3) Water Supply

Water supply facilities generally include those for: A. water supply, B. hot water supply, C. drainage, D. air conditioning and ventilation, E. kitchen, F. laundry, G. medical gas and LPG, H. incineration and I. fire protection. Machines and apparatuses such as air conditioning units, kitchen appliances, and washing machines which are not included in medical appliances are included under this item.

Of the above, the water supply and the drainage which must be considered in relation with regional infrastructure are described below in reference to the present situations of Regions I and II.

(1) Water supply

Now in the Philippines, the Local Water Works Utility ADM (LWUA) and Bureau of Public Works (BPW) promote the Public Water Works Development Project, but it cannot be said that the project has produced effective results, so far. Most of main local cities have public water service facilities (operated by each local public entity, LWUA or BPW), but few have sufficient capacity. Therefore, only a few of the inhabitants share in the benefit of water service, and a large majority use wells, springs, rivers, etc. According to the data of Department of Health, inhabitants who owned sanitary water supply facilities in 1975 accounted for 53% in Region I, and this means that about a half of inhabitants cannot use water with a sense of safety.

Sources of public water are mainly springs, with deep wells also used. This Study was made at the end of dry season, and the rivers flowing abundantly even in such season are little used, probably because dam construction is expensive and because there will be incessant troubles with inhabitants. The use of springs seems inevitably to be accompanied by suffering from a shortage of water in the dry season.

Of the project hospitals in Regions I and II, only five hospitals are supplied water from public water service facilities, but no hospitals are supplied sufficient quantities of water. There are also several cases in which a city with public waterworks cannot supply water to a hospital since the hospital is located at the verge of the city. We discussed these matters with the persons in charge of the respective public waterworks as far as possible, and found that only

Baguio has an improvement project based on their own budget, and that the others do not have any prospects for the execution of improvement.

Hospitals with no water supplied from waterworks obtain water from wells dug in their sites or introduce water from springs in the neighborhood. When such supply is not sufficient, a few hospitals obtain water by car transportation. Needless to say, few hospitals secure sufficient quantities of water. Furthermore, some hospitals suffer from shortage of water because pumps cannot be operated due to insufficient electric capacity, irrespective of the availability of water reserve.

As mentioned above, few hospitals have the capability to satisfy their water requirements sufficiently, and not only medical functions but also general everyday activities are greatly restricted. The insufficient recognition of hygiene due to the shortage of water is shown by the fact that there is no custom of hand-washing after going to the toilet, and that the toilets are filthy since sufficient washing water cannot be secured in any toilets.

(2) Drainage

In the project districts only Baguio has public sewage facilities. Even there, the construction of sewage treatment facilities is suspended, and untreated sewage is now discharged into rivers. According to the data of Department of Health, about a half of inhabitants are exposed to sanitary danger due to drainage. As for the treatment methods of sanitary toilet facilities, septic tanks are mostly used, and the overflow is discharged into creeks, paddy fields, etc. In the regions where the land is inundated in the rainy season, such a situation is very dangerous.

4) Transport

Roads, Ports and Airports

The Philippino-Japanese Friendship Road which runs lengthwise through Regions I and II constitutes the arterial highway of the network of roads in the northern part of the Luzon. Other roads are not necessarily well developed with the exception of those in the Pangasinan area. Particularly, the mountain range which lies in the middle of the Luzon is a great barrier to the construction of roads, forcing traffic to take the route of Baguio to Lagawa by way of Bontoc. The roads running along the seacoast in Regions II are also considerably less developed. (See the main road map and the

length of roads per 1,000 ha.)

There are many cases in which roads in mountain Province, Ifugao, Kalinga-Apayao and other mountain areas are disrupted by landslides and those in Cagayan and Abra by floods in the rainy season. At times, those roads are disrupted over long periods in the rainy season.

Many ports are developed along the northern and western coasts of the Luzon. There are several ports in Batanes Province, but those along the eastern coast of the Luzon are least developed.

Airports are availabe parctically in every province but none in mountain provinces. The main traversing route for the Luzon runs from Manila to Batanes by way of La Union and Laoag.

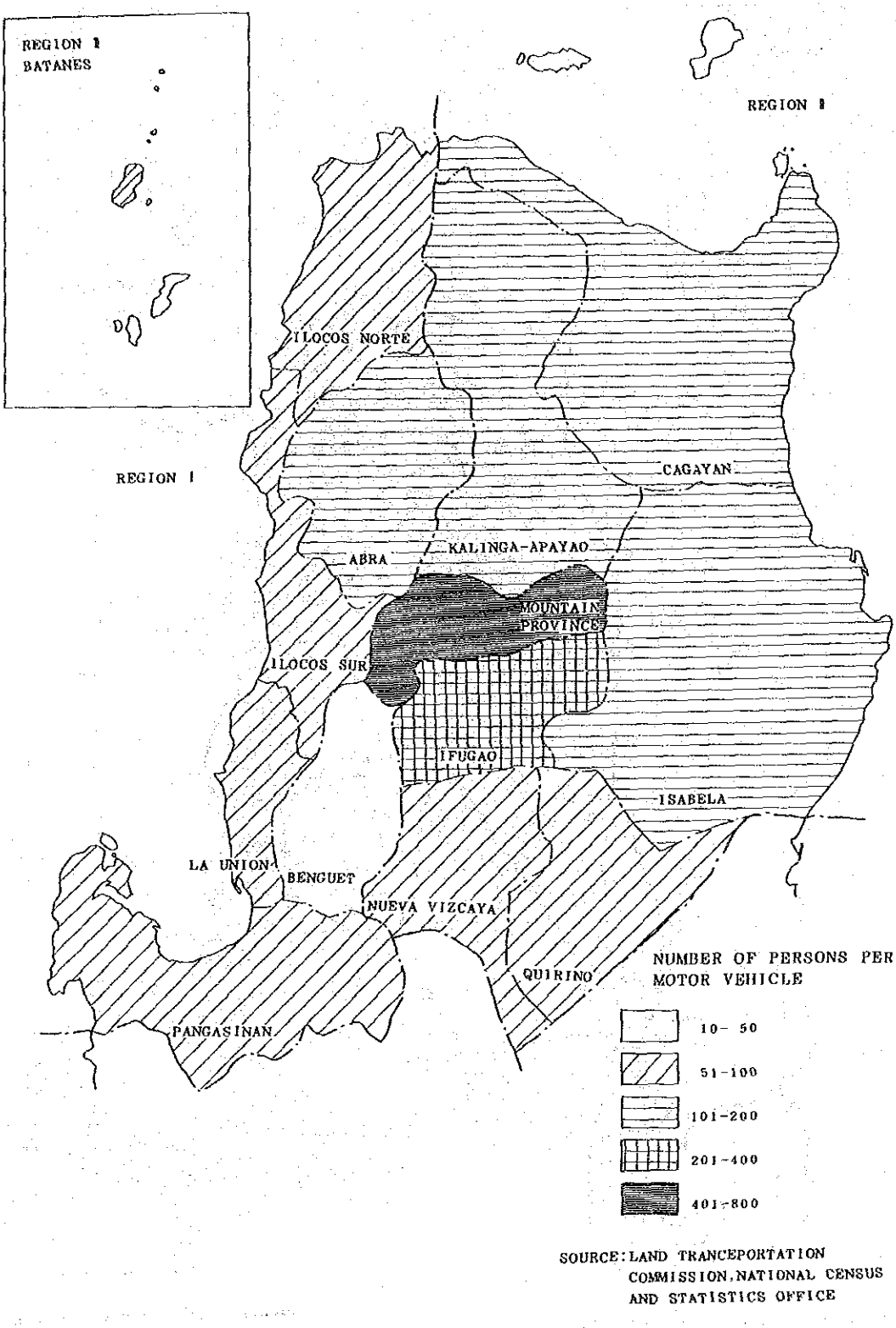
Public Transport

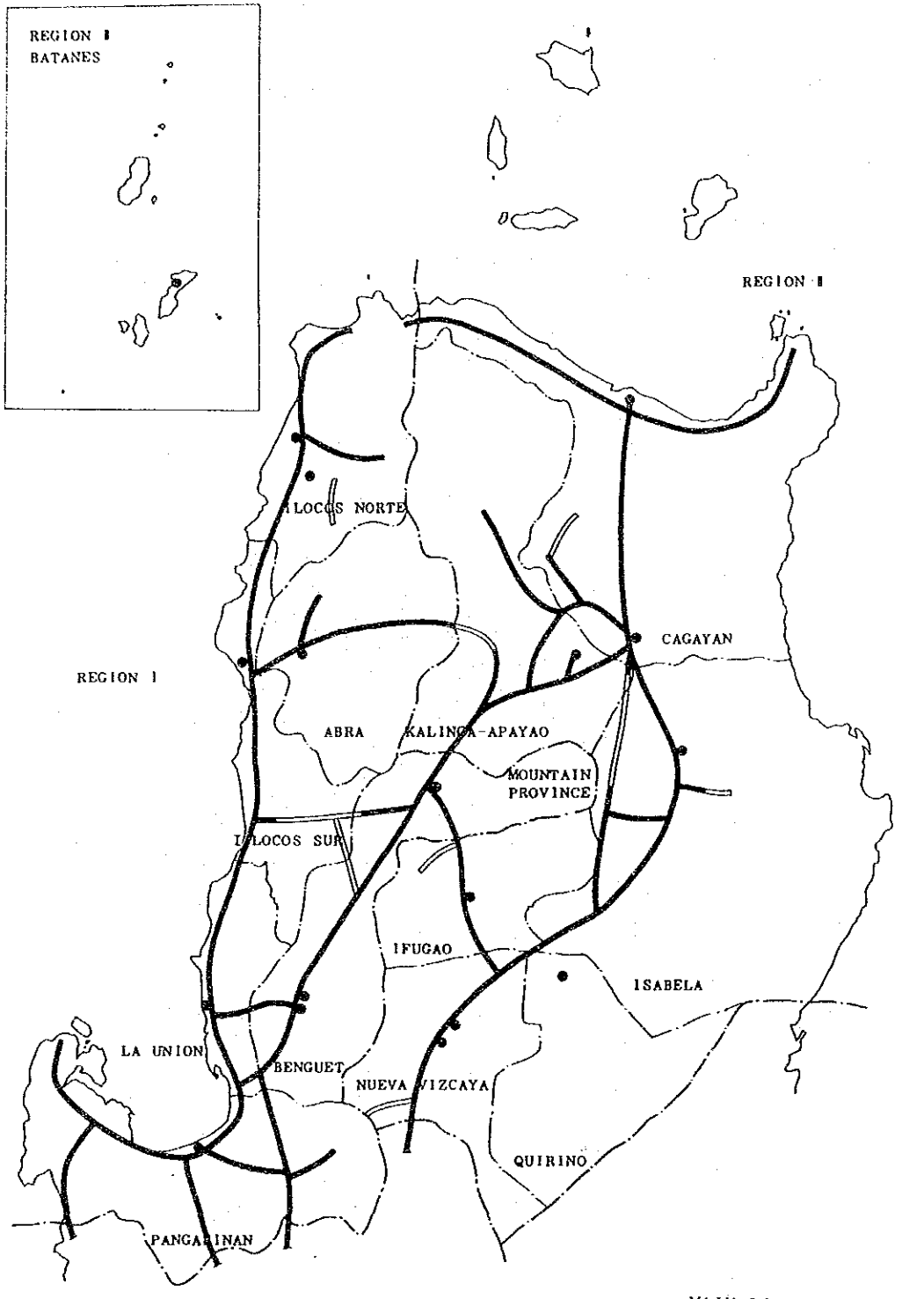
The principal means of transport on the land are tricycles and Jeepneys, and they are available even in small rural communities. Route bus and railway services, which are means of mass transport, are little developed. Tricycles are the means of transport which is most frequently used for hospital visits.

In Batanes Province, ships and aircraft are important means of transport. Motorboats are used for the transport of patients to and from offshore islands. Serious patients are air-lifted to Laoag, Manila and other places. But the disruption of transport by inclement weather -- particularly by typhoons -- pose grave questions.

Emergency Aid and Caravan Activities

As the road conditions are extremely poor with the exception of the Philippino-Japanese Friendship Road, it is quite difficult to deliver emergency care and circuit medical care. In some cases, station wagons are used for ambulances, but jeep-turn-ambulances seem more realistic. At present, the development of communication networks is conducted in few cases with the exception of those in big cities. The transport of emergency cases to hospitals is more dependent or private vehicles than on ambulances.


