72	13.24	0.55	1.15	889	1.13
	11	HUAMACHUCO	1	40	33	1	33	0	0	0	0	0	0	2	26	13.00	16.50	1.27	0.09	1.11	4,415	0.23
			17	1,173	1,052	11	348	5	492	1	214	0	0	38	109	2.87	27.68	9.65	0.79	2.26	1,000	1.00

REGION	HOSP. AREA CODE	LOCATION	HOSPITALS										INDICATORS									
			No. Plann. Avail.			TYPE 1		TYPE 2		TYPE 3		TYPE 4		HEALTH CENTERS	HEALTH POSTS	HP/HC	Avail. Hosp. Beds/HC	Avail. Hosp. Beds/HP	HC/Pop. / km.2	HP/Pop. / km.2	Pop. / 1,000 inhab.	Hosp. Beds/ 1,000 inhab.
			Hosp.	Beds	Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds									
REGION V	12	CHINGOTE	10	805	480	7	143	2	205	1	140	0	0	12	26	2.17	40.67	18.77	0.42	0.92	711	1.41
HUARAZ	13	POMABAMBA	1	30	30	1	30	0	0	0	0	0	0	4	8	2.00	7.50	3.75	0.20	0.40	2,549	0.39
	14	HUARAZ	10	361	327	9	191	1	136	0	0	0	0	18	52	2.89	18.17	6.29	0.93	2.69	1,548	0.65
			21	1,196	845	17	364	3	341	1	140	0	0	34	86	2.53	24.85	9.83	1.54	3.91	1,100	0.91
REGION VI	17, 19-22	RIMAC	72	12,735	12,121	38	593	15	1366	6	1162	13	9000	108	26	0.24	112.23	466.19	0.10	0.02	335	2.98
LIMA	23-24	CHOSICA	13	889	826	8	124	4	397	0	0	1	305	49	89	1.82	16.86	9.28	1.39	2.52	192	5.20
	25	CARETE	3	192	160	2	60	1	100	0	0	0	0	11	23	2.09	14.55	6.96	0.67	1.41	1,125	0.89
			88	13,815	13,107	48	777	20	1863	6	1162	14	9305	168	138	0.82	78.02	94.98	0.73	0.60	336	2.98
REGION VII	26	CHINCHA	22	1,426	1,249	14	353	8	896	0	0	0	0	6	15	2.50	208.17	83.27	0.23	0.57	126	7.96
ICA	27	PISCO	12	930	875	7	109	3	355	2	411	0	0	23	52	2.26	38.04	16.83	1.21	2.75	360	2.78
	28	LUCANAS	4	119	90	4	90	0	0	0	0	0	0	3	30	10.00	30.00	3.00	0.46	4.55	2,504	0.40
			38	2,475	2,214	25	552	11	1251	2	411	0	0	32	97	3.03	69.19	22.82	2.61	7.91	315	3.18
REGION VIII	29	CASTILLA	4	97	75	4	75	0	0	0	0	0	0	17	20	1.18	4.41	3.75	4.00	4.70	1,009	0.99
AREQUIPA	30	CAMANA	5	129	129	5	74	1	55	0	0	0	0	7	20	2.86	18.43	6.45	2.02	5.76	473	2.11
	31	AREQUIPA	10	1,483	1,319	6	114	1	100	2	472	1	633	33	59	1.79	39.97	22.36	1.23	2.19	472	2.12
	32	ISLAY	3	400	400	1	10	1	140	1	250	0	0	2	7	3.50	200.00	57.14	0.20	0.71	123	8.10
			23	2,109	1,923	12	198	3	295	3	722	1	633	59	106	1.80	32.59	18.14	4.64	8.33	420	2.38

REGION	HOSP. AREA CODE	LOCATION	HOSPITALS												INDICATORS								
			No. Plann Avail.			TYPE 1		TYPE 2		TYPE 3		TYPE 4		HEALTH CENTERS	HEALTH POSTS	HP/HC	Avail. Hosp. Beds/HC	Avail. Hosp. Beds/HP	HC/Pop./km.2	HP/Pop./km.2	Pop./Hosp. Avail. Bed	Hosp. Beds/1,000 inhab.	
			Hosp.	Beds	Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds										
REGION IX	33	MOQUEGUA	5	428	355	1	20	4	335	0	0	0	0	7	26	3.71	50.71	13.65	0.97	3.61	318	3.14	
TACHA	34	TACHA	1	368	256	0	0	0	0	1	256	0	0	15	23	1.53	17.07	11.13	1.36	2.09	654	1.53	
			6	796	611	1	20	4	335	1	256	0	0	22	49	2.23	27.77	12.47	2.43	5.41	459	2.18	
REGION X	35	PUNO	5	344	287	4	93	0	0	1	194	0	0	8	48	6.00	35.88	5.98	0.34	2.04	1,358	0.74	
PUNO	36	SAN ROMAN	3	113	68	2	16	1	52	0	0	0	0	7	32	4.57	9.71	2.13	0.32	1.44	4,003	0.25	
	37	AZANGARO	1	52	18	1	18	0	0	0	0	0	0	6	30	5.00	3.00	0.60	0.62	3.08	10,249	0.10	
	38	MELGAR	1	100	77	0	0	1	77	0	0	0	0	12	11	0.92	6.42	7.00	2.34	2.15	1,304	0.77	
			10	609	450	7	127	2	129	1	194	0	0	33	121	3.67	13.64	3.72	2.35	8.61	2,104	0.48	
REGION XI	39	CANCHIS	1	70	65	0	0	1	65	0	0	0	0	7	25	3.57	9.29	2.60	0.43	1.52	4,159	0.24	
CUZCO	40	MADRE DE DIOS	2	50	50	2	50	0	0	0	0	0	0	4	12	3.00	12.50	4.17	6.18	18.55	699	1.43	
	41	CUZCO 1	1	366	347	0	0	0	0	0	0	1	347	11	37	3.36	31.55	9.38	1.48	4.98	712	1.41	
	42	CUZCO 2	2	518	318	1	18	0	0	1	300	0	0	11	39	3.55	28.91	8.15	0.76	2.68	612	1.63	
	43	LA CONVENCION	1	140	128	0	0	1	128	0	0	0	0	1	33	0.00	128.00	3.88	0.23	7.49	1,381	0.72	
	44	ABANCAY	1	150	125	0	0	1	125	0	0	0	0	7	35	5.00	17.86	3.57	0.59	2.95	1,195	0.84	
	45	ANDAHUAYLAS	1	65	60	0	0	1	60	0	0	0	0	8	17	2.13	7.50	3.53	0.28	0.59	2,662	0.38	
			9	1,359	1,093	3	68	4	378	1	300	1	347	49	198	4.04	22.31	5.52	6.97	28.16	1,128	0.89	
REGION XII	46	AYACUCHO	5	234	251	4	113	1	138	0	0	0	0	11	57	5.18	22.82	4.40	0.43	2.20	1,846	0.54	
AYACUCHO																							
REGION XIII	47	HUANCAMELICA	4	186	168	3	58	1	110	0	0	0	0	8	37	4.63	21.00	4.54	0.31	1.45	1,082	0.92	
HUANCAYO	48	HUANCAYO	7	420	406	5	126	2	280	0	0	0	0	28	62	2.21	14.50	6.55	0.58	1.29	1,320	0.76	
	49	JAUJA	9	588	607	6	104	1	149	2	354	0	0	9	34	3.78	67.44	17.85	0.29	1.10	330	3.03	
	50	TARMA	1	257	120	0	0	1	120	0	0	0	0	4	11	2.75	30.00	10.91	0.11	0.29	986	1.04	
	51	SELVA CENTRAL	5	158	178	4	88	1	90	0	0	0	0	9	74	8.22	19.78	2.41	1.47	12.07	1,456	0.69	
	52	JUNIN	1	50	25	1	25	0	0	0	0	0	0	1	6	6.00	25.00	4.17	0.07	0.40	1,269	0.79	
			27	1,659	1,594	19	401	6	749	2	354	0	0	59	224	3.80	25.49	8.71	3.21	12.20	881	1.14	

REGION	HOSP. AREA CODE	LOCATION	HOSPITALS										INDICATORS										
			TYPE 1			TYPE 2		TYPE 3		TYPE 4		HEALTH CENTERS	HEALTH POSTS	Avail. Hosp.	Avail. Hosp.	HC/Pop./	HP/Pop./	Pop./	Hosp.				
			No. Hosp.	Plann. Beds	Avail. Beds	No. Avail. Hosp.	No. Avail. Beds	No. Avail. Hosp.	No. Avail. Beds	No. Avail. Hosp.	No. Avail. Beds			Beds/HC	Beds/HP	km.2	km.2	Avail. Hosp.	Beds/1,000 inhab.				
			:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:			
: REGION XIV	59	PASCO	: 9	515	463	: 5	157	4	306	0	0	0	0	0	12	27	: 2.25	30.50	17.15	: 0.42	0.94	: 398	2.51
: HUANUCO	54	HUANUCO	: 3	170	195	: 2	25	0	0	1	170	0	0	0	8	30	: 3.75	24.38	6.50	: 0.52	1.95	: 1,790	0.56
:	55	LA UNION	: 3	92	80	: 3	80	0	0	0	0	0	0	0	2	31	: 15.50	40.00	2.58	: 0.07	1.01	: 716	1.40
:	56	TINGO MARIA	: 1	155	143	: 0	0	1	143	0	0	0	0	0	2	18	: 9.00	71.50	7.94	: 0.09	0.83	: 665	1.50
:	57	PUCALLPA	: 2	210	175	: 1	40	1	135	0	0	0	0	9	25	: 2.78	19.44	7.00	: 4.75	13.18	: 1,111	0.90	
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	: 18	1,142	1,056	: 11	302	6	584	1	170	0	0	33	131	: 3.97	32.00	6.06	: 5.17	20.53	: 834	1.20	
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
: REGION XV	58	HUALLAGA	: 1	27	27	: 1	27	0	0	0	0	0	0	7	23	: 3.29	3.86	1.17	: 1.85	6.08	: 4,554	0.22	
: MOYOBAMBA	59	SAN MARTIN	: 1	135	135	: 0	0	1	135	0	0	0	0	18	73	: 4.06	7.50	1.85	: 1.65	6.70	: 1,119	0.89	
:	60	MOYOBAMBA	: 2	54	54	: 2	54	0	0	0	0	0	0	9	18	: 2.00	6.00	3.00	: 0.55	1.10	: 1,806	0.55	
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	: 4	216	216	: 3	81	1	135	0	0	0	0	34	114	: 3.35	6.35	1.89	: 4.70	16.05	: 1,720	0.58	
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
: REGION XVI	61	YURIMAGUAS	: 2	56	64	: 1	6	1	58	0	0	0	0	5	26	: 5.20	12.80	2.46	: 3.45	17.94	: 1,520	0.66	
: IQUITOS	62	IQUITOS	: 8	1,018	690	: 3	48	3	233	2	409	0	0	32	87	: 2.72	21.56	7.93	: 21.64	58.83	: 670	1.49	
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	: 10	1,074	754	: 4	54	4	291	2	409	0	0	37	113	: 3.05	20.38	6.67	: 25.11	76.69	: 742	1.35	
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
: REGION XVII	15-16	CHANCAY	: 11	932	852	: 6	109	3	267	2	476	0	0	24	52	: 2.17	35.50	16.38	: 0.70	1.51	: 510	1.93	
: CALLAO	18	CALLAO	: 11	2,229	1,457	: 9	250	0	0	0	0	2	1207	29	9	: 0.31	50.24	161.89	: 0.01	.00	: 304	3.29	
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	: 22	3,161	2,309	: 15	359	3	267	2	476	2	1207	53	61	: 1.15	43.57	37.85	: 0.78	0.89	: 383	2.61	
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	: 338	33,985	29,984	: 209	4440	84	8192	26	5438	19	11914	785	1,925	: 2.45	38.20	15.58	: 53.59	131.42	: 628	1.59	