REGION II
BATANES
REGION II
REGION I
ILOCOS NORTE
CAGAYAN
ABRA
KALINGA-APAYAO
MOUNTAIN PROVINCE
ILOCOS SUR
IFUGAO
ISABELA
LA UNION
BENGUET
NUEVA VIZCAYA
QUIRINO
PANGASINAN
NUMBER OF PERSONS PER MOTOR VEHICLE
10- 50
51-100
101-200
201-400
401-800
SOURCE: LAND TRANCEPORTATION COMMISSION, NATIONAL CENSUS AND STATISTICS OFFICE

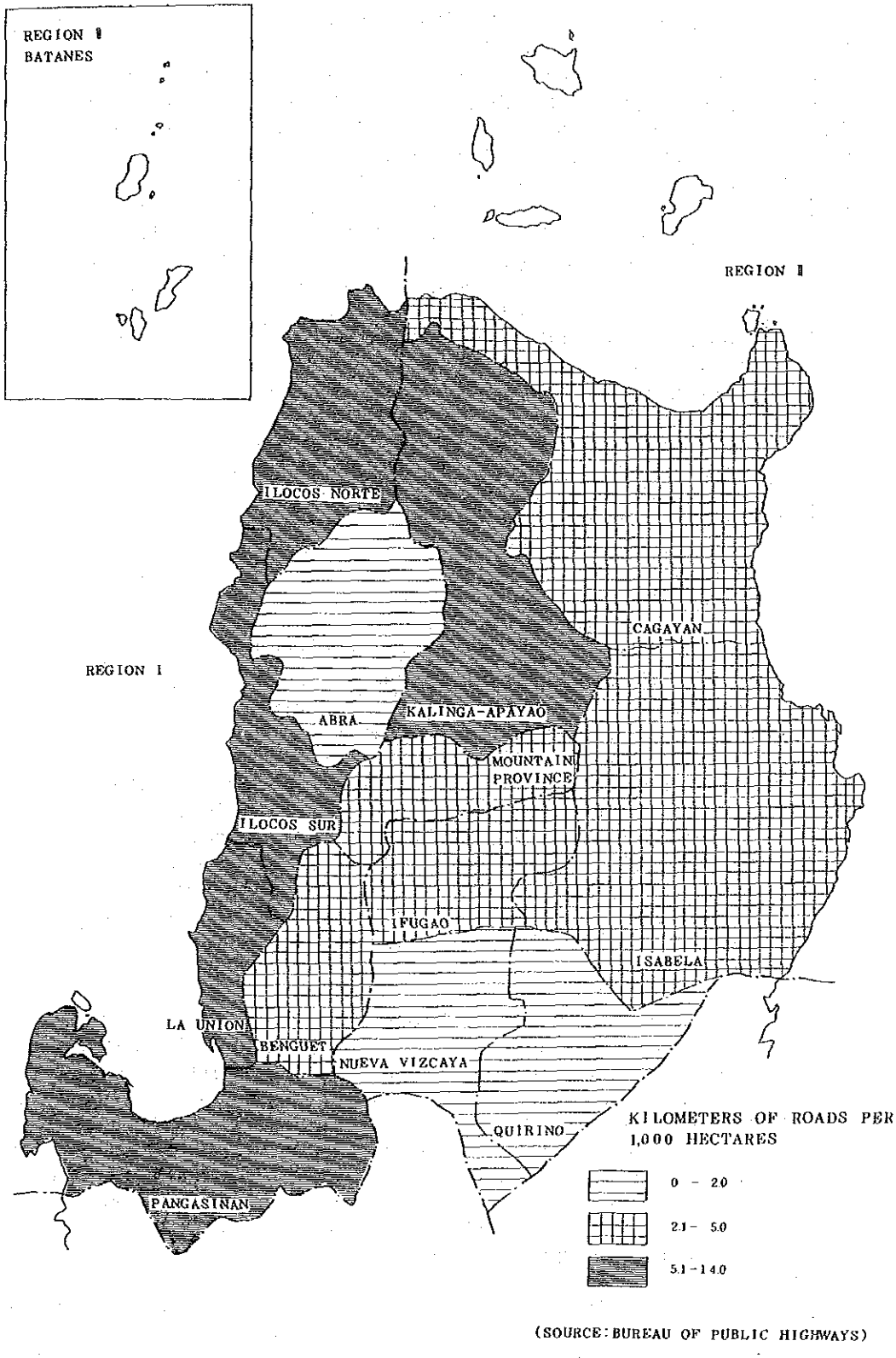


MAIN ROAD MAP

FIRST CLASS NATIONAL ROAD

SECOND " " "

(SOURCE: BUREAU OF PUBLIC HIGHWAYS)



(SOURCE: BUREAU OF PUBLIC HIGHWAYS)

5. Present Conditions of Medical Equipment

The results of recently conducted field survey indicate that many of current medical equipment have been used beyond their operating life. In addition, it is found that present functions available from the medical equipment are insufficient due to the shortage of servicing workers of hospital and insufficient spare parts supplied by equipment suppliers probably because the medical equipment was given as aid by UNICEF and WHO and Japan. And inadequacy of power source for medical equipment and of facilities for water supply and others is a common problem of all the hospitals.

Due to the actual conditions described above, it is required to add a large number of new medical equipment and to establish a training system on the use of the equipment in the present upgrading scheme. At the same time, it will be required to improve the power source, water source and other facilities to select maintenance personnel for each hospital, and to establish a new maintenance system containing maintenance touring services by central authorities.

1) Wards

In regard to the present condition of the wards, it is common to all hospitals that these wards have not good conditions as living space for patients requiring medical treatment. For instance, most of existing beds and mattresses should be quickly replaced as a top priority measure. The reason is that many of them have sizes unsuited to the body dimensions of Orientals and some suitable beds are low quality products so that doctors and nurses are presently having tremendous difficulties in giving help and treatment to the patients, resulting in a considerable amount of time and labor spent in their work due to such inconvenience. In addition, most of them have been used for too long and are not sanitary, so that they should be replaced with new products of suitable sizes.

In addition to the bed replacement, interior finish surfaces should be repainted and existing wall coverings should be replaced with new ones. These will be helpful for obtaining a much better living environment. Since investment for such remodeling is much lower than that required for new construction, such remodeling should be taken into full consideration as priority must be given to functional improvements when effectively assigning the proposed budget.

2) Equipment for the Nurse Department

Main nursing equipment used in wards such as dressing carts, medication carts, chart file carts, wheel stretchers and instrument carriages should be replaced with new ones

having uniform dimensions suited to the body dimensions of Orientals. Particularly for the wards where new structures will not be constructed this time, presently there is not sufficient space for corridors and wards, so that the shapes and dimensions, and also quality and endurance must be fully taken into consideration in determining the equipment specifications for the purposes of improving the overall work efficiency of the medical services, and the equipment should be procured based upon these specifications.

3) Improving Accuracy in Examination

Except for some hospitals having unusual circumstances, medical equipment presently being used in most of hospital are generally simple X-ray equipment and clinical testing equipment for general examination. The shortage of M.E. equipment (probably because activities of maintenance department have not been fully available) such as ECG, EEG, EMG, supersonic examination equipment, etc. basically required in the hospitals for performing clinical health-care was conspicuous in many hospitals. General type examination equipment such as photoelectric photometers, centrifugues, microscopes, thermostatic ovens, dry heat sterilizers, incubators, etc. required for examining specimens are presently being used but they are fairly old and are being used beyond their operating lives. According to information about the types of diseases the machines are used for presented by hospitals during the recent field survey, they are basically common to all hospitals. This means that new basic examination equipment with qualities and types superior to existing ones should be obtained, if possible, equally for all hospitals, since these public community hospitals being considered should be up-graded for achieving their functions. Then, more specialized equipment should be installed depending upon the particular conditions (for example, presence of resident specialists or resident technical specialists, presence of unusual diseases requiring special equipment, etc.) of each hospital.

4) Surgery Department

Except for special hospitals (such as Pangasinan Provincial Hospital and Medical Center) surveyed recently, each hospital performs few operations. According to comments made by hospital officials, all hospitals do abdominal and chest operations but, due to a shortage of medical equipment and supplies, shortage of medical facilities and supplies required for medical care after operation, and shortage of specialists, actual surgeries being conducted in these hospitals are mainly mending operations for external injuries.

Each public hospital being considered this time for upgrading has important functions as a central core in the community, and some hospitals have no competitive private hospital in the vicinity while the others have competitors with inferior ability. This indicates that the functions of the existing surgery department and after-care department must be improved as basic requirements for improved services while not considering, for the time being, the deployment of required doctors and specilized nurses (Priority should be given to the basic facilities such as those related to absolutely necessary tests before surgery, those related to the sterilization of tools needed for surgery, those related to care and prevention of infection after surgery, etc.) Thus aside from basic surgical instruments such as forcepts others should be supplied upon demand by specialists when they are actually assigned, since these tools are considered to be fundamental items for the general surgery.

5) Obstetrics Department

Delivery is usually made at home in most cases in the relevant regions but each hospital studied this time indicated a considerable amount of deliveries handled within the hospital. Officials of hospitals commented that mainly abnormal deliveries are made in the hospital and these facts suggest that upgrading of this department is very important in view of character of public health and medical services in the step of hospital development from now on. The same thing can be also said for the family planning department associated with delivery, since frequent pregnancy is generally very dominant in this country probably because of influence of religion deeply rooted in daily life of citizens. Thus, it is required to have realistic consideration for the equipment useful for preventing infection such as tetanus infection, facilities for giving medical care for premature babies and the equipment for preventing infection of the neonates. When these equipment and facilities are provided, a lower neonatal death rate and better care for the mothers during delivery can be highly expected.

6) Central Medical Supplies Department

Present conditions of autoclaves for sterilizing medical supplies such as bandages are that their capacities are all too small compared to generally used standards for processing capacity determined on a basis of the number of beds in use, in all cases of hospitals.

In addition, even the sterile effects are quetionable since the operation of autoclaves is inadequate and they

have no indicators for assuring the sterile effects. It is a very serious problem to use such equipment by which satisfactory sterilization cannot be expected, since the sterilization is fundamental to all medical activities. They should be upgraded by providing equipment having such indicators.

Therefore, the central medical supply department should be considered as an important area requiring special attention in the hospital development project. However, in upgrading this department, the problem of securing an energy source for the equipment will almost inevitably rise. At the present time, only two different types are being used; those using gas and those using electric. However, much electric equipment is not being used because of malfunction that cannot be corrected due to the lack of spare parts and because of an insufficient electric power supply. Since larger capacity must be planned for the future, use of gas type equipment seems to be more appropriate than steam type in view of various factors such as initial cost, maintenance cost and so forth.

In addition, this department performs washing and cleaning operations, so that necessary water must be secured. For this reason, upgrading of water storage facilities, piping sizes, water lifting facilities, and drain pipes must be also considered, together with the electrical and mechanical equipment of each building.

7) Food Serving Department

Supplying foods to patients is an important part of health care. The results of field survey show that storage spaces and equipment for foods, food materials, cooking tools and tableware are insufficient in number and that sinks for preparing foods are not separated from the sinks for washing the soiled dishes in all hospitals surveyed.

The lists of items shown in the Standard Plan given by the Philippines indicate satisfactory conditions, except for insufficient sterilizing equipment for the tableware.

However, upgrading of this department must cover not only the tableware and equipment, but also the mechanical and electrical equipment in the building; and measures for preventing the entry of insects and rats are also important in view of sanitation. In addition, a very serious problem may occur in this department where cleanliness is vitally important, if a system for disposing garbage, and water drainage are not completly provided. Due consideration is required for these when upgrading this department.

There is also an energy problem for this department. For all public hospitals surveyed this time, it might be said that providing basic piping with adquate sizes and basic electrical wiring with adequate capacity is vitally important and, if this is ignored, upgrading of public hospital will create serious problems not only today but also in future.

8) Laundry Service Department

In the laundry service department, mechanization should be made as this is common practice in recent years. There is no problem as far as securing of workers is concerned but, in view of the recent energy problem including the inadequte water supplies, it is very desirable to perform all work of this department at certain predetermined time on certain work days for efficiency. Occasionally this may need additional workers despite mechanization, but this is inevitable to save the energy, at least for the time being, since the supply of energy needed for all hospitals is assumed to be limited for a while. Therefore, it is indispensable to effectively use energy by limiting hours of usage by the laundry equipment. For upgrading this department, highly efficient equipment should be employed and manpower should be used in such a manner that the objective of energy conservation can be achieved.

6. Present Condition of Hospital Operating Expenses

Looking at the operating expenses for the project hospitals in 1977, it may be seen that almost all of the operating revenue received was government assistance funding, with the total revenue paid by the patients for their health care being roughly 10%. Another 4-5% was received from provincial, city and town municipalities, but as the financial condition of these regional municipalities wavers in the extreme, some hospitals are receiving no such funding.

Or the out-going side, the operating expenditures and paid primarily for personnel and materials, with the expenditures in those two categories coming to 80-90% of the total. The above is gist of the study's findings on this subject.

As the contents will become indicators for calculating the administration and operating costs in proceeding with this project, details on operating income and costs are given in greater detail.

1) Operating Income

The aggregate income and its breakdown is shown in following Table (Blank columns signify that information was unable to be obtained). There are great differences in the aggregate income depending on each hospital's rank, scale and location. Aparri Emergency Hospital, with 25 authorized beds, has the lowest income. On the northern coast of Region II, it is a rank lower than a provincial hospital. On the other hand, Baguio Medical Center, which has the top income is in Baguio, a city worthy of being called the Second Capital of the Philippines. With the highest rank of the government hospitals, it is also of a large scale having 300 authorized beds and has an income of over 10 million pesos which is 38 times Aparri's 280 thousand pesos. These are examples of the extremes on both ends, but even with other examples substantial differences in income may be found -- 100 bed class provincial hospitals vary from 1 to 2 million pesos, and Pangasinan, Cagayan, Don Mariano Marcos and other 200 bed facilities vary from 4 to 5 million pesos. This is not just a simple matter of differences in the number of beds, as the hospitals ranking rises and its diagnosis and treatment functions qualitatively improve government funds to offset this burden increase.

Approximately 10% of this income, as mentioned earlier, is derived from income from the patients, with the remainder provided by the national government and regional municipalities. There are hospitals, like the Baguio Medical Center, which earns income from its nursing school, but the provincial hospitals with training facilities of this type are still very few. The income from patients is low because, according to the Hospital Finance Act (RA 1939), 90% or more (later it was

amended to 70%) of the beds provided by government hospitals are charity beds, the income from inpatients is limited and outpatients may receive free examinations. Thus to fill the gap, the government and regional municipalities grant funds to the tune of 11 to 23 thousand pesos per bed/yr. allocated to 100 bed class hospitals and 14 to 19 thousand pesos per bed/yr. for 200 bed class hospitals from the national government, and from 300 to 1,500 pesos and 1,000 to 2,400 pesos, respectively, from the regional municipalities -- an amount less than 10% of the national government funding in the case of some hospitals -- although some hospitals such as Bantoc and Batanes receive no help from these municipalities. Given the present financial situation in which the larger part of the income is derived from outside funding, the major management issue at the hospitals has come to be that of properly using the budget rather than that of striving to get operating funds through income derived from health care like in the case of Japanese public hospitals.

2) Operating costs

Table in the Comprehensive Report gives the operating costs for each hospital in 1977 (Only Batanes figures are derived from the field survey). The ratio of the expenditures for personnel and material is overwhelminghly high, followed by medical equipment and facilities maintenance.

The yearly per capita personnel expenses per bed ranged from 4,336 to 9,279 pesos in fiscal year 1977. Looking only at the wages the highest sum is less than 7,800 pesos/bed which lessons this difference. The average personnel expenses per bed was 6,591 pesos with the average amount going toward wages being 6,041 pesos and the average compensation, welfare benifits and other expenses coming to 550 pesos. Further as seen in Table , comparing the basic wages, the actually paid out personnel expanses and wages compensation, welfare and other benefits, the personnel expenses add on an average of 16% and the actual wages paid out another 7% to the basic wages. The actual wages are 7% higher than the basic wages because of the payment for overtime and the like. Also, compensation, welfare benefits and other expenses are on the average 9% of the basic wage.

The average percentage of the operating costs accuring to personnel expenses is 40.2% although at Major Marcos, Don Mariano Marcos and Quirino hospitals it is in the 16-20% range, which is far lower.

The material expenses on the other hand, take up an average of 47.8% of the operating costs, a figure twice that for personnel expenses.

The present material expenses per bed is on the average of 8,681 pesos a year, but Baguio, Major Marcos Veteran and Don

Mariano Marcos are high at 18,000 - 22,000 pesos/bed. On the other hand, Abra, Aparri, Kalinga Apayao and Bontoc are low at 3,000 - 4,000 pesos/bed. Other hospitals are within the 5,000 - 8,000 pesos/bed limit.

Next, as long as new medical equipment is not bought and installed, the M.E. expenses remain in the 3 - 5% range. Further, in respect to building and other facilities maintenance expenses, restricting ourselves to the hospitals in the Table, the outlay comes to 0.02 - 7.4% of the Total operating costs, varying tremendously in response to the differences in building age and size.

3) Fees

All charity patients can receive health care services free of charge. Thus, the following applies only to those patients who are capable of paying.

(1) Basic fees for outpatients

Physical check-ups of outpatients are conducted free of charge. The fee for drugs varies depending upon the content of the drug, but when administered by the hospital the charge is 10-30 pesos per time. The examination fee (laboratory test) also is 5-30 pesos per time. And, the X-ray examination is 20-35 pesos, paid separately.

(2) The basic patient admissions fee

The fee for hospitalization is 18 pesos per day for individuals using a regular, shared room and, usually, 24-30 pesos per day for a private room. The charge for meals is 4 pesos per day, and the drug and examination fees about the same as for out-patients. The minimum expenditure for a one day hospitalization is 18 pesos for the room, 4 pesos for the meals, and 10 pesos for medicine, or a total of 32 pesos/day.

(3) Surgery fees

The fee for surgery varies widely depending on the type, but looking at the charge list, major surgery is 500 persos and up, medium surgery 250-400 pesos and minor surgery 50-200 pesos. In addition to the basic surgery fee, the anesthesia fee runs from 50 to 100 pesos and the operating room fee from 25 to 75 pesos. Further, the basic fees for normal childbirth is 80 pesos added to which is a fee for the use of the delivery room.

Table I. Hospital Revenue and Revenue Breakdown (1977)

(in Pesos)

		Pangasinan (P-265B)	Bontoc (P-100B)	Baguio (M-249B)	Benguet (P-119B)	La Union (P-150B)	Abra (P-110B)	Gabriela Silang (P-88B)	Don Mariano Marcos (P-100B)	Ilocos Norte (P-163B)	Cagayan (R-200B)	Kalinga-Apayao (P-100B)	Aparri (E-32B)	Isabela (P-100B)	Quirino (P-73B)	Ifugao (P-75B)	Maj. Marcos Veteran (R-115B)	Nueva Vizcaya (P-56B)	Batanes (P-75B)
Breakdown	(1) Revenue	5,148,257	1,220,947	10,703,141	1,298,804		1,298,114	1,630,087	4,608,297	2,688,274	4,477,592		280,300		2,210,919	1,402,289		677,829	1,175,266
	(a) Pay-patient	764,440	114,969	1,053,569	74,804		167,000	312,000	536,721	325,995	442,346		47,623		202,487	115,992		164,999	68,266
	Outpatient	195,769			18,342			10,000	146,511		53,082		4,902		26,990			9,032	
	Inpatient	568,671			56,462			302,000	390,210		389,264		42,721		175,497			155,967	
	(b) Subsidies Received	4,383,822	1,105,978	9,031,164	1,224,000		1,131,114	1,318,087	3,227,785	2,362,279	4,035,246		232,677		2,008,432	1,286,297		512,830	1,107,000
	City, Municipality & Province Subsidies	486,007		1,050,315	154,000		50,000	118,087	189,707	34,866	226,346		12,429		34,142	8,000		15,000	
	National Aid			7,660,849															
	The General Fund Subsidies	3,897,815	1,105,978	300,000	1,070,000		1,081,114	1,200,000	2,827,078	2,327,413	3,808,900		210,248		1,974,290	1,278,297		497,830	1,107,000
	Others								211,000				DOH 10,000						
	(c) Others			Nursing school 618,408					843,791										
Breakdown Composition by Percent	(1) Revenue	100.00	100.00	100.00	100.00		100.00	100.00	100.00		100.00		100.00		100.00	100.00		100.00	100.00
	(a) Pay-patient	14.85	9.42	9.84	5.76		12.87	19.14	11.65	12.1	9.88		16.99		9.16	8.27		24.34	5.81
	Outpatient	3.80			1.41			0.61	3.18		1.19		1.75		1.22			1.33	
	Inpatient	11.05			4.35			18.53	8.47		8.69		15.24		7.94			23.01	
	(b) Subsidies Received	85.15	90.58	84.38	94.24		87.13	80.86	70.04	87.9	90.12		83.01		90.84	91.73		75.66	94.19
	City, Municipality & Province Subsidies	9.44	0	9.82	11.86		3.85	7.24	4.11	1.3	5.06		4.43		1.54	0.57		2.21	0
	National Aid			71.76															
	The General Fund Subsidies	75.71	90.58	2.80	82.38		83.28	73.62	61.35	86.6	85.06		75.01		89.30	91.16		73.45	94.19
	Others								4.58				3.57						
	(c) Others			5.78					18.31										

Table II. Hospital Revenues (Revenue per bed in fiscal 1977)

(in Pesos)

		Pangasinan (P-265B)	Bontoc (P-100B)	Baguio (M-249B)	Benguet (P-119B)	La Union (P-150B)	Abra (P-110B)	Gabriela Silang (P-88B)	Don Mariano Marcos (P-100B)	Ilocos Norte (P-163B)	Cagayan (R-200B)	Kalinga-Apayao (P-100B)	Aparri (E-32B)	Isabela (P-100B)	Quirino (P-73B)	Ifugao (P-75B)	Maj.Marcos Veteran (R-115B)	Nueva Vizcaya (P-56B)	Batanes (P-75B)
Current Revenue per Bed	(1) Revenue	19,427	12,209	42,985	10,914		11,801	18,524	46,083	16,492	22,388		8,759		30,287	18,697		12,104	15,670
	(a) Pay-patient	2,885	1,149	4,231	629		1,518	3,546	5,367	2,000	2,212		1,488		2,774	1,546		2,946	910
	Outpatient	739			154			114	1,465		266		153		370			161	
	Inpatient	2,146			475			3,432	3,902		1,946		1,335		2,404			2,785	
	(b) Subsidies Received	16,543	11,060	36,270	10,286		10,283	14,978	32,278	14,492	20,176		7,271		27,513	17,151		9,158	14,760
	City, Municipality & Province Subsidies	1,834		4,218	1,294		455	1,342	1,897	214	1,132		388		468	107		268	
	National Aid			30,847															
	The General Fund Subsidies	14,709	11,060	1,205	8,992		9,828	13,636	28,271	14,278	19,044		6,570		27,045	17,044		8,890	14,760
	Others								2,110				313						
	(c) Others			2,484					8,438										
Revenue per Authorized Bed	(1) Revenue	25,741	12,209	35,677	12,988		12,981	16,301	23,041	26,883	22,388		11,212		22,109	18,697		13,557	15,670
	(a) Pay-patient	3,822	1,149	3,512	748		1,670	3,120	2,683	3,260	2,212		1,905		2,025	1,546		3,300	910
	Outpatient																		
	Inpatient																		
	(b) Subsidies Received	21,919	11,060	30,104	12,240		11,311	13,181	16,139	23,623	20,176		9,307		20,084	17,151		10,257	14,760
	City, Municipality & Province Subsidies	2,430		3,501	1,540		500	1,181	949	349	1,132		497		341	107		300	
	National Aid			25,603															
	The General Fund Subsidies	19,489	11,060	1,000	10,700		10,811	12,000	14,135	23,274	19,044		8,410		19,743	17,044		9,957	14,700
	Others								1,055				400						
	(c) Others			2,061					4,219										

Table III. Revenues of Studied Project Hospitals (Fiscal 1977)

(in Pesos)

	Region I									Region II								
	Pangasinan (P-265B)	Bontoc (P-100B)	Baguio (M-249B)	Benguet (P-119B)	La Union (P-150B)	Abra (P-110B)	Gabriela Silang (P-88B)	Don Mariano Marcos (P-100B)	Ilocos Norte (P-163B)	Cagayan (R-200B)	Kalinga-Apayao (P-100B)	Aparri (E-32B)	Isabela (P-100B)	Quirino (P-73B)	Ifugao (P-75B)	Maj. Marcos Veteran (R-115B)	Nueva Vizcaya (P-56B)	Batanes (P-75B)
Budget appropriations	4,112,155	1,125,050	10,633,559	1,377,114		1,326,475	1,430,824	3,179,275	1,799,184		1,306,354	284,909	2,131,652	1,455,104	1,317,579	3,540,300	677,415	
Expenditures	3,806,516	1,220,947	10,139,033	1,570,857	1,927,689	1,197,025	1,289,824	2,931,919	1,871,136		946,944	287,520	2,131,652	1,359,765	1,183,993	3,332,589	673,575	1,000,492
01 Personnel	1,716,625	624,102	3,060,385	635,483	715,510	651,520	703,964	804,702	847,311		538,562	136,933	889,498	366,636	438,875	539,583	313,274	303,699
Salaries and Wages	1,441,808	574,102	2,821,329	531,156	715,510	620,813	649,528	742,949	789,182		504,608	130,911	819,498	340,447	404,579	497,709	287,282	268,699
Fixed Expenditure	94,148	50,000	239,056	104,327		30,707	54,436	61,753	58,129		33,954	6,022	70,000	26,189	34,296	41,874	25,992	35,000
Other	180,669																	
02 Maintenance and Other Operating Expenses	1,989,801	476,845	6,075,328	820,166	1,212,179	485,059	534,960	1,996,678	951,873		408,382	130,604	1,170,154	953,636	707,394	2,793,006	360,301	621,793
Traveling Expenses	20,105	37,022	70,129	28,895	28,980	16,317	13,405	45,151	25,413		25,587	14,263		24,426	25,055	46,214	9,167	
Communication Services	32,581	2,850	23,905	2,911	5,585	1,090	401	12,962	2,517		1,947	591		422	243	759	131	
Rep. & Maint. of National gov't. Facilities	98,131	8,571		66,324	142,874	70,261	3,110	12,962				322		1,269	15,180	760		18,522
Transportation Services	12,605	777	6,333		10,116	3,183	200					1,235		737	5,995	1,497	475	
Other Services	99,055	23,773	450,952	52,036	97,847	51,157	145,555	59,195	69,433		11,529	7,492		28,457	11,407	287,549	11,934	73,421
Supplies & Materials	1,737,324	403,852	5,524,009	665,050	926,777	340,051	372,289	1,868,597	854,510		369,317	106,701		898,325	646,094	2,445,377	312,993	529,850
Rent, Grants, Subsidies, & Contributions				4,950		3,000		3,850							3,420	10,850	25,601	
03 Equipment Outlays	100,000	120,000	486,570	115,208		60,446	50,900	130,539	71,952			10,000	72,000	39,494	37,725			
20 Capital Outlays			516,760									9,983						25,000

Table IV. Composition of Studied Project Hospitals' Revenue (Fiscal 1977) by Percent