TABLE No. 48

REFERRAL NETWORK OF HEALTH FACILITIES BY DEPARTMENT - TOTAL HEALTH SECTOR, 1985

DEPARTMENT	HOSPITALS										INDICATORS									
	No. Plann.		Avail.	TYPE 1		TYPE 2		TYPE 3		TYPE 4		HEALTH CENTERS	HEALTH POSTS	HP/HC	Avail. Hosp. Beds/HC	Avail. Hosp. Beds/HP	HC/Pop./km.2	HP/Pop./km.2	Pop./Avail. Hosp. Bed	Hosp. Beds/1,000 inhab.
	Hosp.	Beds		Hosp.	Beds	Hosp.	Beds	Hosp.	Beds	Hosp.	Beds									
Amazonas	1	124	100	0	0	1	100	0	0	0	0	14	77	5.50	7.14	1.61	1.95	10.72	2,967	0.34
Ancash	21	1,196	845	17	364	4	481	0	0	0	0	33	86	2.61	25.61	13.91	1.33	3.48	1,074	0.93
Apurimac	2	215	185	0	0	2	185	0	0	0	0	16	56	3.50	11.56	3.84	0.93	3.24	1,918	0.52
Arequipa	23	2,109	1,923	16	273	3	295	3	722	1	633	59	107	1.81	32.59	19.71	4.50	8.16	433	2.31
Ayacucho	8	340	326	7	188	1	138	0	0	0	0	13	93	7.15	25.08	3.66	1.06	7.56	1,667	0.60
Cajamarca	4	325	161	3	101	1	60	0	0	0	0	24	89	3.71	6.71	3.65	0.72	2.69	7,189	0.14
Cusco	5	1,094	858	1	18	2	193	1	300	1	347	30	126	4.20	28.60	8.68	2.43	10.20	1,099	0.91
Huancavelica	7	214	196	6	88	1	110	0	0	0	0	23	86	3.74	8.61	2.49	1.32	4.92	1,860	0.54
Huanuco	7	417	418	5	105	1	143	1	170	0	0	14	83	5.93	29.86	5.02	0.88	5.25	1,308	0.76
Ica	12	1,145	1,076	5	94	5	571	2	411	0	0	24	30	1.25	44.83	38.17	1.05	1.31	452	2.21
Junin	22	1,440	1,303	15	310	6	803	1	190	0	0	37	135	3.65	35.22	10.67	1.62	5.92	759	1.32
La Libertad	17	1,173	1,052	11	346	5	492	1	214	0	0	39	115	2.95	26.97	10.20	0.83	2.44	1,040	0.96
Lambayeque	18	1,319	1,127	13	285	3	206	1	234	1	422	22	29	1.32	51.23	45.48	0.38	0.50	713	1.40
Lima y Callao	130	18,172	16,449	77	1,422	28	2,717	9	1,798	16	10,512	221	199	0.90	74.43	91.32	1.20	1.08	380	2.63
Loreto	10	1,074	754	4	54	4	291	2	409	0	0	35	112	3.20	21.54	9.59	23.13	74.01	762	1.31
Madre de Dios	2	50	50	2	50	0	0	0	0	0	0	4	14	3.50	12.50	3.57	7.56	26.45	830	1.20
Moquegua	5	428	355	1	20	4	335	0	0	0	0	7	26	3.71	50.71	16.46	0.94	3.51	328	3.05
Pasco	10	548	496	7	271	3	225	0	0	0	0	17	59	3.47	29.18	9.29	1.57	5.46	513	1.95
Piura	16	1,076	1,119	9	237	6	643	1	239	0	0	51	94	1.84	21.94	11.45	1.43	2.64	1,160	0.86
Puno	10	609	459	7	127	2	129	1	194	0	0	33	121	3.67	13.64	5.03	2.49	9.13	2,131	0.47
San Martin	4	216	216	3	81	1	135	0	0	0	0	34	113	3.32	6.35	1.91	4.61	15.33	1,785	0.55
Tacna	1	368	256	0	0	0	0	1	256	0	0	15	23	1.53	17.07	16.00	1.31	2.01	681	1.47
Tumbes	1	124	92	0	0	1	92	0	0	0	0	11	29	2.64	8.36	4.28	0.42	1.11	1,341	0.75
Ucayali	2	210	175	1	40	1	135	0	0	0	0	9	23	2.56	19.44	9.13	4.40	11.25	1,143	0.88
TOTAL	338	33,986	29,984	210	4,454	85	8,479	24	5,137	19	11,914	785	1,925	2.45	38.20	17.66	51.22	125.60	657	1.52

TABLE No 5A

REFERRAL NETWORK OF HEALTH FACILITIES BY HOSPITAL AREAS AND HEALTH REGIONS
MINISTRY OF HEALTH - PERU, 1985

REGION	HOSP. AREA CODE	LOCATION	HOSPITALS										HEALTH CENTERS		HEALTH POSTS		INDICATORS						
			TYPE 1			TYPE 2			TYPE 3			TYPE 4		HP/HC	Hosp. Beds/HC	Hosp. Beds/HP	Hosp. HC/Pop./km.2	HP/Pop./km.2	Pop./Avail. Bed	Hosp. Beds/1,000 Inhab.			
			No. Hosp.	Plann. Beds	Avail. Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds	No. Hosp.	Avail. Beds	Centers	Posts								Avail. HC	Avail. HP	
REGION I	01	TUMBES	1	124	92	0	0	1	92	0	0	0	0	0	6	19	3.17	15.33	4.84	0.24	0.75	1,298	0.77
PIURA	02	SULLANA	1	126	135	0	0	1	135	0	0	0	0	19	40	2.11	7.11	3.38	0.32	0.67	7,372	0.14	
	03	PIURA	2	365	269	1	30	0	0	1	239	0	0	17	53	3.12	15.82	5.08	0.59	1.84	2,350	0.43	
			4	615	496	1	30	2	227	1	239	0	0	42	112	2.67	11.81	4.43	1.04	2.78	3,522	0.28	
REGION II	04	LAMBAYEQUE	3	392	325	1	29	1	62	1	234	0	0	20	33	1.65	16.25	9.85	0.37	0.62	2,538	0.39	
CHICLAYO	05	JAEN	1	30	30	1	30	0	0	0	0	0	0	3	25	8.33	10.00	1.20	0.12	0.98	8,714	0.11	
	06	AMAZONAS	1	124	100	0	0	1	100	0	0	0	0	11	64	5.82	9.09	1.56	1.57	9.14	2,893	0.35	
			5	546	455	2	59	2	162	1	234	0	0	34	122	3.59	13.38	3.73	1.65	5.94	3,023	0.33	
REGION III	07	CHOTA	1	126	60	0	0	1	60	0	0	0	0	8	20	2.50	7.50	3.00	0.18	0.44	5,776	0.17	
CAJAMARCA	08	CAJAMARCA	2	169	71	2	71	0	0	0	0	0	0	14	46	3.29	5.07	1.54	0.45	1.48	7,308	0.14	
			3	295	131	2	71	1	60	0	0	0	0	22	66	3.00	5.95	1.98	0.62	1.86	6,606	0.15	
REGION IV	09	PACASMAYO	2	250	132	1	42	1	90	0	0	0	0	4	8	2.00	33.00	15.50	0.07	0.14	897	1.11	
TRUJILLO	10	TRUJILLO	3	294	274	2	60	0	0	1	214	0	0	21	61	2.90	13.05	4.49	0.36	1.05	2,877	0.35	
	11	HUAMACHUCO	1	40	33	1	33	0	0	0	0	0	0	1	25	25.00	33.00	1.32	0.04	1.07	4,415	0.23	
			6	584	439	4	135	1	90	1	214	0	0	26	94	3.62	16.88	4.67	0.54	1.95	2,398	0.42	

REGION	HOSP. AREA CODE	LOCATION	HOSPITALS											INDICATORS								
			No. Plann. Avail.			TYPE 1		TYPE 2		TYPE 3		TYPE 4		HEALTH CENTERS	HEALTH POSTS	HP/HC	Avail. Hosp. Beds/HC	Avail. Hosp. Beds/HP	Hosp./Pop./km.2	HP/Pop./km.2	Pop./1,000	Hosp. Beds/1,000 inhab.
			Hosp.	Beds	Beds	No Hosp	Avail Beds	No Hosp	Avail Beds	No Hosp	Avail Beds	No Hosp	Avail Beds									
REGION V	12	CHIMBOTE	4	493	254	2	49	2	205	0	0	0	0	10	21	2.10	25.40	12.10	0.35	0.74	1,366	0.73
HUARAZ	13	POMABAMBA	1	30	30	1	30	0	0	0	0	0	0	4	8	2.00	7.50	3.75	0.20	0.40	2,549	0.39
	14	HUARAZ	6	325	291	5	155	1	136	0	0	0	0	18	52	2.89	16.17	5.60	0.93	2.69	1,739	0.57
			11	848	575	8	234	3	341	0	0	0	0	32	81	2.53	17.97	7.10	1.45	3.68	1,616	0.62
REGION VI	17, 19-22	RIMAC	13	6,562	6,257	0	0	1	147	3	602	9	5,508	76	16	0.21	82.33	391.06	0.07	0.01	650	1.54
LIMA	23-24	CHOSICA	5	254	264	3	49	2	215	0	0	0	0	46	37	0.80	5.74	7.14	1.30	1.05	601	1.66
	25	CANETE	1	50	38	1	38	0	0	0	0	0	0	10	20	2.00	3.80	1.90	0.61	1.23	4,738	0.21
			19	6,866	6,559	4	87	3	362	3	602	9	5,508	132	73	0.55	49.69	89.85	0.58	0.32	672	1.49
REGION VII	26	CHINCHA	1	124	116	0	0	1	116	0	0	0	0	6	15	2.50	19.33	7.73	0.23	0.57	1,352	0.74
ICA	27	PISCO	5	602	555	2	50	2	260	1	245	0	0	22	51	2.32	25.23	10.88	1.16	2.69	568	1.76
	28	LUCANAS	2	91	66	2	66	0	0	0	0	0	0	3	30	10.00	22.00	2.20	0.46	4.55	3,414	0.29
			8	817	737	4	116	3	376	1	245	0	0	31	96	3.10	23.77	7.68	2.53	7.83	946	1.06
REGION VIII	29	CASTILLA	1	48	26	1	26	0	0	0	0	0	0	17	17	1.00	1.53	1.53	4.00	4.00	2,911	0.34
AREQUIPA	30	CAMAÑA	1	55	55	0	0	1	55	0	0	0	0	5	18	3.60	11.00	3.06	1.44	5.18	1,110	0.90
	31	AREQUIPA	2	1,059	925	0	0	0	0	1	292	1	633	17	27	1.59	54.41	34.26	0.63	1.00	673	1.49
	32	ISLAY	1	140	140	0	0	1	140	0	0	0	0	2	5	2.50	70.00	28.00	0.20	0.51	353	2.84
			5	1,302	1,146	1	26	2	195	1	292	1	633	41	67	1.63	27.95	17.10	3.22	5.26	706	1.42
REGION IX	33	MOQUEGUA	2	244	191	0	0	2	191	0	0	0	0	5	21	4.20	38.20	9.10	0.70	2.92	592	1.69
TACNA	34	TACNA	1	368	256	0	0	0	0	1	256	0	0	10	22	2.20	25.60	11.64	0.91	2.00	654	1.53
			3	612	447	0	0	2	191	1	256	0	0	15	43	2.87	29.80	10.40	1.66	4.74	627	1.59

REGION	HOSP. AREA CODE	LOCATION	HOSPITALS											HEALTH CENTERS		HEALTH POSTS		INDICATORS					
			No. Plann. Avail.			TYPE 1		TYPE 2		TYPE 3		TYPE 4		HP/HC	Hosp. Beds/HC	Avail. Hosp. Beds/MP	Hosp./Pop./km.2	Avail. Hosp. Beds/1,000 inhab.	Pop./km.2	Hosp. Beds/1,000 inhab.			
			Hosp.	Beds	Beds	No.	Avail	No.	Avail	No.	Avail	No.	Avail										
			Hosp.	Beds	Beds	Hosp	Beds	Hosp	Beds	Hosp	Beds	Hosp	Beds										
REGION X	35	PUNO	3	290	244	2	50	0	0	1	194	0	0	7	41	5.86	34.86	5.95	0.30	1.75	1,597	0.63	
PUNO	36	SAH ROMAN	3	113	68	2	16	1	52	0	0	0	0	5	23	4.60	13.60	2.96	0.23	1.04	4,003	0.25	
	37	AZANGARO	1	52	18	1	18	0	0	0	0	0	0	5	26	4.33	3.00	0.69	0.62	2.67	10,249	0.10	
	38	MELGAR	1	100	77	0	0	1	77	0	0	0	0	12	10	0.83	6.42	7.70	2.34	1.95	1,304	0.77	
			8	555	407	5	84	2	129	1	194	0	0	30	100	3.33	13.57	4.07	2.14	7.12	2,326	0.43	
REGION XI	39	CANCHIS	1	70	65	0	0	1	65	0	0	0	0	4	24	6.00	16.25	2.71	0.24	1.46	4,159	0.24	
CUZCO	40	MAORE DE DIOS	2	50	50	2	50	0	0	0	0	0	0	2	12	6.00	25.00	4.17	3.09	18.55	699	1.43	
	41	CUZCO 1	1	366	347	0	0	0	0	0	0	1	347	8	34	4.25	43.38	10.21	1.08	4.57	712	1.41	
	42	CUZCO 2	1	500	300	0	0	0	0	1	300	0	0	10	39	3.90	30.00	7.69	0.69	2.68	649	1.54	
	43	LA CONVENCIÓN	1	140	128	0	0	1	128	0	0	0	0	0	32	0.00	---	4.00	0.00	7.26	1,381	0.72	
	44	ABANCAY	1	150	125	0	0	1	125	0	0	0	0	6	34	5.67	20.83	3.68	0.51	2.86	1,195	0.64	
	45	ANDAHUAYLAS	1	65	50	0	0	1	60	0	0	0	0	4	17	4.25	15.00	3.53	0.14	0.59	2,662	0.38	
			8	1,341	1,075	2	50	4	378	1	300	1	347	34	192	5.65	31.62	5.60	4.84	27.31	1,147	0.87	
REGION XII	46	AYACUCHO	5	234	251	4	113	1	138	0	0	0	0	11	57	5.18	22.82	4.40	0.43	2.20	1,846	0.54	
AYACUCHO																							
REGION XIII	47	HUANCAMELICA	1	120	110	0	0	1	110	0	0	0	0	8	35	4.38	13.75	3.14	0.31	1.37	1,652	0.61	
HUANCAYO	48	HUANCAYO	2	296	280	0	0	2	280	0	0	0	0	28	62	2.21	10.00	4.52	0.58	1.29	1,914	0.52	
	49	JAUJA	1	180	190	0	0	0	0	1	190	0	0	9	32	3.56	21.11	5.94	0.29	1.03	1,056	0.95	
	50	TARMA	1	257	120	0	0	1	120	0	0	0	0	4	11	2.75	30.00	10.91	0.11	0.29	966	1.04	
	51	SELVA CENTRAL	4	133	153	3	63	1	90	0	0	0	0	9	74	8.22	17.00	2.07	1.47	12.07	1,694	0.59	
	52	JUNIN	1	50	25	1	25	0	0	0	0	0	0	1	6	6.00	25.00	4.17	0.07	0.40	1,269	0.79	
			10	1,036	878	4	88	5	600	1	190	0	0	59	220	3.73	14.88	3.99	3.21	11.99	1,509	0.66	