	Region I									Regon II								
	Pangasinan (P-265B)	Bontoc (P-100B)	Baguio (M-249B)	Benguet (P-119B)	La Union (P-150B)	Abra (P-110B)	Gabriela Silang (P-88B)	Don Mariano Marcos (P-100B)	Ilocos Norte (P-163B)	Cagayan (R-200B)	Kalinga-Apayao (P-100B)	Aparri (E-32B)	Isabela (P-100B)	Quirino (P-73B)	Ifugao (P-75B)	Maj. Marcos Veteran (R-115B)	Nueva Vizcaya (P-56B)	Batanes (P-75B)
Budget Release																		
Expenditures	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
01 Personal Services	45.10	51.12	30.18	40.45	37.12	54.43	54.58	27.45	45.28		56.87	47.62	14.73	26.96	37.07	16.19	46.51	30.35
Salaries and Wages	37.88	47.02	27.83	33.81	37.12	51.86	50.36	25.34	42.18		53.29	45.53	38.44	25.04	34.17	14.93	42.65	26.85
Fixed Expenditure	2.47	4.10	2.35	6.64		2.57	4.22	2.11	3.10		3.58	2.09	3.29	1.93	2.90	1.26	3.86	3.50
Others	4.75																	
02 Maintenance and Other Operating Expenses	52.27	39.05	59.92	52.22	62.88	40.52	41.47	68.10	50.87		43.13	45.43	54.89	70.13	59.75	83.81	53.49	62.15
Traveling Expenses	0.53	3.03	0.69	1.84	1.50	1.36	1.04	1.54	1.36		2.70	4.96		1.80	2.12	1.39	1.36	
Comunication Services	0.86	0.23	0.24	0.19	0.29	0.09	0.03	0.44	0.13		0.21	0.21		0.03	0.02	0.02	0.02	
Rep. & Maint. of National gov't. Facilities	2.58	0.70		4.22	7.41	5.87	0.24	0.44				0.11		0.09	1.28	0.02		1.85
Transportation Services	0.06	0.06	0.06		0.52	0.27	0.02					0.43		0.06	0.51	0.04	0.07	
Other Services	2.60	1.95	4.45	3.31	5.08	4.27	11.28	2.02	3.71		1.22	2.61		2.09	0.96	8.63	1.77	7.34
Supplies & Materials	45.64	33.08	54.48	42.34	48.08	28.41	28.86	63.73	45.67		39.00	37.11		66.06	54.57	73.38	46.47	52.96
Rent, Grants, Subsidies, & Contributions				0.32		0.25		0.13							0.29	0.33	3.80	
03 Equipment Outlays	2.63	9.83	4.80	7.33		5.05	3.95	4.45	3.85			3.48	3.38	2.91	3.18			
20 Capital Outlays			5.10									3.47						

CHAPTER III

PRESENT CONDITION OF EACH PROJECT HOSPITAL

CONTENTS

III-1 PRESENT CONDITION OF MEDICAL SERVICE IN EACH PROJECT HOSPITAL

(I-1) Pangasinan Provincial Hospital

Being situated at the center of the densely populated Pangasinan Province, this hospital plays an extremely important role in the region, and the expected upgrading of this hospital from a provincial hospital to a medical center seems fully justified.

The hospital has an authorized capacity of 200 beds with the actual number of beds provided at 265. Apart from the four major departments of internal medicine, surgery, gynecology and obstetrics, and pediatrics, the hospital offers medical service in radiology, orthopedics, dentistry, EENT, laboratory, ICU, and for tuberculosis, malnutrition and contagious diseases.

The distribution of patients by department does not show any particular dispersion. Compared with the average of Region I, the ratio of internal and pediatric departments is low (41.9%), whereas it is somewhat high in surgical cases. Noteworthy is the fact that the ratio of gynecological and obstetric cases is increasing every year.

The distribution of diseases shows that A-type has gradually decreased to about 50%, whereas C-type, including normal and abnormal births, has increased. The ratio of traffic accidents and other forms of accidents (D-type) is also high. In general, the distribution of diseases seems to be getting out of the contagious disease pattern.

The annual total number of patients has been increasing steadily. Current average duration of hospitalization is 5.3 days (6 days in surgical cases and 3 days in pediatric, internal and gynecological cases) with a bed occupancy percentage of 125.4%. These figures show that the hospital has reached the limit of expansion and that the number of beds will have to be increased drastically. Seasonal change in the number of patients is not so large; it is reported to increase about 5 $\sim$ 10% in the wet season. Charity Patients account for 80% of the total. Though the remaining 20% are Pay Patients, Complete Pay Patients account for about 10%. There are not particularly many vernacular diseases. The nursing unit is 25, attended by two to three nurses.

As for manpower, physicians total 37, including the Director and 23 Residents. The hospital has 67 nurses including the Chief and Assistant Chief Nurses and 22 nursing attendants. As for technicians, there are 3 pharmacists, 1 assistant, 1 dental assistant, 2 radiologists, 3 laboratory technicians, 1 assistant and 1 social worker, totalling 12. In addition, there are 11 in food service, 17

in other services, 8 in maintenance, 2 in transport and 23 in clerical work for a total of 183, averaging 0.69 personnel per bed.

The distribution of beds by department is:

Internal Medicine:	50
Surgical	75
Pediatric	40
Gynecological	40
Malnutrition	10

In addition, there are 15 beds for neonates and 2 ∿ 5 beds for neonates with contagious diseases. ICU has 8 beds. However, of these, 4 beds are complete with equipment but are not in use because no operator is available. As for the remaining 4, only the rooms are complete without equipment.

In the surgical sector, 2 major operating rooms and 1 minor operating room are provided. In addition, there is a simple operating room which is also a treatment room near the emergency entrance. The main operations carried out are appendectomy, exploratory, laparatomy, radical excision and cesarian, and only sterilization is centralized in central supply.

The radiology section is equipped with rather antiquated X-ray cameras (1 for mass X-ray and 2 for general purposes). The laboratory is relatively well equipped among the hospitals covered by the survey. However, testing of urine, stool, blood and bacteria only is carried out, and the equipment needs improvement.

The food service is by a central dietary system, serving only patients. Annually it prepares 104,000 meals of special food. The service wagons include insulated ones.

Washing is manually done and household dryers and irons are used. It is reported that the linen is changed every other day.

Emergency service is actively carried out. However, only one of the two ambulances is in service at present. The other one, which is out of order, cannot be repaired locally. In addition, the hospital has 1 Jeep and 1 service car for a total of 3. Maintenance is carried out by two drivers; but the supply of tools is inadequate.

There are no maintenance staff for medical equipment and repair staff have to be sent for each time from Manila. There is an electric engineer for maintenance.

As for medical history and records, because cards are kept for 25 years current space is insufficient.

The hospital provides training as below.

o Training of student nurses: 400

Practical training provided for 2 regional schools of nursing and 5 provincial colleges.

o Residency training: 16

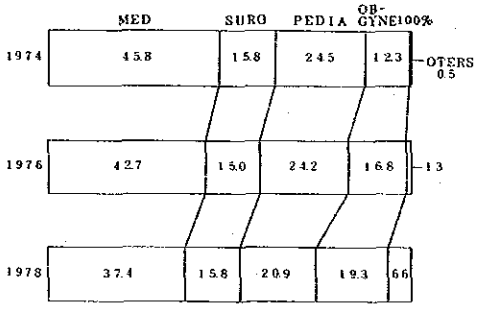
o Training in X-ray: Resident 1
Students 20

o Pathological test technician: Resident 1
Students 59

In addition to the above training, hospital training is provided for about 30 participants, lasting about two weeks each time, four times bi-annually.

PATIENT RATE BY DEPARTMENT OF REGION I

IN PATIENT



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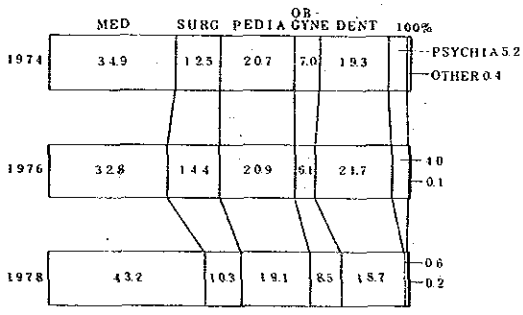
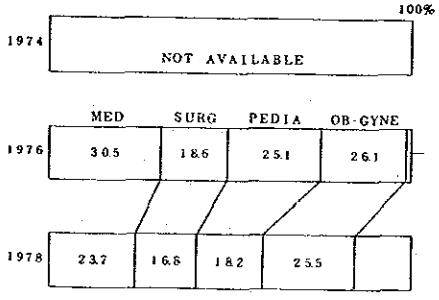


PATIENT RATE BY DEPARTMENT OF PANGASINAN PH

IN PATIENT



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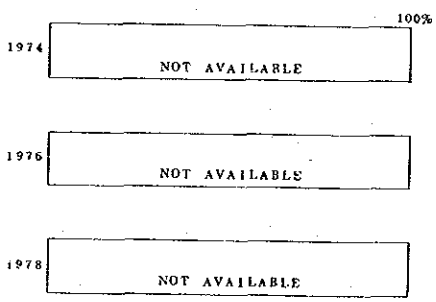
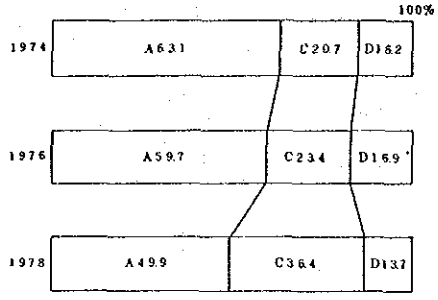


PATIENT RATE BY LEADING DISEASE OF PANGASINAN MC

IN PATIENT



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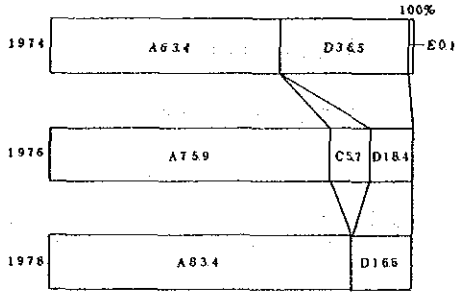


(I-2) Bontoc Provincial Hospital

Being situated in a mountain district, this hospital has the special characteristic of being the center of medical service for minority tribes. As a result, minority people account for a large proportion of the patients. Under the Government policy, they receive free medical service.

The hospital has an authorized bed capacity of 100 which happens to be the actual capacity at present. Though the hospital does not have established departments, it provides medical service in internal, surgical, pediatric, obstetric and gynecological, laboratory and dental departments with each physician is dealing with all cases. In addition, the hospital provides special services such as malnutrition treatment, an under 6 clinic and family planning. Though there are many cases of contagious diseases, no special ward is provided.

As for manpower, the hospital has a total of 19 physicians including the Director and 16 Residents. There are 37 nurses including 14 nursing attendants. On the technical side, there are 1 pharmacist, 1 assistant, 1 dental assistant, 3 laboratory technicians and 1 social worker, totalling 7. Further, there are 6 in food service, 17 in services, 3 in maintenance, 1 in transport and 13 in clerical work. Thus the total manpower is 103, or 1.03 per bed.

The number of patients is showning a tendency to increase both in admissions and in outpatients, and the rate of increase is high compared with that of the population. The hospital receives 87 patients a day on the average, including both admissions and outpatients, though the number was low, at 68, on the day of the survey.

The distribution of diseases shows that there are many cases of bronchitis, URTI and influenza, indicating the tendency peculiar to mountain districts for respiratory diseases to predominate. This is probably due to large fluctuations in temperature during the day and during the year. Another disease worthy of attention is Amibiasis averaging 80 cases a month.

Though it was not possible to ascertain seasonal changes in the number of patients accurately, increases in the number was noticed with the change of season. Increase was also seen in the number of infectious and bronchial diseases in the wet season. It should be added that since the open market draws a large crowd from the mountain district on Monday, Wednesday and Saturday when it is held and the transport conditions are poor, the number of patients both in admission and in outpatient increases markedly on these days.

In general, the distribution of diseases shows a typical case of the predominance by infectious diseases, and the first objective for the time being will be to deal with them.

The short average duration of hospitalization of 3.7 days may be related to the indigence of the minority tribes, though it is also due to the insufficient number of physicians. Further, the percentage bed occupancy of 86.0% seems ideal; but the low standards of the ward may require improvement.

The nursing unit is 25 beds, and there are four nurse stations; but they are attended by only one nurse each.

In the surgical sector, there is only one operating room (but there is an operating/delivery room which has just been completed not yet in use). Caesarian operations form the majority of cases. There are also many cases of laceration which are treated in the presences of a police officer. Sterilization is centralized.

In the laboratory sector, testing of urine, stool and blood is being carried out. Blood test has to be carried out very often because of malaria, and the insufficient capacity of refrigeration was reported.

Cooperation with other hospitals seems to be difficult; complicated cases are transferred to Baguio by ambulance only once in two to three months.

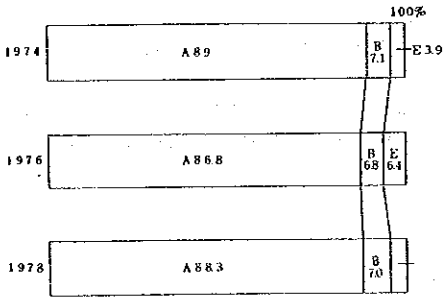
X-ray films and drugs are supplied once a week from Manila and Baguio. However, roads may be blocked by land slide, etc. in the wet season. Then supplies are obtained through other minor roads or from a pharmacy in Bontoc. Minor repair work on X-ray and other medical equipment is sent for from the Regional Office, and major repair work from Manila. However, it often takes more than one month.

The problems in food service are that the site is on a slope and that trays are used for serving as there are no insulated wagons. Washing is also done manually.

Emergency service cannot be carried out satisfactorily due to the bad road conditions and the lack of communication facilities, though the hospital has one ambulance and one pick-up. Repair work is contracted out. There are 200 ∿ 300 emergency patients a year.

PATIENT RATE BY LEADING DISEASE OF BONTOC PH

IN PATIENT



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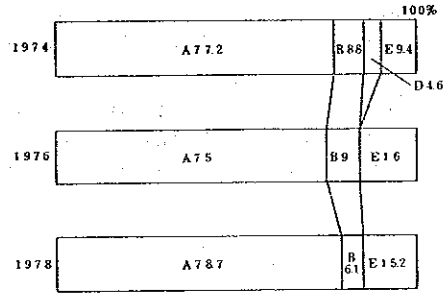


(I-3) Baguio General Hospital and Medical Center

This hospital is the largest in size and has the highest level of medical service among the project hospitals. It has already been established as a Medical Center, playing the role of the central hospital in North Luzon.

The hospital has an authorized bed capacity of 350 with an actual bed capacity of 249. A cancer center, the only one of its kind in the region, is under construction, and the application of Cobalt 60 is being used in some cases. Scintillation and scanning equipment are also provided, though they are not in operation due to the lack of operators.

The radioactive materials being used were purchased in 1975, and will be reach their half-life in 1982. Accordingly, the hospital expressed the wish to purchase the next supply from Japan under the proposed loan. As for the material for scanning, since it is obtainable from the Philippine Atomic Corporation, no request has been made.

The role played by this hospital is shown in the distribution of patients by district. Those from Baguio and Benguet Province account for approximately 60% of the total outpatients of which about half are Igorots, the mountain tribe; and other regions (including Regions I and III) account for the remaining 40%.

With regard to inpatients, those from Baguio and Benguet Province account for 60% of the total; many of them are outpatients turning inpatients. Other inpatients referred from minor hospitals account for 30% of the total. In particular, those advanced cases in surgery and OB-GYNE come from Benguet PH.

Departments available for treatment include general surgery, general internal, pediatric, OB-GYNE, family planning, EENT, radiology, rehabilitation, ICU, CCU, contagious diseases and under 6 clinic.

The hospital is provided with ample manpower. The physicians total 66 including the Director, chief of the medical staff, 20 medical specialists, 1 dental surgeon and 41 resident physicians. The nurses total 153, including the Chief and Assistant Chief Nurses, 100 nurses attendants.

As for medical technicians, there are 5 pharmacists, 1 assistant, 1 dental assistant, 4 radiologists, 7 laboratory technicians, 2 assistants, 1 psychoanalysist and 4 social workers, totalling 25.

There are also 22 for food service, 62 for other services, 16 for maintenance, 1 for transport and 39 for clerical work, totalling 183. Medical manpower per bed is thus 0.73 persons.

In 1978, the number of outpatients was 94,951 while inpatients totalled 12,408. There is a considerable difference between the

wet and dry seasons; the number of outpatients which averages 260 ∿ 270 a day in the dry season, increases to 340 ∿ 350 in the wet season. The bed occupancy ratio also rises from 80 ∿ 85% in the wet season to 100% in the dry season. The number of inpatients has not shown a marked change in the last five years; but the number of outpatients has been increasing steadily, showing the need for additional beds.

As for the distribution of diseases, there are many cases of URTI, gastro-enteritis and thyroid, showing the predominance of infectious diseases. The relatively long duration of hospitalization of 9 days is probably due to the fact that the hospital handles many advanced cases, and this tendency is expected to increase further. On the other hand, the duration of hospitalization in OB is about 3 days at present.

The bed occupancy ratio is 90% at present. The ratio of charity beds at this hospital is extremely low at less than 20%, indicating that the hospital is well off in terms of hospital management among the project hospitals.

Though the nursing unit is 50 beds, they are each attended by 5 nurses and 30 trainees, providing extremely intensified nursing. The surgery, radiology, laboratory and emergency sectors are also considerably well provided. The food service serves about 350 meals a day, preparing also special food, and is provided with insulated wagons.

(I-4) Benguet Provincial Hospital

Being situated at La Trinidad in the outskirts of Baguio, this hospital is especially important for the Igorot patients because of its location on the border between the mountain district and the plain, and because it is at an important center of transport in La Union Province.

The hospital has an authorized bed capacity of 100 with an actual capacity of 119 beds. Apart from the established departments of internal, surgical, pediatric and OB-GYNE, treatment is also given in dental and radiology departments. The distribution of beds by department is 30 for internal, 30 for surgical, 20 for pediatric and 20 for OB-GYNE.

With regard to manpower, the Director is the only medical specialist. There are also 1 dental surgeon and 15 resident physicians for a total of 17. There are 40 nurses including the Chief Nurse, 23 nurses and 17 nursing attendants. There are 8 medical technicians, including 2 pharmacists, 1 assistant, 1 dental assistant, 1 radiology technician, 2 laboratory technicians and 1 assistant. There are 7 for food service, 17 for other services, 4 for maintenance and 14 for clerical work. With the total of 107, the medical manpower per bed is 0.90 persons.

The number of patients has been increasing every year; in 1978, the number of outpatients was 16,282 while that of inpatients was 3,575. The distribution of inpatients by department shows that internal and pediatric departments account for 65 ∿ 70% of the total and OB-GYNE accounts for 25%, which is considerably large. Internal and pediatric departments also account for about 80% of the outpatients. What is worthy of note is the increase in the number of dental patients.

The distribution of diseases shows the predominance of respiratory diseases such as URTI, influenza, bronchopneumonia, bronchitis, etc., underlying the large number of patients from the mountain tribe. "A" type dominates both in- and outpatients, indicating a perfect contagious disease type of distribution.

As for the seasonal change in the number of patients, in the dry season it is about 80% of the wet season.

The average duration of hospitalization is 7.3 days, while it is about 3 days in OB. The average bed occupancy ratio is 92% and is probably much higher in the wet season, as many patients have their beds in the corridor.

The pay ward has only 24 beds at present and the rest are all charity beds. As for major contagious diseases, there are many cases of ambiasis, malaria and gastro-type diseases apart from the above respiratory cases.

The nursing unit seems to be about 50 beds at present; this is probably due to the fact that one unit has to be provided for one block because of the shortage of space.

As for operations, 60 ∿ 80 operations are conducted annually. Caesarian operations are the majority, followed by appendectomy and thyroidectomy. Pectoral and abdominal operations are not performed. The number of deliveries has been increasing considerably every year.

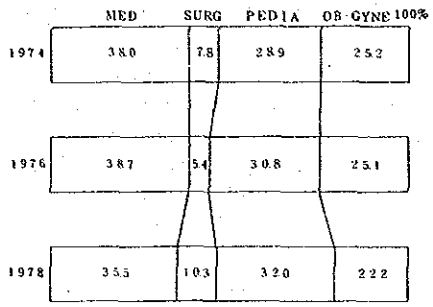
In radiology, there is only one X-ray camera for general purposes, and it cannot be used satisfactorily due to the size of the room. The laboratory carries out chemical testing apart from the normal tests. It is hoped that the laboratory will improve in bacteriological testing.

In ambulantry, the hospital has one ambulance and one antiquated passenger car. The number of emergency patients is relatively large with nearly 7,000 in 1978, showing an active ambulance service. Food service is by the central dietary method; but no insulated wagons are available. Washing is assumed to be done manually.

The hospital provides training for medical technicians only at present, but intends to provide training for nurses in future.

PATIENT RATE BY DEPARTMENT OF BENGUET PH

IN PATIENT



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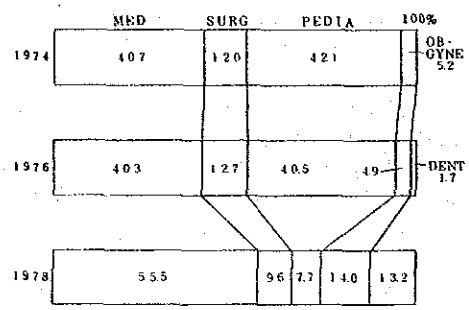
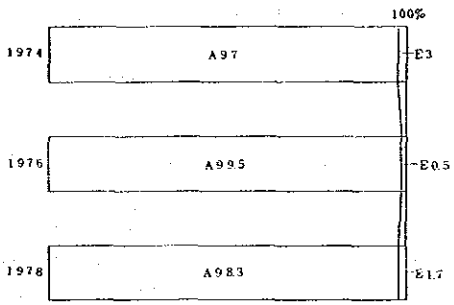


PATIENT RATE BY LEADING DISEASE OF BENGUET PH

IN PATIENT



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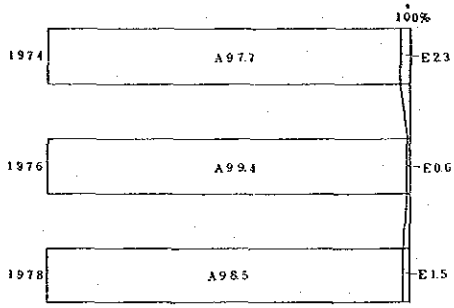


(I-5) La Union Provincial Hospital

San Fernando City, where the hospital is located, has only recently begun to flourish. However, as the project to move all government agencies in Region II to the city to turn it to the center of the Region under the government policy is in progress, the hospital is expected to be upgraded to a regional hospital.

The hospital has an authorized bed capacity of 150 which happens to be the actual capacity. Apart from the established internal, surgical, pediatric and OB-GYNE departments, there are EENT, orthopedic and psychiatric wings which are expected to be upgraded to departments. Medical service is also provided in under 6 clinic, family planning, malnutrition, dentistry and infectious diseases. The hospital is also planning to provide a domiciliary service in future.

The hospital has a total manpower of 145, or 0.97 persons per bed. There are 2 medical specialists including the Director, 1 dental surgeon and 24 resident physicians, totalling 27 for the medical staff. There are 36 nurses including the Chief Nurse, 13 nurses and 23 nursing attendants. As for medical technicians, there are 2 pharmacists, 1 assistant, 1 radiologist, 2 assistants, 1 laboratory technician, 1 assistant and 1 social worker, totalling 9.

There are also 8 for food service, 25 for other services, 8 maintenance, 4 for transport and 28 for clerical work.

As for the number of patients, the annual total number of outpatients in 1977 is assumed to have been about 30,000. The annual total of inpatients was 7,512, and is on the increase, though the rate of increase is not as rapid as that of population. The distribution of patients by department indicates the average trend in the Region I, with internal and pediatric departments accounting for 72 ∿ 73% of the total, though it is decreasing slowly.

The distribution of diseases shows that gastroentritis is the major cause of illness. However, a large number of respiratory cases is also worthy of attention as it indicates that contagious diseases form the keynote of the distribution.

With regard to the seasonal change, the number of admissions increases in the wet season; but the number of outpatients decreases in the wet season and increases in the dry season.

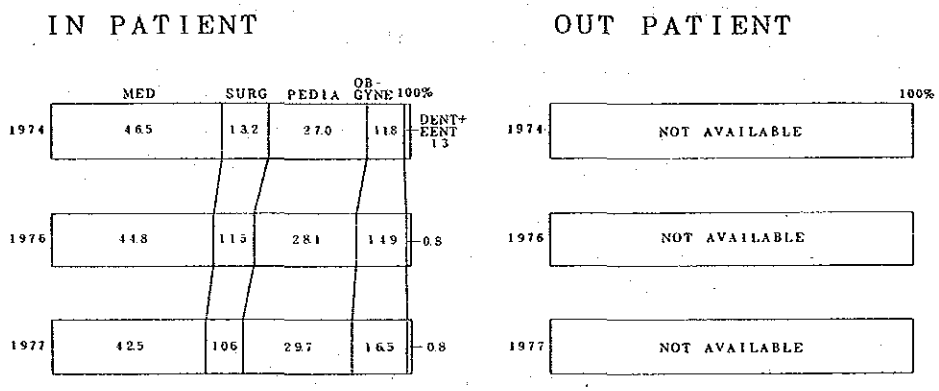
The average duration of hospitalization is 6.1 days and the bed occupancy ratio rises to 106%. In the wet season, the patients of the four major departments sometimes fill the corridor. There are 45 beds in the pay ward, accounting for 30% of the total, and 105 beds in the charity ward, accounting for 70%. The nursing unit is estimated to be about 30 beds.

In surgery, 250 ∿ 300 major operations are performed every year and the number is on the increase. Most of them are Caesarian, appendectomy and exploratory lap. The number of deliveries is about 500 a year. In radiology, apart from general X-ray cholecystography and Barium swallow oreneme.

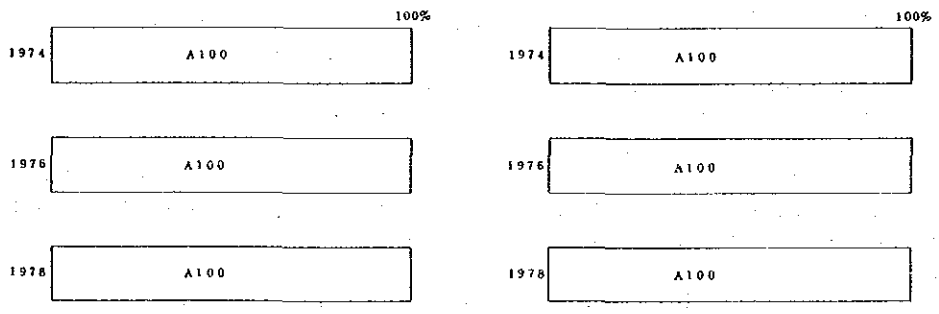
In the laboratory, though normal tests and bacteriological tests are carried out, insufficient provision of equipment is to be noted. The hospital provides an active ambulance service with 3 cars, attending to 10,000 persons a year(1978).