REGION	HOSP. AREA CODE	LOCATION	HOSPITALS										INDICATORS									
			No. Plann. Avail.			TIPE 1		TIPE 2		TIPE 3		TIPE 4		HEALTH CENTERS	HEALTH POSTS	HP/HC	Avail. Avail.:		Pop./ Hosp.			
			Hosp.	Beds	Beds	No.	Avail	No.	Avail	No.	Avail	No.	Avail			Bed/ HC	Bed/ HP	km.2	km.2	Avail. Hosp. 1,000	Beds/ 1,000 inhab.	
REGION XIV	53	PASCO	1	58	55	0	0	1	55	0	0	0	0	13	27	2.08	4.23	2.04	0.45	0.94	3,352	0.30
HUANUCO	54	HUANUCO	1	142	170	0	0	0	0	1	170	0	0	8	30	3.75	21.25	5.67	0.52	1.95	2,054	0.49
	55	LA UNION	1	28	28	1	28	0	0	0	0	0	0	2	31	15.50	14.00	0.90	0.07	1.01	2,044	0.49
	56	TINGO MARIA	1	155	143	0	0	1	143	0	0	0	0	2	18	9.00	71.50	7.94	0.09	0.83	665	1.50
	57	PUCALLPA	2	210	175	1	40	1	135	0	0	0	0	9	24	2.67	19.44	7.29	4.75	12.66	1,111	0.90
			6	593	571	2	68	3	333	1	170	0	0	34	130	3.82	16.79	4.39	5.33	20.37	1,542	0.65
REGION XV	58	HUALLACA	1	27	27	1	27	0	0	0	0	0	0	7	24	3.43	3.86	1.13	1.85	6.34	4,554	0.72
MOYOBAMBA	59	SAN MARTIN	1	135	135	0	0	1	135	0	0	0	0	20	69	3.45	6.75	1.96	1.84	6.33	1,119	0.89
	60	MOYOBAMBA	2	54	54	2	54	0	0	0	0	0	0	9	18	2.00	6.00	3.00	0.55	1.10	1,806	0.55
			4	216	216	3	81	1	135	0	0	0	0	36	111	3.08	6.00	1.95	5.07	15.63	1,720	0.58
REGION XVI	61	YURIMAGUAS	1	56	58	0	0	1	58	0	0	0	0	5	26	5.20	11.60	2.23	3.45	17.94	1,677	0.60
IQUITOS	62	IQUITOS	2	570	241	1	0	0	0	1	241	0	0	32	71	2.22	7.53	3.39	21.64	48.01	1,919	0.52
			3	626	299	1	0	1	58	1	241	0	0	37	97	2.62	8.08	3.08	25.11	65.83	1,872	0.53
REGION XVII	15-16	CHANCAY	5	605	539	2	48	2	206	1	285	0	0	24	43	1.79	22.46	12.53	0.70	1.25	819	1.22
CALLAO	18	CALLAO	4	1,131	962	3	107	0	0	0	0	1	855	31	9	0.29	31.03	106.89	0.01	.00	461	2.17
			9	1,736	1,501	5	155	2	206	1	285	1	855	55	52	0.95	27.29	28.87	0.81	0.76	590	1.70
			116	18,742	14,747	52	1,397	38	3,981	15	3,462	12	7,343	789	1713	2.17	18.69	8.61	53.87	116.95	1,277	0.78

TABLE No. 5B

REFERRAL NETWORK OF HEALTH FACILITIES BY DEPARTMENT - MINISTRY OF HEALTH, 1985

DEPARTMENT	HOSPITALS										INDICATORS									
	No. Hosp	Plann. Beds	Avail. Beds	TYPE 1		TYPE 2		TYPE 3		TYPE 4		HEALTH CENTERS	HEALTH POSTS	HP/HC	Avail. Hosp. Beds/HC	Avail. Hosp. Beds/HP	Hosp./Pop./km.2	HP/Pop./km.2	Pop./Avail. Hosp. Bed	Hosp. 1,000 inhab
				No. Hosp.	Avail. Beds															
Amazonas	1	124	100	0	0	1	100	0	0	0	0	11	77	7.00	9.09	1.61	1.53	10.72	2,967	0.34
Ancash	11	848	575	8	234	3	341	0	0	0	0	31	86	2.77	18.55	9.86	1.25	3.48	1,578	0.63
Apurimac	2	215	185	0	0	2	185	0	0	0	0	11	56	5.09	16.82	3.84	0.64	3.24	1,918	0.52
Arequipa	5	1,302	1,146	1	26	2	195	1	292	1	633	41	107	2.61	27.95	12.17	3.13	8.16	727	1.38
Ayacucho	7	325	317	6	179	1	138	0	0	0	0	11	93	8.45	28.82	3.49	0.89	7.56	1,715	0.58
Cajamarca	4	325	161	3	101	1	60	0	0	0	0	24	89	3.71	6.71	3.65	0.72	2.69	7,189	0.14
Curco	4	1,076	640	0	0	2	193	1	300	1	347	22	126	5.73	38.18	8.54	1.78	10.20	1,122	0.89
Huancavelica	1	120	110	0	0	1	110	0	0	0	0	21	86	4.10	5.24	1.40	1.20	4.92	3,347	0.30
Huanuco	3	325	341	1	28	1	143	1	170	0	0	10	83	8.30	34.10	3.92	0.63	5.25	1,604	0.62
Ica	6	726	671	2	50	3	376	1	245	0	0	23	30	1.30	29.17	24.20	1.00	1.31	725	1.38
Junin	8	883	735	3	55	4	490	1	190	0	0	37	135	3.55	19.86	6.54	1.62	5.92	1,345	0.74
Le Libertad	6	584	439	4	135	1	90	1	214	0	0	27	115	4.26	16.26	5.08	0.57	2.44	2,492	0.40
Lambayeque	3	392	325	1	29	1	62	1	234	0	0	20	29	1.45	16.25	13.52	0.34	0.50	2,472	0.40
Lima y Callao	28	8,602	8,060	9	242	5	568	4	887	10	6363	179	199	1.11	45.03	43.23	0.97	1.08	775	1.29
Loreto	3	626	299	1	0	1	58	1	241	0	0	13	112	8.62	23.80	5.59	8.59	74.01	1,923	0.52
Madre de Dios	2	50	50	2	50	0	0	0	0	0	0	2	14	7.00	25.00	3.57	3.78	26.45	830	1.20
Moquegua	2	244	191	0	0	2	191	0	0	0	0	5	26	5.20	38.20	9.38	0.67	3.51	609	1.64
Pasco	2	91	88	1	33	1	55	0	0	0	0	8	59	7.38	11.00	1.54	0.74	5.46	2,892	0.35
Piura	3	491	404	1	30	1	135	1	239	0	0	36	94	2.61	11.22	5.22	1.01	2.64	3,212	0.31
Puno	8	555	407	5	84	2	128	1	194	0	0	30	121	4.03	13.51	4.59	2.26	9.13	2,357	0.42
San Martin	4	216	216	3	81	1	135	0	0	0	0	28	113	4.04	7.71	1.91	3.80	15.33	1,785	0.56
Tacna	1	368	256	0	0	0	0	1	256	0	0	10	23	2.30	25.60	16.00	0.87	2.01	681	1.47
Tumbes	1	124	92	0	0	1	92	0	0	0	0	6	29	4.83	15.33	4.28	0.23	1.11	1,341	0.75
Ucayali	2	210	175	1	40	1	135	0	0	0	0	6	23	3.83	29.17	9.13	2.94	11.25	1,143	0.88
TOTAL	117	18,822	16,183	52	1,397	38	3,981	15	3,462	12	7,343	612	1,925	3.15	26.44	9.78	39.93	125.60	1,217	0.82

TABLE No. 6

SUPPLY AND DEMAND FOR HOSPITAL BEDS - HEALTH SECTOR, 1985

REGION	HOSP. AREA CODE	LOCATION	DEMAND FOR HOSP. BEDS (10 days)	DEMAND FOR HOSP. BEDS (5 days)	ANNUAL SUPPLY OF HOSP. BEDS	D - S (10 days)	D - S (5 days)	BED DEFICIT (10 days)	BED DEFICIT (5 days)
REGION I	01	TUMBES	59,700	29,850	33,580	26,120	(3,730)	72	(10)
PIURA	02	SULLANA	497,606	248,803	162,425	335,181	86,378	918	237
	03	PIURA	316,051	158,025	246,010	70,041	(87,985)	192	(241)
			873,357	436,678	442,015	431,342	(5,337)	1,182	(15)
REGION II	04	LAMBAYEQUE	412,412	206,206	411,355	1,057	(205,149)	3	(562)
CHICLAYO	05	JAEN	130,708	65,354	10,950	119,758	54,404	328	149
	06	AMAZONAS	144,637	72,318	36,500	108,137	35,818	256	98
			687,756	343,878	458,805	228,951	(114,927)	627	(315)
REGION III	07	CHOTA	173,274	86,637	21,900	151,374	64,737	415	177
CAJAMARCA	08	CAJAMARCA	259,451	129,726	25,915	233,536	103,811	640	284
			432,725	216,362	47,815	384,910	166,547	1,055	462
REGION IV	09	PACASMAYO	59,232	29,616	48,180	11,052	(18,564)	30	(51)
TRUJILLO	10	TRUJILLO	394,180	197,090	323,755	70,425	(126,665)	193	(347)
	11	HUACHUCO	72,845	36,423	12,045	60,800	24,378	167	67
			526,256	263,128	383,980	142,276	(120,852)	390	(331)
REGION V	12	CHIMBOTE	173,435	86,718	178,120	(4,685)	(91,403)	(13)	(250)
HUARAZ	13	POKABAMBA	38,234	19,117	10,950	27,284	8,167	75	22
	14	HUARAZ	253,068	126,534	119,355	133,713	7,179	366	20
			464,736	232,368	308,425	156,311	(76,057)	428	(208)
REGION VI	17,19-22	RIMAC	2,032,845	1,016,422	4,424,165	(2,391,321)	(3,407,743)	(6,552)	(9,336)
LIMA	23-24	CHOSICA	79,350	39,675	301,490	(222,140)	(261,815)	(609)	(717)
	25	CANETE	90,021	45,010	58,400	31,621	(13,390)	87	(37)
			2,202,215	1,101,108	4,784,055	(2,581,840)	(3,682,948)	(7,074)	(10,090)

REGION	HOSP. AREA CODE	LOCATION	DEMAND FOR HOSP. BEDS (10 days)	DEMAND FOR HOSP. BEDS (5 days)	ANNUAL SUPPLY OF HOSP. BEDS	D - S (10 days)	D - S (5 days)	BED DEFICIT (10 days)	BED DEFICIT (5 days)
REGION VII	26	CHINCHA	78,424	39,212	455,885	(377,461)	(416,673)	(1,034)	(1,142)
ICA	27	PISCO	157,524	78,762	319,375	(161,851)	(240,613)	(443)	(659)
	28	LUCANAS	112,667	56,334	32,850	79,817	23,484	219	64
			348,615	174,308	808,110	(459,495)	(633,803)	(1,259)	(1,736)
REGION VIII	29	CASTILLA	37,842	18,921	27,375	10,467	(8,454)	29	(23)
AREQUIPA	30	CAMANA	30,539	15,269	47,085	(16,547)	(31,816)	(45)	(87)
	31	AREQUIPA	311,239	155,619	481,435	(170,197)	(325,816)	(466)	(893)
	32	ISLAY	24,681	12,341	146,000	(121,319)	(133,660)	(332)	(366)
			404,300	202,150	701,895	(297,595)	(499,745)	(815)	(1,369)
REGION IX	33	MOQUEGUA	56,500	28,250	129,575	(73,075)	(101,325)	(200)	(278)
TACNA	34	TACNA	83,700	41,850	93,440	(9,740)	(51,590)	(27)	(141)
			140,200	70,100	223,015	(82,815)	(152,915)	(227)	(419)
REGION X	35	PUNO	194,831	97,415	104,755	90,076	(7,340)	247	(20)
PUNO	36	SAN ROMAN	136,096	68,048	24,820	111,276	43,228	305	118
	37	AZANGARO	92,237	46,118	6,570	85,667	39,548	235	108
	38	MELGAP	50,187	25,094	28,105	22,082	(3,012)	60	(8)
			473,350	236,675	164,250	309,100	72,425	847	198
REGION XI	39	CANCHIS	135,175	67,587	23,725	111,450	43,862	305	120
CUZCO	40	MADRE DE DIOS	17,478	8,739	18,250	(772)	(9,511)	(2)	(26)
	41	CUZCO 1	123,481	61,740	126,655	(3,175)	(64,915)	(9)	(178)
	42	CUZCO 2	97,311	48,656	116,070	(18,759)	(67,415)	(51)	(185)
	43	LA CONVENCIÓN	88,381	44,191	46,720	41,661	(2,530)	114	(7)
	44	ABANCAY	74,707	37,354	45,625	29,082	(8,272)	80	(23)
	45	ANDAHUAYLAS	79,872	39,936	21,900	57,972	18,036	159	49
			616,404	308,202	398,945	217,459	(90,743)	596	(249)
REGION XII	46	AYACUCHO	231,638	115,819	91,615	140,023	24,204	384	66
AYACUCHO									
REGION XIII	47	HUANCVELICA	90,863	45,432	61,320	29,543	(15,889)	81	(44)
HUANCAYO	48	HUANCAYO	267,999	133,999	148,190	119,809	(14,191)	328	(39)
	49	JAUIJA	100,293	50,147	221,555	(121,262)	(171,409)	(332)	(470)
	50	TARMA	57,965	28,983	43,800	14,165	(14,818)	39	(41)
	51	SELVA CENTRAL	129,567	64,783	64,970	64,597	(187)	177	(1)
	52	JUNIN	15,863	7,931	9,125	6,738	(1,194)	18	(3)
			662,549	331,274	548,960	113,589	(217,686)	311	(596)

REGION	HOSP. AREA CODE	LOCATION	DEMAND FOR HOSP. BEDS (10 days)	DEMAND FOR HOSP. BEDS (5 days)	ANNUAL SUPPLY OF HOSP. BEDS	D - S (10 days)	D - S (5 days)	BED DEFICIT (10 days)	BED DEFICIT (5 days)
REGION XIV	53	PASCO	92,176	46,088	168,995	(76,820)	(122,907)	(210)	(337)
HUANUCO	54	HUANUCO	174,571	87,286	71,175	103,396	16,111	283	44
	55	LA UNION	28,620	14,310	29,200	(580)	(14,890)	(2)	(41)
	56	TINGO MARIA	47,573	23,787	52,195	(4,622)	(28,409)	(13)	(78)
	57	PUCALLPA	97,200	48,600	63,875	33,325	(15,275)	91	(42)
			440,140	220,070	385,440	54,700	(165,370)	150	(453)
REGION XV	58	HUALLAGA	61,475	30,737	9,855	51,620	20,882	141	57
MOYOBAMBA	59	SAN MARTIN	75,503	37,751	49,275	26,228	(11,524)	72	(32)
	60	MOYOBAMBA	48,773	24,387	19,710	29,063	4,677	80	13
			185,750	92,875	78,840	106,910	14,035	293	38
REGION XVI	61	YURIMAGUAS	48,629	24,315	23,360	25,269	955	69	3
IQUITOS	62	IQUITOS	231,271	115,636	251,850	(20,579)	(136,215)	(56)	(373)
			279,900	139,950	275,210	4,690	(135,260)	13	(371)
REGION XVII	15-16	CHANCAY	220,820	110,410	310,980	(90,160)	(200,570)	(247)	(550)
CALLAO	18	CALLAO	221,707	110,853	531,805	(310,099)	(420,952)	(850)	(1,153)
			442,527	221,263	842,785	(400,259)	(621,522)	(1,097)	(1,703)
			9,412,415	4,706,207	10,944,160	(1,531,746)	(6,237,953)	(4,197)	(17,090)

NOTE: Parenthesis indicates "SURPLUS".

TABLE No. 7

SUPPLY AND DEMAND FOR HOSPITAL BEDS - MINISTRY OF HEALTH, 1985

REGION	HOSP. AREA CODE	LOCATION	DEMAND FOR HOSP. BEDS (10 days)	DEMAND FOR HOSP. BEDS (5 days)	ANNUAL SUPPLY OF HOSP. BEDS	D - S (10 days)	D - S (5 days)	BEDS DEFICIT (10 days)	BEDS DEFICIT (5 days)
REGION I	01	TUMBES	59,700	29,850	33,580	26,120	(3,730)	72	(10)
PIURA	02	SULLANA	497,606	248,803	49,275	448,331	199,528	1,228	547
	03	PIURA	316,051	158,025	98,185	217,866	59,840	597	164
			873,357	436,678	181,040	692,317	255,638	1,897	700
REGION II	04	LAMBAYEQUE	412,412	206,206	118,625	293,787	87,581	805	240
CHICLAYO	05	JAEN	130,708	65,354	10,950	119,758	54,404	328	149
	06	AMAZONAS	144,637	72,318	36,500	108,137	35,818	296	98
			687,756	343,878	166,075	521,681	177,803	1,429	487
REGION III	07	CHOTA	173,274	86,637	21,900	151,374	64,737	415	177
CAJAMARCA	08	CAJAMARCA	259,451	129,725	25,915	233,536	103,611	640	284
			432,725	216,362	47,815	384,910	168,547	1,055	462
REGION IV	09	PACASMAYO	59,232	29,616	48,180	11,052	(18,564)	30	(51)
TRUJILLO	10	TRUJILLO	394,180	197,090	100,010	294,170	97,080	806	266
	11	HUAMACHUCO	72,845	36,423	12,045	60,800	24,378	167	67
			526,256	263,128	160,235	366,021	102,893	1,003	282
REGION V	12	CHIMBOTE	173,435	86,718	92,710	80,725	(5,993)	221	(16)
HUARAZ	13	POMABAMBA	38,234	19,117	10,950	27,284	8,167	75	22
	14	HUARAZ	253,068	126,534	106,215	146,853	20,319	402	56
			464,736	232,368	209,875	254,861	22,493	698	62
REGION VI	17,19-22	RIMAC	2,032,845	1,016,422	2,283,805	(250,961)	(1,267,383)	(688)	(3,472)
LIMA	23-24	CHOSICA	79,350	39,675	96,360	(17,010)	(56,685)	(47)	(155)
	25	CANETE	90,021	45,010	13,870	76,151	31,140	209	85
			2,202,215	1,101,108	2,394,035	(191,820)	(1,292,928)	(526)	(3,542)

REGION	HOSP. APEA CODE	LOCATION	DEMAND FOR HOSP. BEDS (10 days)	DEMAND FOR HOSP. BEDS (5 days)	ANNUAL SUPPLY OF HOSP. BEDS	D - S (10 days)	D - S (5 days)	BEDS DEFICIT (10 days)	BEDS DEFICIT (5 days)
REGION VII	26	CHINCHA	78,424	39,212	42,340	36,084	(3,128)	99	(9)
ICA	27	PISCO	157,524	78,762	202,575	(45,051)	(123,813)	(123)	(339)
	28	LUCANAS	112,667	56,334	24,090	88,577	32,244	243	88
			348,615	174,308	269,005	79,610	(94,698)	218	(259)
REGION VIII	29	CASTILLA	37,842	18,921	9,490	28,352	9,431	78	26
AREQUIPA	30	CAMANA	30,539	15,269	20,075	10,464	(4,806)	29	(13)
	31	AREQUIPA	311,239	155,619	337,625	(26,387)	(182,006)	(72)	(499)
	32	ISLAY	24,681	12,341	51,100	(26,419)	(38,760)	(72)	(106)
			404,300	202,150	418,290	(13,990)	(216,140)	(38)	(592)
REGION IX	33	MOQUEGUA	56,500	28,250	69,715	(13,215)	(41,465)	(36)	(114)
TACNA	34	TACNA	83,700	41,850	93,440	(9,740)	(51,590)	(27)	(141)
			140,200	70,100	163,155	(22,955)	(93,055)	(63)	(255)
REGION X	35	PUNO	194,831	97,415	89,060	105,771	8,355	290	23
PUNO	36	SAN ROMAN	136,096	68,048	24,820	111,276	43,228	305	118
	37	AZANGARO	92,237	46,118	6,570	85,667	39,548	235	108
	38	MELGAR	50,187	25,094	28,105	22,082	(3,012)	60	(8)
			473,350	236,675	148,555	324,795	88,120	890	241
REGION XI	39	CANCHIS	135,175	67,587	23,725	111,450	43,862	305	120
CUZCO	40	MADRE DE DIOS	17,478	8,739	18,250	(772)	(9,511)	(2)	(26)
	41	CUZCO 1	123,481	61,740	126,655	(3,175)	(64,915)	(9)	(178)
	42	CUZCO 2	97,311	48,656	109,500	(12,189)	(60,845)	(33)	(167)
	43	LA CONVENCION	88,381	44,191	46,720	41,661	(2,530)	114	(7)
	44	ABANCAY	74,707	37,354	45,625	29,082	(8,272)	80	(23)
	45	ANDAHUAYLAS	79,872	39,936	21,900	57,972	18,036	159	49
			616,404	308,202	392,375	224,029	(84,173)	614	(231)
REGION XII	46	AYACUCHO	231,638	115,819	91,615	140,023	24,204	384	66
AYACUCHO									
REGION XIII	47	HUANCAVELICA	90,863	45,432	40,150	50,713	5,282	139	14
HUANCAYO	48	HUANCAYO	267,999	133,999	102,200	165,799	31,799	454	87
	49	JAUJA	100,293	50,147	69,350	30,943	(19,204)	85	(53)
	50	TARMA	57,965	28,983	43,800	14,165	(14,818)	39	(41)
	51	SELVA CENTRAL	129,567	64,783	55,845	73,722	8,938	202	24
	52	JUNIN	15,853	7,931	9,125	6,738	(1,194)	18	(3)
			662,549	331,274	320,470	342,079	10,804	937	30

REGION	HOSP. AREA CODE	LOCATION	DEMAND FOR HOSP. BEDS (10 days)	DEMAND FOR HOSP. BEDS (5 days)	ANNUAL SUPPLY OF HOSP. BEDS	D - S (10 days)	D - S (5 days)	BEDS DEFICIT (10 days)	BEDS DEFICIT (5 days)
REGION XIV	53	PASCO	92,176	46,088	20,075	72,101	26,013	198	71
HUANUCO	54	HUANUCO	174,571	87,286	62,050	112,521	25,236	308	69
	55	LA UNION	28,620	14,310	10,220	18,400	4,090	50	11
	56	TINGO MARIA	47,573	23,787	52,195	(4,622)	(28,409)	(13)	(78)
	57	PUCALLPA	97,200	48,600	63,875	33,325	(15,275)	91	(42)
			440,140	220,070	208,415	231,725	11,655	635	32
REGION XV	58	HUALLACA	61,475	30,737	9,855	51,620	20,882	141	57
MOYOBAMBA	59	SAN MARTIN	75,503	37,751	49,275	26,228	(11,524)	72	(32)
	60	MOYOBAMBA	48,773	24,387	19,710	29,063	4,677	80	13
			185,750	92,875	78,840	106,910	14,035	293	38
REGION XVI	61	YURIMAGUAS	48,629	24,315	21,170	27,459	3,145	75	9
ICUITOS	62	ICUITOS	231,271	115,636	87,965	143,306	27,671	393	76
			279,900	139,950	109,135	170,765	30,815	468	84
REGION XVII	15-16	CHANCAY	220,820	110,410	196,735	24,085	(86,325)	66	(237)
CALLAG	18	CALLAG	221,707	110,853	351,130	(129,424)	(240,277)	(355)	(658)
			442,527	221,263	547,865	(105,339)	(326,602)	(289)	(895)
			9,412,415	4,706,207	5,382,655	4,029,760	(676,448)	11,040	(1,853)

NOTE: Parenthesis indicate "SURPLUS".