Training is expected to be provided in future for 30 ∿ 40 persons.

PATIENT RATE BY DEPARTMENT OF LA UNION RH



PATIENT RATE BY LEADING DISEASE OF LA UNION RH



(I-6) Abra Provincial Hospital

This hospital is located in the outskirts of Bangued, the provincial capital of Abra Province. Though the hospital has a low utilization rate, it is reported to be due to the lack of understanding about health care services among the minority tribes in the Ilocos region.

The hospital has an authorized bed capacity of 100 with an actual capacity of 110. Medical treatment is given in internal, surgical, pediatric and OB-GYNE. In addition to the four major departments, health care is provided in malnutrition, radiology, laboratory and family planning.

The total manpower of the hospital is 73, or 0.66 persons per bed. The size of the medical staff is extremely small with two medical specialists including the Director, 1 dental surgeon and 1 intern. There are 29 nurses including 16 nurses and 13 nursing attendants. As for medical technicians, there are 2 pharmacists, 1 assistant, 1 dental assistant, 1 radiologist, 1 laboratory technician and 1 assistant, totalling 7. In addition, there are 6 for food service, 15 for other services, 4 for maintenance and 8 for clerical work.

The number of inpatients in 1978 was 2,138 and that of outpatients 11,307. The number of patients had shown a temporary drastic increase in 1975 ∿ 1976.

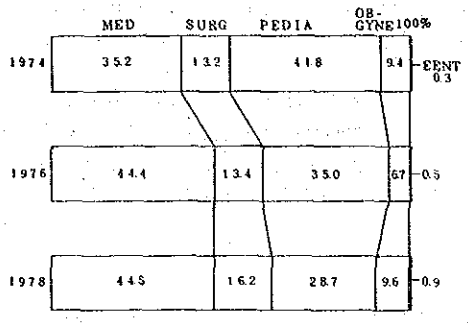
The distribution of patients by department shows that the number of internal cases has increased suddenly, whereas that of pediatric cases is on the decrease. Combining these two, a decrease from 77 to 73% of the total cases is under way. The distribution of patients by disease shows that they are in the main contagious cases such as PTB, gastroenteritis and bronchitis, though there are some belonging to B, C and D types.

The average duration of hospitalization is 7.0 days: 7 days in surgical, 10 ∿ 15 days in internal, 3 ∿ 4 days in OB-GYNE and 10 days in pediatric. The bed occupancy ratio is reported to be around 75%. No seasonal change in the number of patients is reported. The number of operations and the number of deliveries are both relatively small for Region I. Operations are mainly appendectomy, Caesarian and excision mass.

Only normal X-ray examinations are carried out in radiology. In the laboratory, bacteriological tests seem to be in need of improvement. Ambulance service is not active due to the unsatisfactory condition of the ambulance and the insufficient number of physicians. The food service currently prepares meals only for 45 ∿ 60 patients; it is hoped that the service will be extended to the staff in the future.

PATIENT RATE BY DEPARTMENT OF ABRA PH

IN PATIENT



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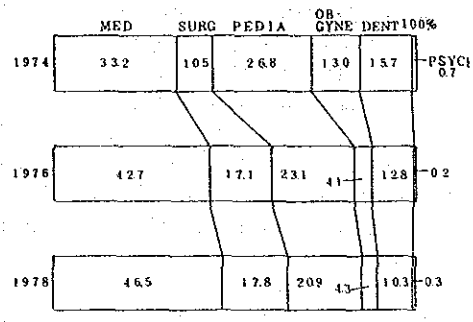
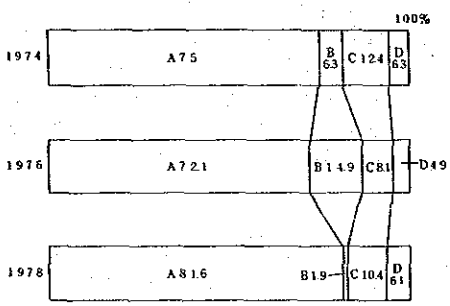


PATIENT RATE BY LEADING DISEASE OF ABRA PH

IN PATIENT



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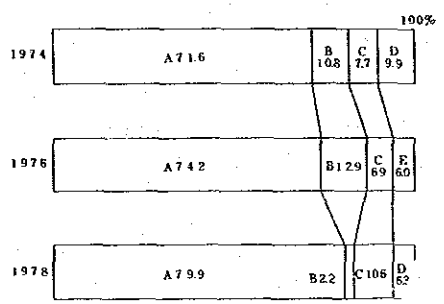


(I-7) Gabriela-Silang Provincial Hospital

This hospital is located in the outskirts of Vigan, the provincial capital of Ilocos Sur, with an authorized bed capacity of 100 and actual capacity of 88. In addition to the four major departments of internal medicine, surgery, pediatrics and OB-GYNE, the hospital provides medical service in radiology, contagious diseases and malnutrition.

The distribution of beds by department shows that the internal department accounts for 43% of the total, surgical and pediatric 15% respectively, and OB-GYNE 25%.

With regard to manpower, the medical staff consists of only 10, including the only medical specialist, the Director, 1 dental surgeon and 8 resident physicians. There are 37 nurses including the Chief and Assistant Chief Nurses, 21 nurses and 14 nursing attendants. As for medical technicians, there are 2 pharmacists, 1 assistant, 1 dental assistant, 1 laboratory technician and 1 assistant, totalling 6. There are 6 for food service, 13 for other services, 5 for maintenance, 3 for transport and 11 for clerical work. The total manpower is thus 91, averaging 1.03 persons per bed.

The number of outpatients runs 20,000 ∿ 30,000 annually and that of inpatients 4,000 ∿ 6,000, having shown a peak in 1976 as in the case of Abra PH. The distribution of patients by department shows outpatients are roughly distributed equally. The internal and pediatric departments altogether account for 40 ∿ 50% of the total, relatively small compared with other hospitals. The relatively large ratio of the dental department is also worthy of note.

Inpatients are overwhelmingly internal cases, while the number of pediatric cases is small. Here, too, contagious diseases account for most of the patients, though the number of traffic casualties is also worthy of attention.

With regard to the seasonal change in the number of patients, the wet season shows an increase of about 10%, particularly in intestinal, gastroenteritis and other contagious cases. The average duration of hospitalization is 4.5 days with OB-GYNE recording 3.5 days. The bed occupancy ratio is about 80%. The nursing unit is approximately 1 unit per department, averaging 20 ∿ 40 beds, attended by 2 nurses and 2 nursing attendants.

The number of operations and OB cases do not show sizeable changes, at 300 OB cases annually and 200 major operations. Major operations are appendectomy, hysterectomy and Caesarian. In the laboratory sector, normal and testa are being carried out over a wide range; testing should be extended to bacteriology, particularly culture tests.

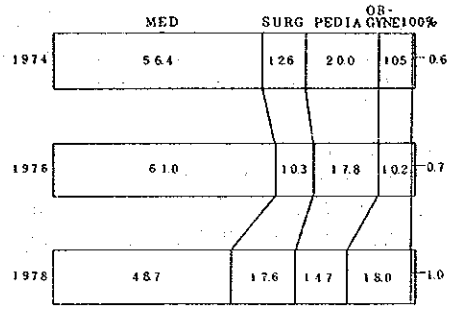
The ambulance service is relatively active, attending to 6,637 cases in 1978. Only one ambulance out of the two is available for service. Training is conducted once a week as below.

Training in nursing: 60 persons.

Training in midwifery: 30 persons.

PATIENT RATE BY DEPARTMENT OF GABRIELA-SILANG PH

IN PATIENT



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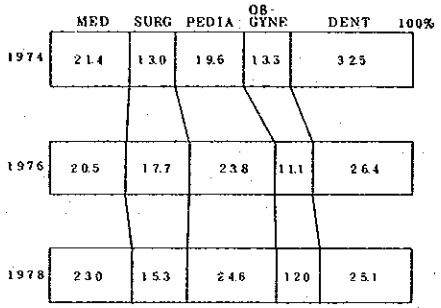
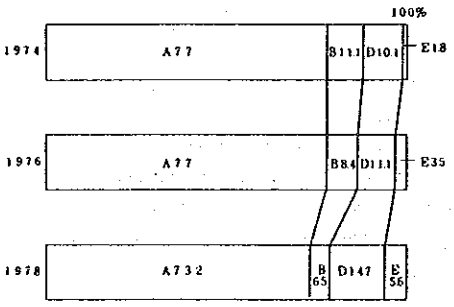


PATIENT RATE BY LEADING DISEASE OF GABRIELA-SILANG PH

IN PATIENT



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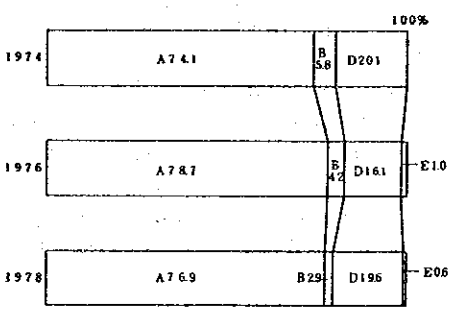


(I-8) Don Mariano Marcos Memorial Hospital

This hospital, located in Batac, Ilocos Norte Province, is being rebuilt on the same site. The current authorized bed capacity is 200 with an actual capacity of 100.

The hospital has internal, surgical, OB-GYNE, pediatric and anesthetic departments for medical treatment, and also provides services in dentistry, radiology, laboratory, family planning, etc.

The hospital has a total manpower of 135. The medical staff consists of 15 persons: 3 medical specialists including the Director, 2 dental surgeons and 9 resident physicians. There are 60 nurses including the Chief and Assistant Chief Nurses, 38 nurses and 20 nursing attendants. As for medical technicians, there are 3 pharmacists, 1 assistant, 1 dental assistant and 2 laboratory technicians, totalling 7. There are also 11 for food service, 21 for other services, 4 for maintenance, 3 for transport and 14 for clerical work. The manpower per bed of 1.35 is high compared with other hospitals.

As for the number of patients, 2,717 patients were inpatients in 1978 and 12,811 outpatients, both reaching the ceiling. A feature of the distribution of patients by department is the high ratio of surgical cases among inpatients. Internal and pediatric cases account for 60% of the total, showing a slight downward trend. On the other hand, the ratio of OB cases is increasing steadily. In contrast, the ratio of internal cases is extremely high among outpatients and those of surgical and OB cases extremely small. The high ratios of dental and psychiatric cases are also worthy of note.

The distribution of patients by disease shows that A-type diseases account for between 70 and 80% of inpatients. A-type diseases are also numerous among outpatients, indicating the predominance of contagious diseases. However, B-type diseases such as cardiac cases, and D-type diseases such as fractures, are expected to increase.

The average duration of hospitalization is 5.0 days. The bed occupancy ratio of 56% indicates the insufficient utilization of beds available at present.

In 1978, 247 major operations were performed, and there were 161 deliveries. Apart from orthopedic and Caesarian operations, the major operations include gallbladder, craniotomy and abdominal surgery.

In radiology, normal X-ray examinations, chole G. I. and Barium swallow oreneme are carried out. In the laboratory, normal tests and chemical tests are conducted, though pathological tests are not carried out.

The ambulance service does not seem to be very active, though the number of patients has been increasing rapidly since 1977. The hospital has one ambulance. The food service serves both patients and the staff, preparing 350 meals a day. Special food is also served.

The hospital is very active in providing training. The government-approved training schemes are listed below.

Surgical: 3 resident physicians.

Anesthetic: 1 supervising pnysician, 1 resident physician and 1 vacant position.

OB-GYNE: 1 supervising physician, 1 resident physician and 1 vacant position.

In addition, other schemes which have not yet been approved by the Government are as below.

Pediatric: 1 supervising physician, 2 resident physicians and 1 vacant position.

Internal: 1 supervising physician, 2 resident physicians and 1 vacant position.

X-ray: 1 supervising physician and 1 vacant position.

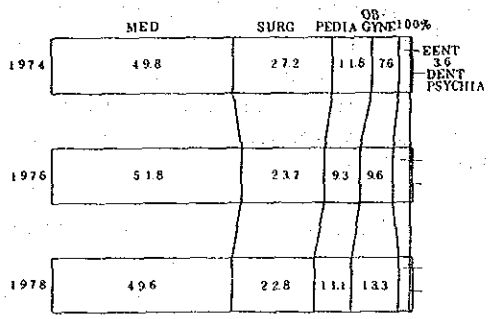
X-ray technician: 2 technicians.

Laboratory: 3 vacant positions for physicians, 1 technician, 1 chief technician.

Family planning: 1 physician and 36 nurses.