TABLE No. 8

COMPARISON OF AVAILABILITY OF HOSPITAL BEDS IN THE HEALTH SECTOR
IN 1975 AND 1985

DEPARTMENT	POPULATION 75	POTENTIAL DEMAND 75	SUPPLY 75	DEFICIT 75	POPULATION 85	POTENTIAL DEMAND 85	SUPPLY 85	DEFICIT 85	XCHANGE DEMAND	XCHANGE SUPPLY
Amazonas	204,100	102,050	52,195	137	296,700	148,350	36,500	306	45.37	-30.07
Ancash	842,000	421,000	272,290	407	907,400	453,700	308,425	398	7.77	13.27
Apurimac	349,100	174,550	69,350	288	354,900	177,450	67,525	301	1.66	-2.63
Arequipa	595,800	297,900	725,985	(1,173)	833,200	416,600	701,895	(782)	39.85	-3.32
Ayacucho	506,100	253,050	123,735	354	543,500	271,750	118,990	419	7.39	-3.83
Cajamarca	1,163,400	581,700	86,870	1,356	1,157,500	578,750	58,765	1,425	-0.51	-32.35
Cusco	833,400	416,700	332,150	232	942,700	471,350	313,170	433	13.11	-5.71
Huancavelica	402,800	201,400	55,115	401	368,200	184,100	72,270	306	-8.59	31.13
Huanuco	488,700	244,350	149,650	259	546,900	273,450	152,570	331	11.91	1.95
Ica	433,500	216,750	422,670	(564)	486,500	243,250	392,740	(410)	12.23	-7.08
Junin	812,300	406,150	482,895	(210)	988,700	494,350	475,595	51	21.72	-1.51
La Libertad	907,700	453,850	589,110	(371)	1,094,000	547,000	383,980	447	20.52	-34.82
Lambayeque	577,800	288,900	296,015	(19)	803,500	401,750	411,355	(26)	39.06	38.96
Lima y Callao	4,314,400	2,157,200	5,799,485	(9,979)	6,246,400	3,123,200	6,003,885	(7,892)	44.78	3.52
Loreto	608,700	304,350	208,050	264	574,900	287,450	275,210	34	-5.55	32.28
Madre de Dios	30,400	15,200	16,425	(3)	41,500	20,750	18,250	7	36.51	11.11
Moquegua	79,500	39,750	94,170	(149)	116,400	58,200	129,575	(196)	46.42	37.60
Pasco	217,200	108,600	169,360	(166)	254,500	127,250	181,040	(147)	17.17	6.90
Piura	1,082,000	541,500	394,930	402	1,297,800	648,900	408,435	659	19.83	3.42
Puno	933,300	466,650	153,665	857	959,100	479,550	164,250	864	2.76	6.85
San Martin	270,700	135,350	75,190	165	385,500	192,750	78,840	312	42.41	4.85
Tacna	112,200	56,100	150,745	(259)	174,300	87,150	93,440	(17)	55.35	-38.01
Tumbes	102,700	51,350	59,860	(23)	123,400	61,700	33,589	77	20.16	-43.90
Ucayali	200,000	100,000	80,665	53	200,000	100,000	63,875	99	0.00	-20.81
TOTALES	15,868,800	7,934,400	10,860,575	(8,017)	19,697,500	9,848,750	10,944,160	(3,001)	24.13	0.77

NOTE: Parenthesis indicates "SURPLUS".

SOURCE: Office of Statistics and Information, Ministry of Health.
Health Regions, Ministry of Health.
Projections on Population by Departments, INE 1985.

TABLE No. 9

PARTICIPATION OF THE MINISTRY OF HEALTH IN THE OVERALL SUPPLY
OF PHYSICAL INFRASTRUCTURE FOR HEALTH CARE - 1975

DEPARTMENT	HEALTH SECTOR			SECTORIAL INDICATORS				MINISTRY OF HEALTH								
	HOSP. CENTERS	HEALTH POSTS	HEALTH POSTS	AVAIL. HOSP. BEDS	POP./ HOSP. BED	POP./ HC	POP./ HP	HOSP. PLANN. HOSP. BEDS	AVAIL. HOSP. BEDS	% OF SECTOR HOSP.	% OF SECTOR HOSP. BEDS	HEALTH CENTERS	% OF SECTOR HC	HEALTH POSTS	% OF SECTOR HP	
Anazones	3	11	71	143	1,428	18,555	2,875	3	166	143	100.00	100.00	9	81.82	71	100.00
Ancash	19	24	57	746	1,129	35,083	14,772	10	508	507	52.63	67.96	22	91.67	47	82.46
Apurimac	2	6	36	190	1,837	58,183	9,697	2	195	190	100.00	100.00	6	100.00	36	100.00
Arequipa	22	37	65	1,989	300	16,103	9,166	5	1356	1294	22.73	65.06	19	51.35	55	84.62
Ayacucho	8	8	62	339	1,493	63,263	8,163	5	277	304	62.50	89.68	6	75.00	62	100.00
Cajamarca	4	20	49	238	4,888	58,170	23,743	3	288	228	75.00	95.80	18	90.00	49	100.00
Cusco	6	20	84	910	916	41,670	9,321	4	985	874	66.67	96.04	17	85.00	84	100.00
Huancavelica	3	4	24	151	2,668	100,700	16,783	1	120	109	33.33	72.19	2	50.00	24	100.00
Huanuco	5	7	55	410	1,192	69,814	8,885	3	308	350	60.00	85.37	7	100.00	55	100.00
Ica	17	19	26	1,158	374	22,816	16,673	6	742	723	35.29	62.44	11	57.89	26	100.00
Junin	20	19	58	1,323	614	42,753	14,005	7	914	772	35.00	58.35	10	52.63	58	100.00
La Libertad	21	34	53	1,614	582	26,697	17,126	8	1036	954	38.10	59.11	22	64.71	28	52.83
Lambayeque	17	23	42	811	712	25,122	13,757	3	411	275	17.65	33.91	17	73.91	17	40.48
Lima y Callao	136	188	32	15,889	272	22,949	134,825	27	8690	7422	19.85	46.71	104	55.32	28	87.50
Loreto	4	9	76	570	1,068	67,633	8,009	2	230	230	50.00	40.35	7	77.78	49	64.47
Madre de Dios	2	3	10	45	676	19,133	3,040	2	45	45	100.00	100.00	2	66.67	10	100.00
Moquegua	4	7	14	258	308	11,357	5,679	2	204	160	50.00	62.02	4	57.14	14	100.00
Pasco	9	10	19	464	468	21,720	11,432	1	60	60	11.11	12.93	6	60.00	19	100.00
Piura	15	33	70	1,082	1,001	32,818	15,471	4	719	538	26.67	19.72	24	72.73	68	97.14
Puno	8	20	80	421	2,217	46,665	11,666	5	496	387	62.50	91.92	14	70.00	67	83.75
San Martin	5	8	80	206	1,314	33,838	3,384	4	217	196	80.00	95.15	7	87.50	80	100.00
Tacna	2	7	12	413	272	16,029	9,350	1	310	343	50.00	83.05	5	71.43	12	100.00
Tumbes	2	11	8	164	626	9,336	12,838	1	126	124	50.00	75.61	4	36.36	8	100.00
Ucayali	3	5	27	221	905	40,000	7,407	1	130	130	33.33	58.82	4	80.00	27	100.00
TOTAL	337	533	1,110	29,755	533	29,773	14,296	110	18,533	16,358	32.64	54.98	347	65.10	994	89.55

Source.- Oficina Sectorial de Estadística e Informática, Ministerio de Salud.
Regiones de Salud, Ministerio de Salud.
Proyecciones de Población por Departamentos, INE 1985.

TABLE No. 10

UTILIZATION AND PERFORMANCE OF AVAILABLE HOSPITAL BEDS
BY MAIN HEALTH INSTITUTIONS
PERU : 1964-1983

Year	No. of Beds		Beds per 1,000 beneficiar.			No. of Hosp. Discharges			Average	Occupancy		Discharges per		
	MOH (1)	IPSS(2)	NA (3)	MOH	IPSS	MOH	IPSS	Total	Days of stay	MOH	IPSS	MOH	IPSS	
1964	16,200	3,400	2.52	1.90	3.64	245,700	69,200	385,200	17.6	14.8	66.0	60.9	13.20	18.70
1969	16,300	3,700	2.38	1.74	3.79	300,100	72,400	492,100	13.5	14.5	70.0	77.6	16.10	16.90
1974	16,400	4,100	2.22	1.66	3.06	371,900	93,500	645,000	11.5	12.8	68.1	79.7	22.74	22.50
1979	16,165	4,452	2.01	1.45	2.13	378,300	101,300	703,600	10.5	13.1	68.2	79.7	20.20	22.40
1983	16,502	4,758	1.84	1.34	1.87	443,800	120,200	842,000	9.7	11.0	68.7	71.4	23.00	25.04

NOTES: (1) Ministry of Health and other Public Organizations
(2) Peruvian Social Security Institute (IPSS)
(3) National Average

SOURCE: Atencion Medica en el Peru, 1964 - 1983
Dr. Carlos Bustos R. y colaboradores, 1985

TABLE NO. 11

DETERIORATION OF PHYSICAL PLANT OF HOSPITALS AND HEALTH CENTERS BY HOSPITAL
AREAS (ON MORE THAN 50 PERCENT)

H O S P I T A L

SERVICES	07	08	39	41	42	43	44	45
Administration								
Floor	7	13	2	7	9	1	6	4
Ceiling	8	16	4	9	10	2	6	5
Walls	-	1	1	1	3	1	2	1
Outpatient's Area								
Floor	1	4	3	3	2	1	-	3
Ceiling	-	4	4	2	4	1	3	2
Walls	-	2	2	1	1	1	3	1
Intermediate Services								
Floor	1	4	2	1	1	-	-	3
Ceiling	-	4	2	3	3	-	3	3
Walls	-	2	2	1	2	-	2	-
Surgery								
Floor	1	4	2	2	1	-	-	0
Ceiling	-	4	2	2	3	-	3	1
Walls	-	3	2	1	2	-	3	-
Hospitalization								
Floor	1	5	2	3	1	-	-	3
Ceiling	-	4	2	3	3	-	2	3
Walls	8	16	4	9	10	2	6	5
General Services								
Floor	1	3	2	3	3	-	-	1
Ceiling	-	3	2	3	4	-	3	1
Roof								
0-25%	1	5	-	5	3	-	2	1
26-50%	6	2	1	2	4	2	2	2
51-75%	1	1	1	-	2	-	-	-
76%-100%	-	-	-	-	-	-	-	-
TOTAL	8	16	4	9	11	2	6	5

SOURCE: Recursos Fisicos

Estado de Planta Fisica, Instalaciones y Equipo.
Bolivar, Javier, ANSSA-PERU. Feb. 1986

TABLE NO. 12A

STATE OF UTILITY SYSTEMS IN HOSPITALS AND HEALTH CENTERS

AREA 07 CHOTA

Total No. of Hospitals 1
 Total No. of Health Centers 7

	HOSPITALS			HEALTH CENTERS		
	W/O			W/O		
	INF.	10-50%	51-100%	INF.	10-50%	51-100%
Sanitary Systems						
Hot and Cold Water						
. faucets	1	-	-	2	4	2
. network	-	-	-	2	1	2
. service	-	1	-	1	2	4
Sewage						
. pipes	1	-	-	1	4	3
. network	1	-	-	1	2	4
Mechanical Systems						
Compressed Oxygen						
. accessories	1	-	-	7	-	-
. network	1	-	-	7	-	-
. service	-	1	-	7	-	-
Steam, petroleum, purge						
. accessories	1	-	-	7	-	-
. network	-	1	-	7	-	-
. service	-	1	-	7	-	-
Electrical Systems						
Lighting & Power						
. board	-	1	-	3	1	3
. network	-	1	-	2	3	2
. service	-	-	1	2	2	3
Communications						
. telephone board	-	-	1	7	-	-
. network	-	-	1	7	-	-
. service	-	-	1	7	-	-

SOURCE: Recursos Fisicos
 Estado de Planta Fisica, Instalaciones y Equipo
 Bolivar, Javier, ANSSA-PERU. Feb. 1985.

TABLE NO. 12B

STATE OF UTILITY SYSTEMS IN HOSPITALS AND HEALTH CENTERS

AREA 08 CAJAMARCA

Total No. of Hospitals 2
 Total No. of Health Centers 14

	HOSPITALS			HEALTH CENTERS		
	W/O			W/O		
	INF.	10-50%	51-100%	INF.	10-50%	51-100%
Sanitary Systems						
Hot and Cold Water						
. faucets	-	-	2	3	10	1
. network	-	1	1	5	7	4
. service	-	1	1	7	2	4
Sewage						
. pipes	1	1	-	3	5	6
. network	1	1	-	6	7	1
Mechanical Systems						
Compressed Oxygen						
. accessories	1	1	-	13	1	-
. network	1	1	-	13	-	-
. service	2	-	-	13	-	-
Steam, petroleum, purge						
. accessories	1	1	-	13	1	-
. network	1	1	-	13	1	-
. service	1	1	-	13	1	-
Electrical Systems						
Lighting & Power						
. board	-	1	1	3	7	4
. network	-	1	1	2	7	5
. service	-	1	1	2	3	9
Communications						
. telephone board	1	-	1	13	-	-
. network	1	-	1	13	-	-
. service	1	-	1	13	-	-

SOURCE: Recursos Fisicos
 Estado de Planta Fisica, Instalaciones y Equipo
 Bolivar, Javier, ANSSA-PERU. Feb. 1986.

TABLE NO. 12C

STATE OF UTILITY SYSTEMS IN HOSPITALS AND HEALTH CENTERS

AREA 39 CANCHIS

Total No. of Hospitals 1
 Total No. of Health Centers 3

	HOSPITALS			HEALTH CENTERS		
	W/O			W/O		
	INF.	10-50%	51-100%	INF.	10-50%	51-100%
Sanitary Systems						
Hot and Cold Water						
. faucets	-	1	-	1	1	1
. network	1	-	-	3	-	-
. service	-	-	1	3	-	-
Sewage						
. pipes	-	1	-	1	-	2
. network	-	-	1	2	-	1
Mechanical Systems						
Compressed Oxygen						
. accessories	-	-	1	3	-	-
. network	-	-	1	3	-	-
. service	1	-	-	3	-	-
Steam, petroleum, purge						
. accessories	1	-	-	3	-	-
. network	1	-	-	3	-	-
. service	1	-	-	3	-	-
Electrical Systems						
Lighting & Power						
. board	-	-	1	2	-	1
. network	-	-	1	2	-	1
. service	-	-	1	1	1	1
Communications						
. telephone board	-	-	1	3	-	-
. network	-	-	1	3	-	-
. service	-	-	1	3	-	-

SOURCE: Recursos Fisicos
 Estado de Planta Fisica, Instalaciones y Equipo
 Bolivar, Javier, ANSSA-PERU. Feb. 1986.

TABLE NO. 12D

STATE OF UTILITY SYSTEMS IN HOSPITALS AND HEALTH CENTERS

AREA 41 CUZCO I

Total No. of Hospitals 1
 Total No. of Health Centers 8

	HOSPITALS			HEALTH CENTERS		
	W/D			W/D		
	INF.	10-50%	51-100%	INF.	10-50%	51-100%
Sanitary Systems						
Hot and Cold Water						
. faucets	1	-	-	1	7	-
. network	-	1	-	1	7	-
. service	1	-	-	1	6	1
Sewage						
. pipes	1	-	-	1	7	-
. network	-	1	-	4	4	-
Mechanical Systems						
Compressed Oxygen						
. accessories	-	1	-	8	-	-
. network	-	-	-	6	-	-
. service	1	-	-	8	-	-
Steam, petroleum, purge						
. accessories	-	1	-	8	-	-
. network	-	1	-	8	-	-
. service	1	-	-	8	-	-
Electrical Systems						
Lighting & Power						
. board	-	1	-	3	5	-
. network	1	-	-	2	6	-
. service	1	-	-	2	6	-
Communications						
. telephone board	-	1	-	8	-	-
. network	1	-	-	8	-	-
. service	-	1	1	8	-	-

SOURCE: Recursos Fisicos
 Estado de Planta Fisica, Instalaciones y Equipo
 Bolivar, Javier, ANSSA-PERU, Feb. 1986.

TABLE NO. 12E

STATE OF UTILITY SYSTEMS IN HOSPITALS AND HEALTH CENTERS

AREA 42 CUZCO II

	HOSPITALS			HEALTH CENTERS		
	W/O			W/O		
	INF.	10-50%	51-100%	INF.	10-50%	51-100%
Total No. of Hospitals 1						
Total No. of Health Centers 8						
Sanitary Systems						
Hot and Cold Water						
. faucets	-	1	-	2	6	-
. network	-	1	-	2	7	1
. service	-	-	1	6	4	-
Sewage						
. pipes	-	1	-	2	8	-
. network	-	-	1	5	5	-
Mechanical Systems						
Compressed Oxygen						
. accessories	1	-	-	9	1	-
. network	1	-	-	10	-	-
. service	1	-	-	10	-	-
Steam, petroleum, purge						
. accessories	-	1	-	10	-	-
. network	-	1	-	10	-	-
. service	1	-	-	10	-	-
Electrical Systems						
Lighting & Power						
. board	-	1	-	4	6	-
. network	-	1	-	5	5	-
. service	-	1	-	6	3	1
Communications						
. telephone board	1	-	-	10	-	-
. network	1	-	-	10	-	-
. service	-	1	-	10	-	-

SOURCE: Recursos Fisicos
Estado de Planta Fisica, Instalaciones y Equipo
Bolivar, Javier, ANSSA-PERU. Feb. 1986.

TABLE NO. 12F

STATE OF UTILITY SYSTEMS IN HOSPITALS AND HEALTH CENTERS

AREA 43 LA CONVENCION

Total No. of Hospitals 1
 Total No. of Health Centers 1

	HOSPITALS			HEALTH CENTERS		
	W/O			W/O		
	INF.	10-50%	51-100%	INF.	10-50%	51-100%
Sanitary Systems						
Hot and Cold Water						
. faucets	-	-	1	-	1	-
. network	-	-	1	-	1	-
. service	-	-	1	-	1	-
Sewage						
. pipes	-	1	-	-	1	-
. network	-	-	1	-	1	-
Mechanical Systems						
Compressed Oxygen						
. accessories	-	1	-	1	-	-
. network	1	-	-	1	-	-
. service	1	-	-	1	-	-
Steam, petroleum, purge						
. accessories	1	-	-	1	-	-
. network	1	-	-	1	-	-
. service	1	-	-	1	-	-
Electrical Systems						
Lighting & Power						
. board	-	1	-	1	-	-
. network	-	1	-	1	-	-
. service	-	1	-	1	-	-
Communications						
. telephone board	-	1	-	1	-	-
. network	1	-	-	1	-	-
. service	-	1	-	1	-	-

SOURCE: Recursos Fisicos
 Estado de Planta Fisica, Instalaciones y Equipo
 Bolivar, Javier, ANSSA-PERU, Feb. 1986.

TABLE NO. 126

STATE OF UTILITY SYSTEMS IN HOSPITALS AND HEALTH CENTERS

AREA 44 ABANCAY

Total No. of Hospitals 1
Total No. of Health Centers 5

	HOSPITALS			HEALTH CENTERS		
	W/O			W/O		
	INF.	10-50%	51-100%	INF.	10-50%	51-100%
Sanitary Systems						
Hot and Cold Water						
. faucets	-	1	-	2	3	-
. network	-	1	-	2	1	1
. service	-	1	-	3	2	-
Sewage						
. pipes	-	1	-	1	4	-
. network	-	1	-	1	4	-
Mechanical Systems						
Compressed Oxygen						
. accessories	-	1	-	5	-	-
. network	-	1	-	5	-	-
. service	1	-	-	5	-	-
Steam, petroleum, purge						
. accessories	-	-	1	5	-	-
. network	-	-	1	5	-	-
. service	-	1	-	5	-	-
Electrical Systems						
Lighting & Power						
. board	-	1	-	2	3	-
. network	-	1	-	1	4	-
. service	-	1	-	2	2	1
Communications						
. telephone board	-	1	-	5	-	-
. network	-	1	-	5	-	-
. service	-	1	-	5	-	-

SOURCE: Recursos Fisicos
Estado de Planta Fisica, Instalaciones y Equipo
Bolivar, Javier, ANSSA-PERU. Feb. 1986.

TABLE NO. 12H

STATE OF UTILITY SYSTEMS IN HOSPITALS AND HEALTH CENTERS

AREA 45 ANDAHUAYLAS

Total No. of Hospitals 2
 Total No. of Health Centers 3

	HOSPITALS			HEALTH CENTERS		
	W/O			W/O		
	INF.	10-50%	51-100%	INF.	10-50%	51-100%
Sanitary Systems						
Hot and Cold Water						
. faucets	-	1	1	-	2	1
. network	-	1	1	1	1	1
. service	-	1	1	-	1	2
Sewage						
. pipes	-	1	1	-	3	-
. network	-	1	1	-	3	-
Mechanical Systems						
Compressed Oxygen						
. accessories	-	2	-	3	-	-
. network	-	2	-	3	-	-
. service	-	2	-	3	-	-
Steam, petroleum, purge						
. accessories	-	2	-	3	-	-
. network	-	2	-	3	-	-
. service	-	2	-	3	-	-
Electrical Systems						
Lighting & Power						
. board	-	1	1	-	3	-
. network	-	1	1	-	3	-
. service	-	1	1	-	2	1
Communications						
. telephone board	-	1	1	3	-	-
. network	-	1	1	3	-	-
. service	-	1	1	3	-	-

SOURCE: Recursos Fisicos
 Estado de Planta Fisica, Instalaciones y Equipo
 Bolivar, Javier, ANSSA-PERU. Feb. 1986.

TABLE NO. 13

STATE OF PHYSICAL PLANT OF HEALTH POSTS BY HOSPITAL AREA

		WALLS	ROOFS	FLOORS
<u>REGION III - CAJAMARCA</u>				
07 Chota	Good Condition	1	1	1
	Partially Damaged	3	2	2
	Damaged	15	16	16
08 Cajamarca	Good Condition	8	7	7
	Partially Damaged	24	23	22
	Damaged	14	16	17
<u>REGION XI - CUZCO</u>				
39 Canchis	Good Condition	3	3	3
	Partially Damaged	25	25	24
	Damaged	2	2	3
41 Cuzco I	Good Condition	9	10	4
	Partially Damaged	20	20	23
	Damaged	3	2	5
41 Cuzco II	Good Condition	26	26	5
	Partially Damaged	8	8	28
	Damaged	4	4	5
43 La Convencion	Good Condition	4	4	4
	Partially Damaged	18	19	19
	Damaged	7	7	7
44 Abancay	Good Condition	11	10	8
	Partially Damaged	18	19	19
	Damaged	2	2	4
45 Andahuaylas	Good Condition	12	2	2
	Partially Damaged	3	13	13
	Damaged	1	1	1

SOURCE: Recursos Fisicos
Estado de Planta Fisica, Instalaciones y Equipo,
Bolivar, Javier, ANSSA-PERU. Feb. 1986

TABLE NO. 14A

PERCENTUAL SUMMARY ABOUT OTHER ASPECTS RELATED TO PHYSICAL INFRASTRUCTURE OF HEALTH POSTS

Health Region and Hospital Area	Access By						Communications			
	Water	Electricity	Air	Land	River	Mule	Telephone	Radio	Postal	Telegraph
III Cajamarca	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Have	24.7	3.7	0.0	72.9	0.0	72.5	10.2	1.1	33.7	19.1
- Do Not Have	75.3	96.3	98.9	27.1	38.9	27.5	86.0	95.2	63.7	79.9
- No Info	0.0	0.0	1.1	0.0	1.1	0.0	3.7	3.7	2.6	1.1
07 Chota	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Have	21.1	5.3	0.0	63.2	0.0	84.2	5.3	0.0	0.0	31.6
- Do Not Have	78.9	94.7	100.0	36.8	100.0	15.8	89.5	94.7	94.7	68.4
- No Info	0.0	0.0	0.0	0.0	0.0	0.0	5.3	5.3	5.3	0.0
08 Cajamarca	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Have	28.3	2.2	0.0	82.6	0.0	60.9	15.2	2.2	67.4	6.5
- Do Not Have	71.7	97.8	97.8	17.4	97.8	39.1	82.6	95.7	32.6	91.3
- No Info	0.0	0.0	2.2	0.0	2.2	0.0	2.2	2.2	0.0	2.2

H.P. of the Cajamarca Region

Chota Hosp. Area : 19
 Cajamarca Hosp. Area : 46
 Total Region : 65

SOURCE: Recursos Fisicos
 Estado de Planta Fisica, Instalaciones y Equipo,
 Bolivar, Javier, ANSSA-PERU, Feb. 1986