PATIENT RATE BY DEPARTMENT OF DON MARIANO MARCOS MH

IN PATIENT



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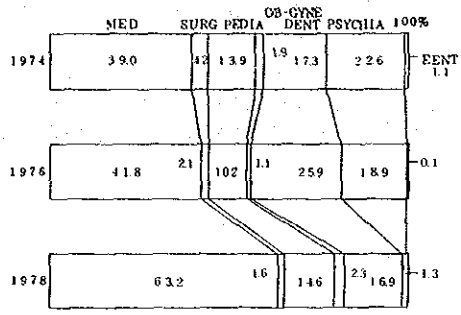
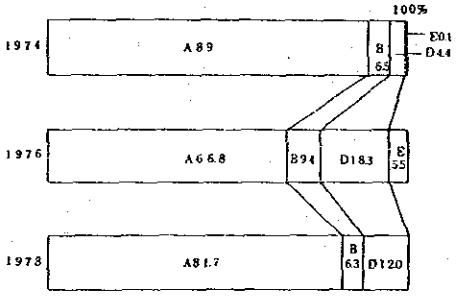


PATIENT RATE BY LEADING DISEASE OF DON MARIANO MARCOS MH

IN PATIENT



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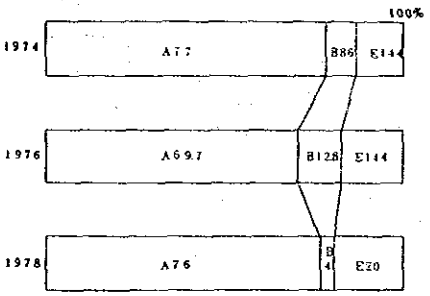


(I-9) Ilocos Norte Provincial Hospital

The Director of Don Mariano Marcos Memorial Hospital holds concurrently the Directorship of this hospital located in Laoag City. With an authorized bed capacity of 100 and the actual capacity of 163, it is an approved teaching and training hospital.

Apart from the five established departments (surgery, internal, OB-GYNE, pediatrics and anesthetics), the hospital provides medical service in dentistry, family planning, laboratory, contagious wing, radiology, malnutrition and under 6 clinic.

The manpower of the hospital is 118, averaging 1.18 persons per bed. The medical staff consists of 15, including the Director, Chief of the medical staff, 1 medical specialist, 2 dental surgeons and 3 resident physicians. There are 52 nurses, including the Chief and Assistant Chief Nurses, 31 nurses and 18 nursing attendants. As for medical technicians, there are 2 pharmacists, 1 assistant, 1 radiologist, 1 laboratory technician, 1 assistant and 9 physiotherapists, totalling 16. There are also 11 for the food service, 17 for other services, 4 for maintenance, 2 for transport and 10 for clerical work.

As for the number of patients, inpatients totalled 6,388 in 1978, showing a steady increase, whereas the number of outpatients was 16,794, reaching the ceiling. The distribution by department shows a similarity on the whole to the average distribution in Region I. However, the distribution of patients at Ilocos Norte is featured by the somewhat high ratio of surgical cases, unclear trend and the low ratio of OB-GYNE cases among outpatients. The ratio of internal and pediatric cases combined is 62 ∿ 66% with inpatients and 50 ∿ 73% with outpatients.

The distribution of patients by disease shows that many of the inpatients are gastro-enteritis and influenza cases. Thus the A-type diseases account for at least 67% of the total, and 90% in some years. The same can be said of outpatients. On the whole, the distribution does not seem to be moving toward the dominance of B-type diseases. With regard to the seasonal change, the number of inpatients was small at 67, for instance, when the survey was conducted; it was the crop season for tobacco. However, it increases to 100 ∿ 110 a day in the wet season.

The distribution of beds by department is; internal 49%, surgical 18.5% OB-GYNE 13% and pediatric 19%. The average duration of hospitalization is short at 4.0 days. The current bed occupancy ratio is 85%, an appropriate level.

In the surgical-OB sector, appendectomy, gastro, exploratory lap and Caesarian are the main operations. The hospital hopes to carry out operations on the chest in future. In 1978, the number of operations was 5,075 and deliveries 4,435; the latter showing an upward trend. In radiology, normal X-ray examinations, chole

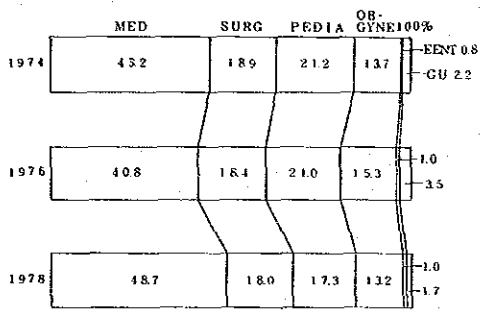
G.I. and Barium swallow oreneme are carried out as at many other hospitals. In the laboratory, normal and chemical tests are conducted, but not pathological.

In ambulatory, since there are several emergency facilities in Laoag, the number of patients has not shown a large change for the last few years; 1,130 persons were attended to in 1978.

As for training, resident training is provided at present for internal, surgical, anesthetic and OB-GYNE departments. Practical training is also given to 200 student nurses of the school of nursing in Laoag. Training is also given to 20 midwives.

PATIENT RATE BY DEPARTMENT OF ILOCOS NORTE PH

IN PATIENT



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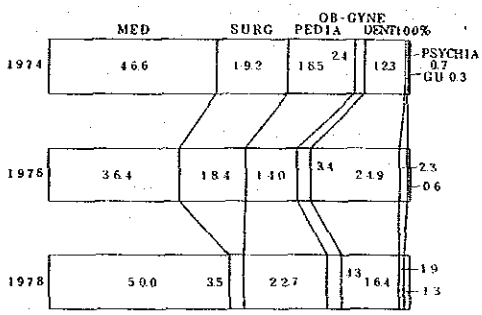
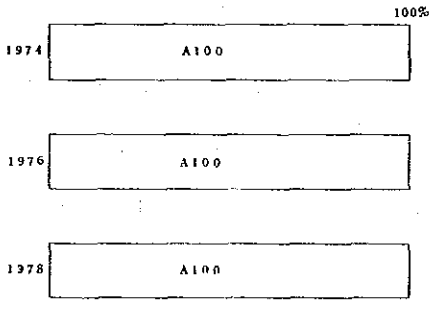


PATIENT RATE BY LEADING DISEASE OF ILOCOS NORTE PH

IN PATIENT



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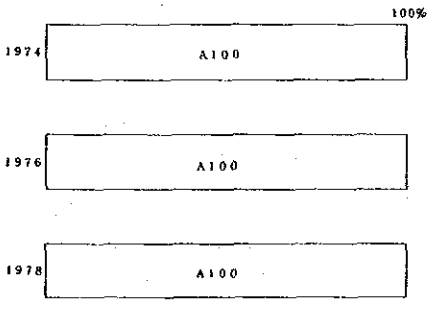


(II-1) Cagayan Regional Hospital

Because of the transport conditions and the distance, Cagayan district is compelled to form an area of its own. This hospital, the central hospital of Region II (Cagayan Valley) will, therefore, have to provide health care services close to that of a medical center.

The hospital has at present an authorized, and actual bed capacity of 200, and provides medical treatment in the four major departments of internal medicine, surgery, pediatrics and OB-GYNE. In addition, the hospital provides various services in radiology, laboratory, dentistry, malnutrition, family planning and contagious diseases.

The total manpower of the hospital is 136, averaging 0.68 persons per bed, which is a very low figure. The medical staff consists of 15, including the Director, Chief of the medical staff, 1 medical specialist, 3 dental surgeons and 21 interns. There are 15 nurses including the Chief and Assistant Chief Nurses, 10 nurses, 2 nursing attendants (these figures do not include those under training; but it is clearly under-staffed) and 1 midwife.

As for medical technicians, there are 3 pharmacists, 1 assistant, 2 dental assistants and 2 other technicians, totalling 8. In addition, there are 18 for food service, 34 for other services, 9 for maintenance, 6 for transport and 19 for clerical work.

The total number of inpatients in 1978 was 10,026, showing a steady annual increase. The number of outpatients was 54,628, also showing a gradual increase every year. The distribution of patients by department shows that, the ratio of internal and pediatric inpatients, compared with the average for Region II, is showing a secular trend to decrease, registering 54.1% in 1978. The ratio of surgical cases is relatively large. This is also true with OB-GYNE cases which are showing a steady increase. The ratio of internal and pediatric outpatients is also decreasing gradually (51.4% in 1978); but the ratio of pediatric/OB-GYNE is large. The ratio of surgical cases is also somewhat large.

The annual distribution of patients shows that out of 10 major diseases the first 7 places have not changed their positions for the last five years in the order of gastro-enteritis, bronchitis, influenza, malaria, pneumonia, diarrhea and PTB. Most of them are contagious diseases and the distribution of diseases is the same as other hospitals. The same order can be seen with outpatients down to the 5th place.

Since there is no water supply in the area, an epidemic of gastric infection occurs once in every 4-5 years, presenting a serious problem for the hospital. Though there is some seasonal change in the number of patients, no data were available.

The average duration of hospitalization is 5.0 days. This is due to the high ratio of abnormal deliveries in OB-GYNE as the hospital has to take in all cases from the region since there are no other facilities. The current bed occupancy ratio is 80%.

In the surgery sector, there is only one major operating room, and the extension work is being suspended at present. Appendectomy, Caesarian and hysterectomy are the major operations performed, though almost all operations except brain and heart surgery are performed. The number of operations has been increasing slightly with 641 major cases in 1978. The total number of deliveries in the same year was 1,289.

In radiology, normal examinations and G.I. series are carried out. At present, cancer cases are all referred to Manila.

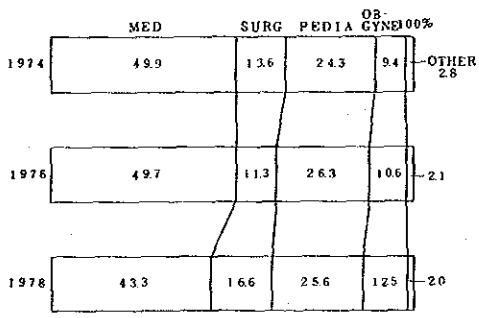
In the laboratory, normal tests of urine, stool and blood, chemical tests and some pathological and serological tests are carried out; but bacteriological tests are not conducted and improvement in the general level will be needed.

The hospital provides the ambulance service with two ambulance cars (one requires repair) on a 24-hour basis.

In training, there are 4 in internal, 8 in surgical, 2 in pediatric and 3 in OB-GYNE departments for resident training. The hospital hopes to increase the number to 10 in future in each department. In addition, there are 7 municipal officers receiving training in food service, X-ray, anesthetics and laboratory testing. There are also 20 for training in nursing. It may be added here that Dr. Ramelo Ramirez of this hospital is receiving training in radiology at the Radiation Health Office in Manila to be prepared for radiological treatment to be provided at the hospital in the future. He has completed a course in radiation protection is waiting to be trained in practical application.

PATIENT RATE BY DEPARTMENT OF REGION II

IN PATIENT



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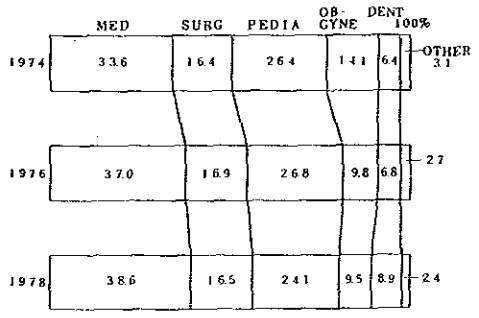
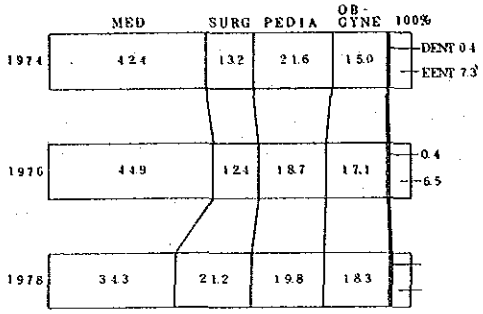


PATIENT RATE BY DEPARTMENT OF CAGAYAN RH

IN PATIENT



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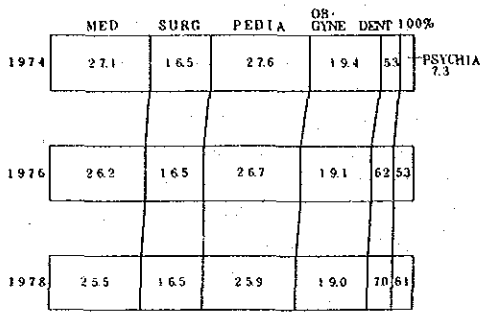
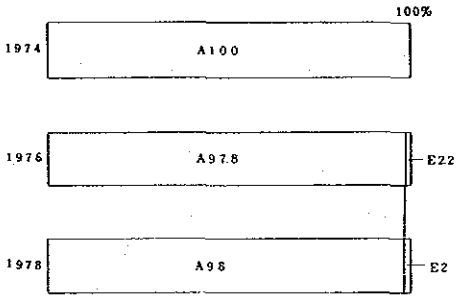


PATIENT RATE BY LEADING DISEASE OF CAGAYAN RH

IN PATIENT



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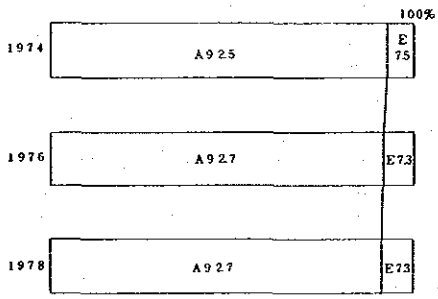


(II-2) Regional Mental Hospital

This mental hospital is under construction on the new site of Cagayan Regional Hospital. After completion, it will form part of the regional hospital. However, concrete information concerning the management of the mental hospital could not be obtained at the site. It is also not clear how the new hospital is related to the old one located at the present site of the Cagayan Regional Hospital. With the present capacity of 100 beds, it does not seem to be sufficient any longer.

(II-3) Kalinga-Apayao Provincial Hospital

With the current capacity of 100 beds, authorized and actual, this hospital is designated as a teaching and training hospital. In addition to the four major departments of internal medicine, surgery, pediatrics and OB-GYNE, the hospital provides service in dentistry, laboratory and radiology.