TABLE 14B

PERCENTUAL SUMMARY ABOUT OTHER ASPECTS RELATED TO PHYSICAL INFRASTRUCTURE OF HEALTH POSTS

Health Region and Hospital Areas	Water	Electricity	Access Ways				Communications			
			Air	Land	River	Mule	Telephone	Radio	Postal	Telegraph
XI Cuzco	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Has	57.8	31.8	0.5	97.8	0.0	26.4	4.7	13.3	45.1	34.6
- Does Not Have	40.1	66.0	96.3	2.2	96.9	70.5	89.8	83.9	50.1	63.2
- No Info	2.1	2.2	3.1	0.0	3.1	3.1	5.4	2.7	4.9	2.2
39 Canchis	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Has	66.7	6.7	0.0	100.0	0.0	0.0	0.0	3.3	70.0	46.7
- Does Not Have	33.3	93.3	100.0	0.0	100.0	100.0	100.0	93.3	30.0	53.3
- No Info	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
41 Cuzco1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Has	62.5	46.9	0.0	100.0	0.0	0.0	0.0	3.1	59.4	6.3
- Does Not Have	31.3	50.0	93.8	0.0	93.8	93.8	100.0	96.9	40.6	93.8
- No Info	6.3	3.1	6.3	0.0	6.3	6.3	0.0	0.0	0.0	0.0
42 Cuzco2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Has	78.9	39.5	0.0	100.0	0.0	5.3	0.0	2.6	13.2	2.6
- Does Not Have	21.1	60.5	100.0	0.0	100.0	94.7	100.0	97.4	86.8	97.4
- No Info	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43 LaCon.yLar.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Has	20.7	3.4	0.0	100.0	0.0	0.0	0.0	0.0	27.6	0.0
- Does Not Have	79.3	93.1	100.0	0.0	100.0	100.0	96.6	96.6	69.0	96.6
- No Info	0.0	3.4	0.0	0.0	0.0	0.0	3.4	3.4	3.4	3.4

44 Abancay	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Has	67.7	19.4	3.2	87.1	0.0	96.8	9.7	71.0	6.5	71.0
- Does Not Have	25.8	74.2	96.8	12.9	100.0	3.2	61.3	19.4	67.7	19.4
- No Info	6.5	6.5	0.0	0.0	0.0	0.0	29.0	9.7	25.8	9.7
45 Andahuaylas	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Has	50.0	75.0	0.0	100.0	0.0	56.3	18.8	0.0	93.8	81.3
- Does Not Have	50.0	25.0	87.5	0.0	87.5	31.3	81.3	100.0	6.3	18.8
- No Info	0.0	0.0	12.5	0.0	12.5	12.5	0.0	0.0	0.0	0.0

H.P. of the Cuzco Region
 Canchis Hosp. Area : 30
 Cuzco1 Hosp. Area : 32
 Cuzco2 Hosp. Area : 38
 La Convenc & Lares Hosp. Area : 29
 Abancay Hosp. Area : 31
 Andahuaylas Hosp. Area : 16
 Total Region : 176

SOURCE: Recursos Fisicos
 Estado de Planta Fisica, Instalaciones y Equipo,
 Bolivar, Javier, ANSSA-PERU. Feb. 1986

TABLE NO. 15

PERCENTUAL SUMMARY OF MEDICAL EQUIPMENT FOR HEALTH POSTS

Health Region and Hospital Area	Total	First-Aid		Medical Instrument %			Refriger- ation	Bed or Equivalent %	Table %	Cabinet %
		Medicine Box %	Sterilization	Minor Surgery	Scale					
III Cajamarca	65	67	3	84	4	97	84	78	69	42
07 Chota	19	-	10	52	15	95	84	68	31	5
08 Cajamarca	46	95	-	97	-	97	84	82	84	56
XI Cuzco	176	96	65	92	80	92	30	53	92	89
39 Canchis	30	93	66	93	93	76	53	83	96	90
41 Cuzco 1	32	96	69	97	81	94	22	3	100	91
42 Cuzco 2	38	100	76	100	92	100	21	18	97	100
43 La Convencion y Lares	29	96	59	90	97	97	20	62	66	69
44 Abancay	31	90	74	74	26	87	16	94	97	87
46 Andahuaylas	16	100	31	100	100	100	75	93	100	100

SOURCE: Recursos Fisicos
Estado de Planta Fisica, Instalaciones y Equipo
Bolivar, Javier, ANSSA-PERU, Feb. 1986

TABLE NO. 16

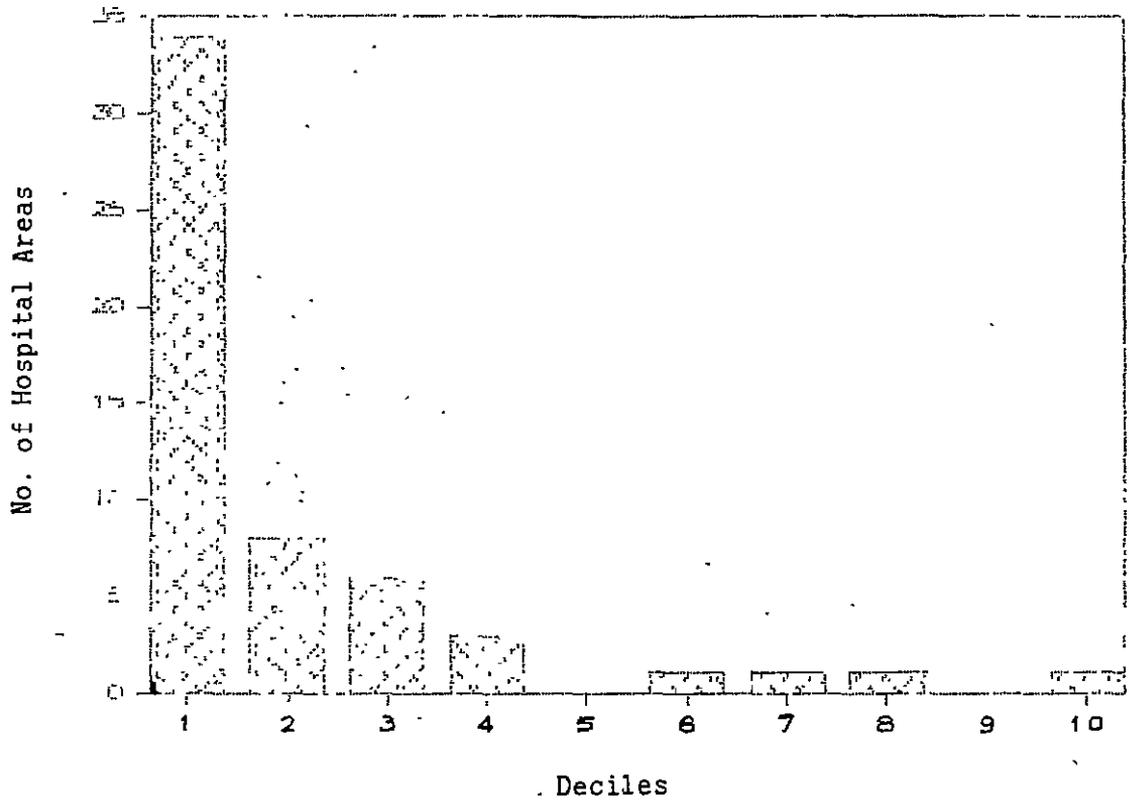
MINIMUM REQUIRED EQUIPMENT FOR HEALTH POSTS BY HOSPITAL AREA

		Sterili- zation	Examin- ation	Surgery	Infants Scale	Refri- geration
<u>REGION III - CAJAMARCA</u>						
07 Chota	Yes	46	44	46	42	40
	No	-	2	-	4	6
	W/O Inf.	-	-	-	-	-
08 Cajamarca	Yes	2	10	3	18	16
	No	17	9	15	1	3
	W/O Inf.	-	-	-	-	-
<u>REGION XI - CUZCO</u>						
39 Canchis	Yes	20	27	26	23	16
	No	8	5	-	-	12
	W/O Inf.	-	-	-	-	-
41 Cuzco I	Yes	22	31	26	31	8
	No	9	-	2	-	24
	W/O Inf.	1	1	4	1	-
42 Cuzco II	Yes	29	38	35	38	11
	No	9	-	3	-	27
	W/O Inf.	-	-	-	-	-
43 La Convencion	Yes	17	27	29	29	6
	No	11	2	-	-	23
	W/O Inf.	1	-	-	-	-
44 Abancay	Yes	29	40	24	43	18
	No	18	7	23	4	29
	W/O Inf.	-	-	-	-	-
45 Andahuaylas	Yes	6	16	16	16	12
	No	10	-	-	-	4
	W/O Inf.	-	-	-	-	-

SOURCE: Recursos Fisicos
Estado de Planta Fisica, Instalaciones y Equipo,
Bolivar, Javier, ANSSA-PERU. Feb. 1986

GRAPH 1

HEALTH CENTERS / POPULATION DENSITY
Frequency Distribution



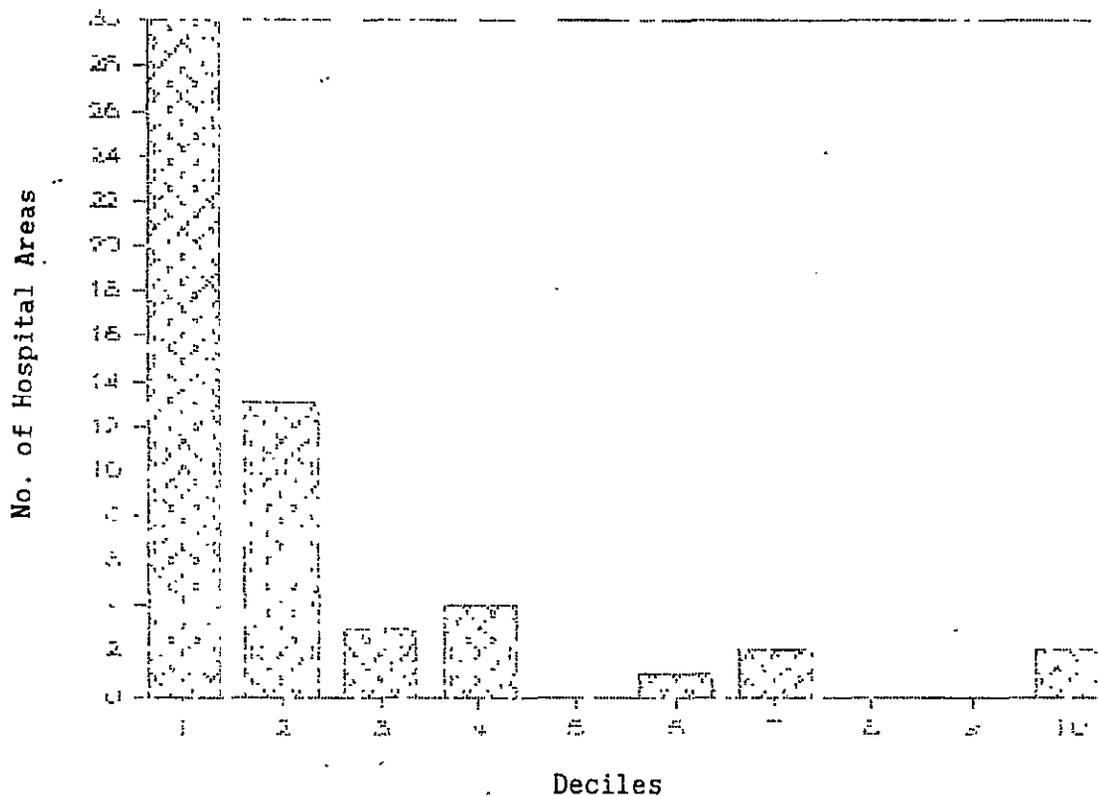
FREQUENCY DISTRIBUTION FOR THE INDICATOR
HEALTH CENTERS/POP. DENSITY
(HC/Pop./km²)

DECILES	RANK	FREQUENCY
1	0.00 - 0.65	34
2	0.66 - 1.30	8
3	1.31 - 1.95	6
4	1.96 - 2.60	3
5	2.61 - 3.25	0
6	3.26 - 3.90	1
7	3.91 - 4.55	1
8	4.56 - 5.20	1
9	5.21 - 5.85	0
10	5.86 - 6.50	1
		55

SOURCE: TABLE No. 4

GRAPH 2

HEALTH POSTS / POPULATION DENSITY
Frequency Distribution



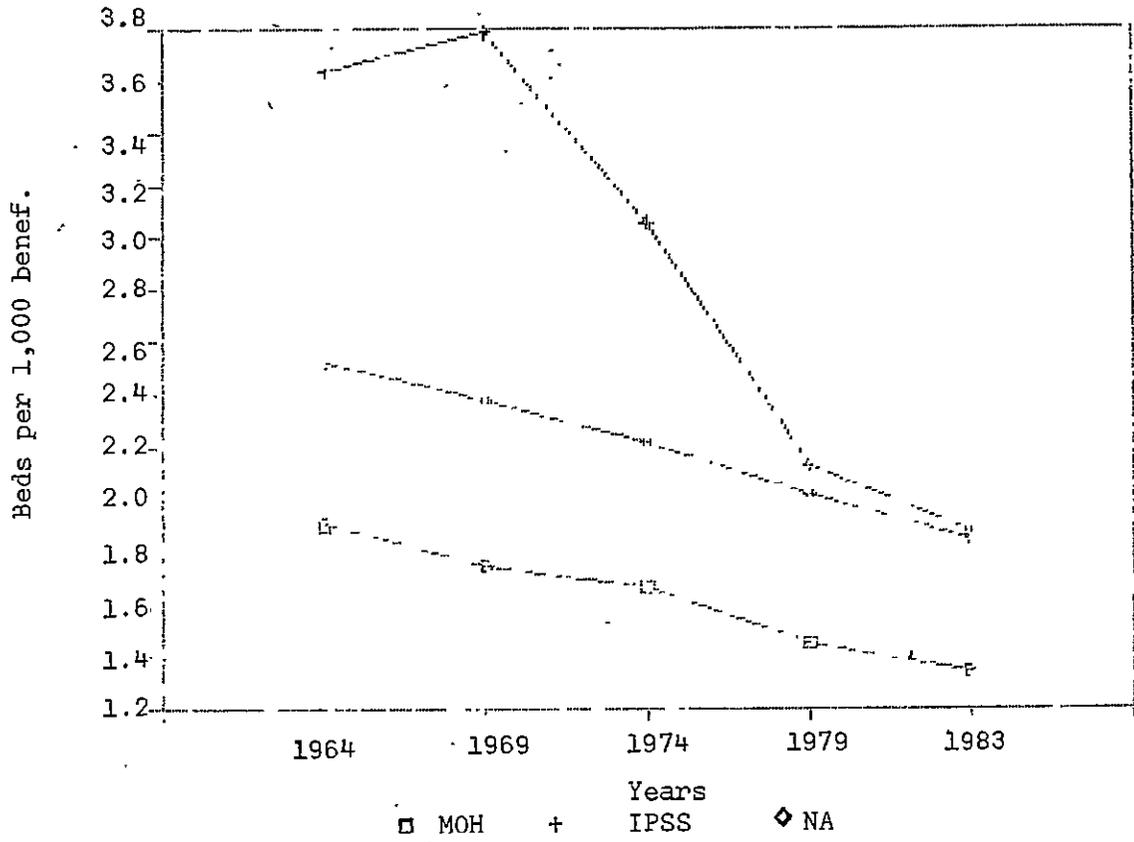
FREQUENCY DISTRIBUTION FOR THE INDICATOR
HEALTH POSTS / POP. DENSITY
(HP/Pop./km²)

DECILES	RANK	FRECUENCY
1	0.00 - 1.90	30
2	1.91 - 3.80	13
3	3.81 - 5.70	3
4	5.71 - 7.60	4
5	7.61 - 9.50	0
6	9.51 - 11.40	1
7	11.41 - 13.3	2
8	13.31 - 15.2	0
9	15.21 - 17.1	0
10	17.11 - 19.0	2
		55

SOURCE: TABLE No. 4

GRAPH 3

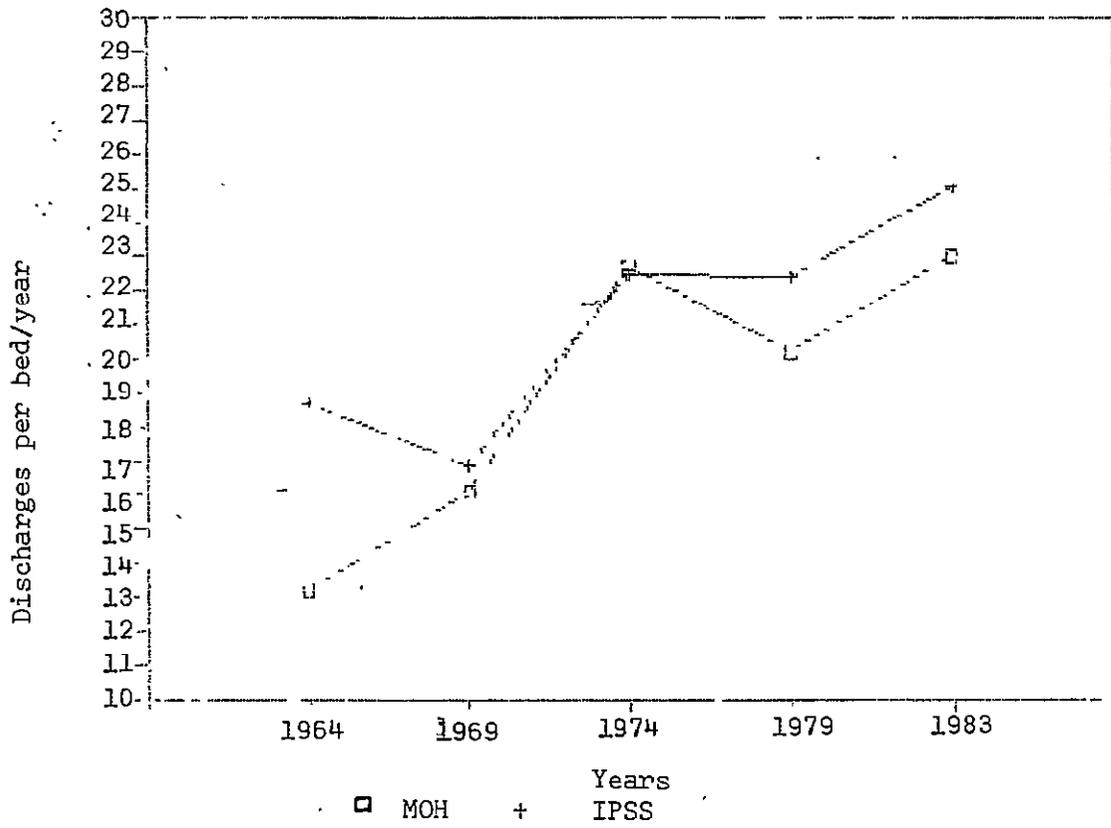
BEDS PER 1,000 BENEFICIARIES
1964 - 1983



SOURCE: Table No. 10

GRAPH 4

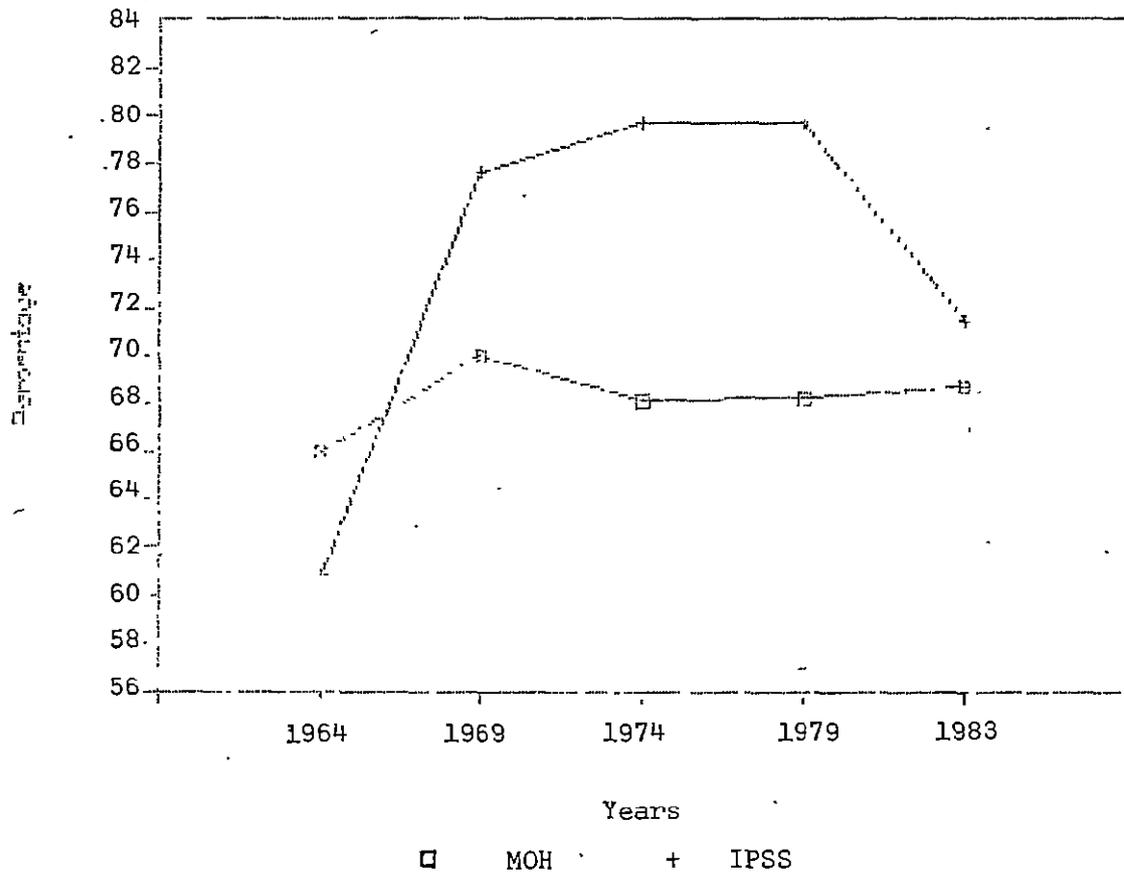
DISCHARGES PER BED / YEAR
1964 - 1983



SOURCE: Table No. 10

GRAPH 5

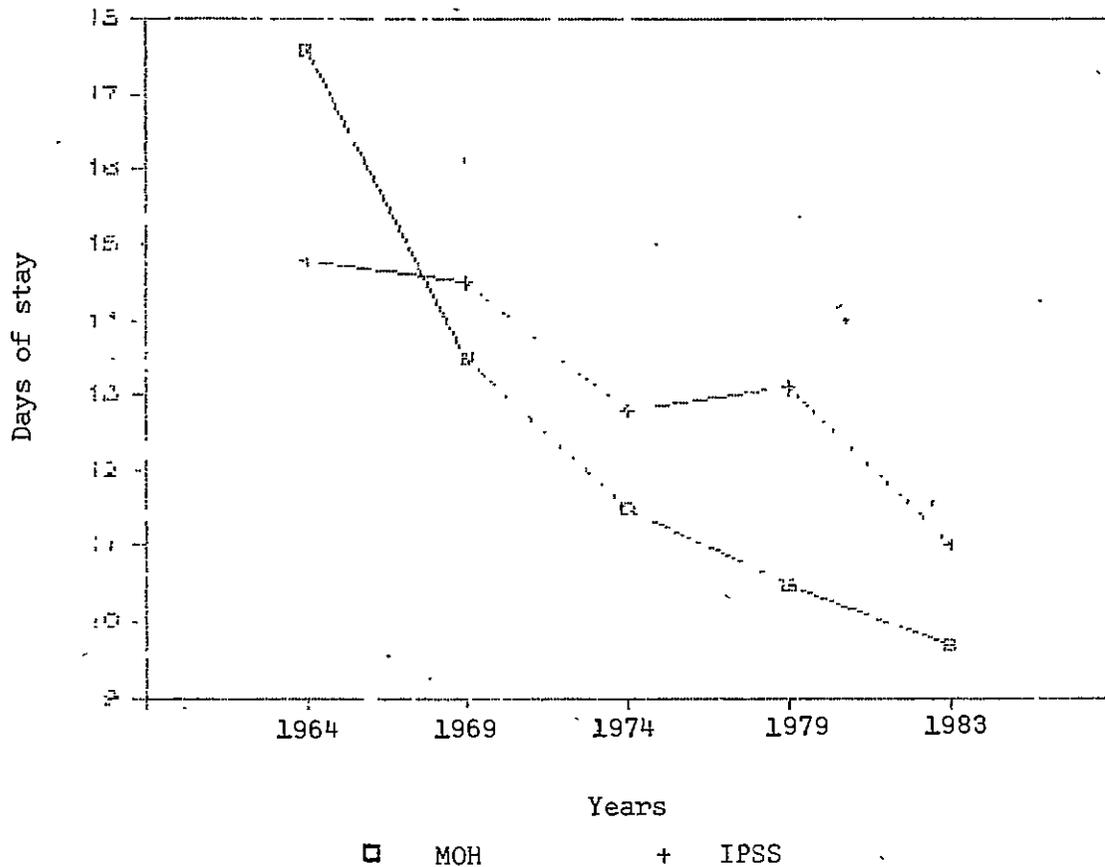
OCCUPANCY OF BEDS
1964 - 1983



SOURCE: Table No. 10

GRAPH 6

AVERAGE DAYS OF HOSPITAL STAY
1964 - 1983



SOURCE: Table No. 10

HSA-PERU REPORTS

Health Sector Analysis of Peru:
Summary and Recommendations
Dieter K. Zschock

Health Status of the Peruvian Population
Luis Carlos Gomez

The Demand for Health Care in Peru:
Lima and the Urban Sierra, 1984
Paul Gertler
Luis Locay
Warren Sanderson

Health and Community Participation in Peru
Judith R. Davidson

Health Care Facilities in Peru
Ethel R. Carrillo

Medical Doctors in Peru
Luis Locay

Pharmaceuticals in Peru
Gary Gereffi

Coverage and Costs of Medical Care
Under Social Security in Peru
Carmelo Mesa-Lago

Health Care Financing in Peru
Dieter K. Zschock