The total manpower of the hospital is 95, averaging 0.95 persons per bed. The medical staff consists of 6, the Director, 1 dental surgeon and 4 resident physicians. There are 42 nurses, including the Chief Nurse and nurses, totalling 26, and 16 nursing attendants.

As for medical technicians, there are 7, including 1 pharmacist, 1 assistant, 1 dental assistant, 1 radiologist, 1 laboratory technician and 1 social worker. There are 7 for food service, 17 for other services, 3 for maintenance and 13 for clerical work, with no one for transport.

The total number of patients in 1977 was 3,961 inpatients and 16,254 outpatients, a marked decrease compared to 1974 and 1976. In 1976, there was a large increase in the number of internal inpatients. In general, the ratio of internal/pediatric cases is overwhelmingly high among inpatients at around 90%. In contrast, the ratio of OB-GYNE/surgical cases is extremely small. However, the number of OB-GYNE patients has been increasing slightly, and the trend is expected to continue in the future. As for outpatients, the ratio of internal/pediatric cases is not as high as that of inpatients, but is still at over 80%, except for the year 1977 when the number of dental outpatients showed a drastic increase.

The distribution of patients by disease shows that contagious diseases such as malaria, pneumonia, influenza, etc. occupy the top places. With A-type diseases accounting for around 90% of the 10 major diseases every year, the distribution shows a typical contagious-type pattern. It is to be noted that accidents including injuries due to military engagements account for 6 ∿ 8%

There is a large seasonal change in the number of patients. It falls to 67% in the crop season and rises as far as 82 ∿ 85% in off-season, averaging about 70%. Incidentally, it was about 40% on the day when the survey was conducted.

The average duration of hospitalization is about 6 days: 7 days in surgical, 5 days in OB and 3 days in pediatric departments. The short stay in the pediatric department is to be noted.

In the surgery/delivery sector, the hospital has 1 major operating room and 1 minor operating room. The total number of operations in 1978 was 180, out of which Caesarian operations

numbered about 12 every month, followed by appendectomy, exploratory lap, herniolophy, mastectomy radical, amputation, thyroid, etc. Almost all operations except brain and heart are performed.

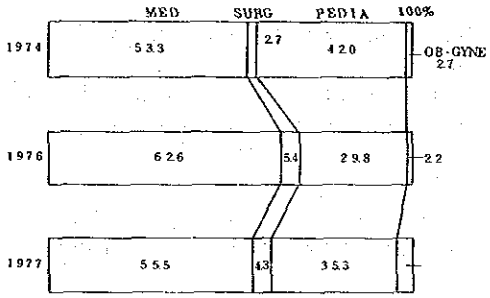
In radiology, chest, fracture and KUD only are carried out. Only normal tests are conducted in the laboratory excluding chemical, bacteriological and pathological tests.

The hospital's ambulance service was curtailed drastically after 1977 due to the breakdown of the ambulance car, though it still attends to 500 cases annually.

Having been designated as a teaching and training hospital, there is a plan to establish a school of nursing with 100 students.

PATIENT RATE BY DEPARTMENT OF KALINGA-APAYAO PH

IN PATIENT



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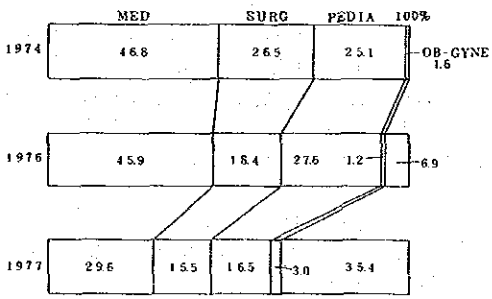

PATIENT RATE BY LEADING DISEASE OF KALINGA-APAYAO PH

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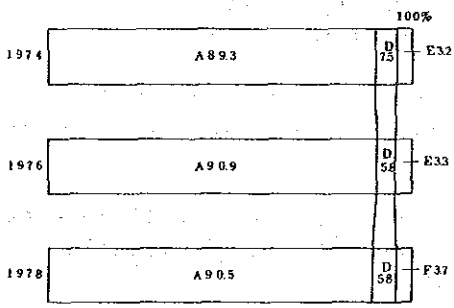

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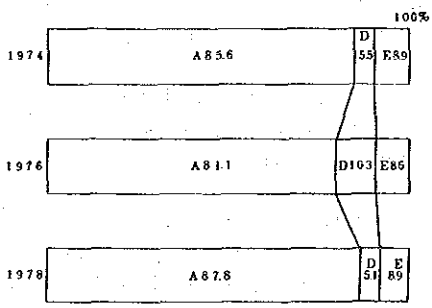


(II-4) Aparri Emergency Hospital

There is a plan to move this hospital located at present in the outskirts of Aparri to a new site to be upgraded to Cagayan Provincial Hospital. However, neither site is suitable for hospital facilities. (For detail see Chapter 0 Appendix)

This emergency hospital has an authorized bed capacity of 25 with an actual capacity of 23 beds, providing internal, surgical, pediatric, OB-GYNE, laboratory and X-ray health care services.

The total manpower of the hospital is 21, averaging 0.91 persons per bed. The Director and 1 intern constitute the medical staff. There are 4 nurses including the Chief Nurse, assisted by 3 nursing attendants, and 1 midwife. There is 1 laboratory technician. There are 2 for food service, 4 for other services, 1 for transport and 3 for clerical work. There are no personnel for maintenance.

The total number of patients in 1978 was 1,250 admissions and 6,103 outpatients. No secular trend is available.

The distribution of patients by department shows that in the case of inpatients both internal and pediatric departments register higher ratios then the average for Region II. They show a high aggregate ratio of 83 ∿ 85%. In contrast, surgical and OB-GYNE departments show low ratios.

The ratio of internal/pediatric cases is also high with outpatients at around 85%, and the high ratio of pediatric cases is worthy of note.

Though the data on the distribution of patients by disease was not available, there are many gastro and respiratory diseases such as gastro-enteritis, broncho pneumonia, bronchitis, etc.

There is a clear seasonal change in the number of patients, an increase of about 40% in the wet season. The average duration of hospitalization seems to be 3 ∿ 4 days, though it is only 2 days in OB-GYNE cases. The current bed occupancy ratio is 72% on the average, though it was 57% on the day of the survey.

Malnutrition and infectious patients are both accomodated in the internal ward, showing the difficulty of a small scale hospital. Charity beds account for 60% of the total capacity.

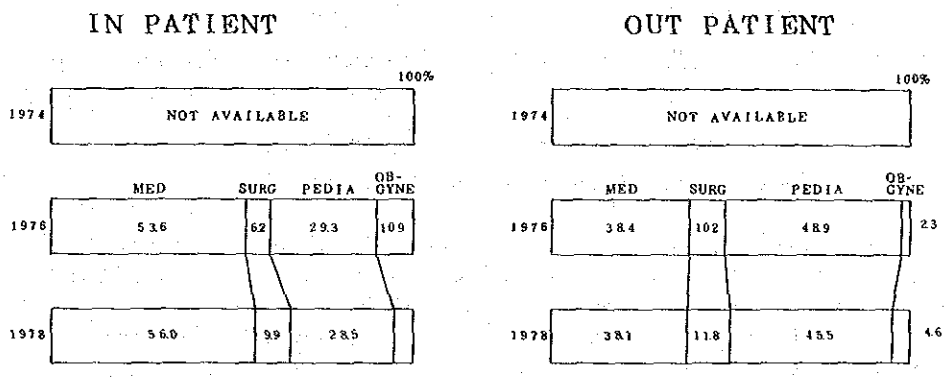
In the surgery/delivery sector, the total number of operations in 1978 was 31, mostly appendectomy, laparatomy and Caesarian. There are about 40 deliveries annually.

Radiology is equipped with only one portable X-ray equipment used only for chest and fracture examinations.

The laboratory conducts only normal tests.

The hospital sends personnel to upper-grade organizations, e.g., medical training at Cagayan Regional Hospital and training in midwifery and nursing at the Regional Training Center.

PATIENT RATE BY DEPARTMENT OF APARRI EH



(II-5) Isabela Provincial Hospital

This hospital provides the 100 authorized beds at present. It has 4 major departments, internal medicine, surgery, pediatrics and OB-GYNE, and offers services in the fields of radiology, laboratory, dentistry, malnutrition, contagious diseases and TB. The number of beds allotted to each department is shown below:

Internal medicine	25 beds
Surgery	25 beds
Pediatrics	20 beds (6 beds are allotted for malnutrition patients)
OB-GYNE	15 beds
Contagious diseases ward	20 beds

The distribution of its manpower is as follows: 14 physicians -- 6 medical specialists including the Director of hospital, 1 dentist and 7 resident physicians. 45 nurses -- 24 registered nurses including the chief nurse and 21 nursing attendants. 8 medical technicians -- 2 pharmacists, 1 pharmacy aide, 1 laboratory technician, 1 laboratory aide, 2 other medical technicians and 1 social worker. 7 food service workers; 12 other services workers; 5 maintenance workers; 3 transportation workers; and 8 clerks. 102 staff members thus constitute its manpower, which means 1.02 persons per bed.

The number of inpatients in 1978 was 7,832 and that of outpatients was 16,792, indicating a steady growth on both sides. Regarding the ratio of inpatients in each department, that in the internal medicine decreased rapidly during the past 5 years, but that in the pediatrics increased on the contrary, while that in the internal medicine plus the pediatrics maintained approximately 70 ∿ 75% without evincing any extreme variation, thus intimating a fluxional structure on the whole. As to the outpatients, their ratio in internal medicine plus pediatrics is fluxional, but that in the surgery attests a noticeably sound increase. Regarding the ratio of inpatients by diseases, gastro-enteritis, bronchitis and malaria occupy the upper ranks, and the ratio of Type A disease is 80 ∿ 87%, attesting its fluxional feature; it thus patently evinces the infectious structure. The similar diseases are numerous among the outpatients, and their ratio of Type A diseases indicates 82 ∿ 84%.

The variation of the number of patients by seasons shows that it increases by 10 ∿ 15% in the dry season (Feb. ∿ May) against the rainy season.

The average days of hospitalization are 6 days, the details of which in each department are as follows: 7 ∿ 8 days in the surgery, 4 days in the internal medicine, 4 days in the pediatrics and around 3 days in the OB-GYNE.

The ratio of bed occupancy is 74.9%, which sometimes goes up nearly to 90%.

With regard to the departments of operation and delivery, the number of delivery is recorded as 249 cases in 1977, and half of them underwent Caesarian operation. Little variation is noted for the frequency of delivery in each year. As to the frequency of operation in 1977, the major operation counted 207 cases and the minor operation counted 106 cases. The hospital has one major operation room and one minor operation room for emergency. The main types of operation conducted in this hospital are laparotomy, Caesarian, fractinus, appendectomy and herniorrhaphy.

Its X-ray department serves for general X-ray photographing and G.I. series(i.e., Chole G.I. and Barium swallow oreneme).

The laboratory offers general medical tests on the main, and chemical tests to a certain extent, but no bacilloscopy is performed.

2 ambulances serve for its emergency activities.

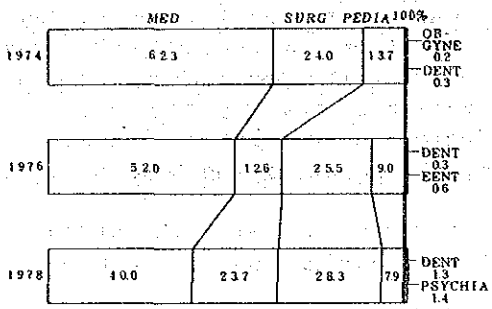
Food service is provided for the patients alone. The staff members usually bring their own lunch, who can have the hospital food in the form of aid. Laundry is done outside.

The hospital offers training for the sake of CHHC.

Resident training is offered for those in the surgery and OB-GYNE. Also the hospital trains nurses and nursing attendants.

PATIENT RATE BY DEPARTMENT OF ISABELA PH

IN PATIENT



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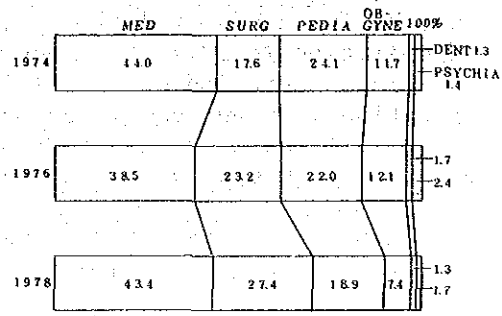
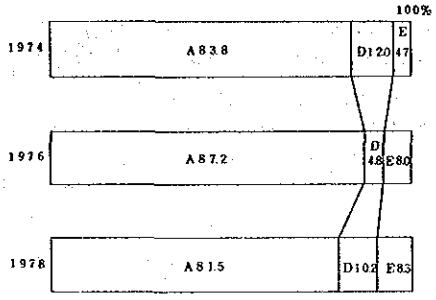


PATIENT RATE BY LEADING DISEASE OF ISABELA PH

IN PATIENT



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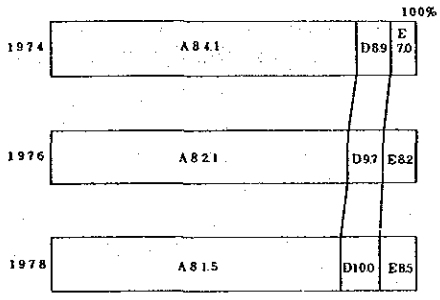


(II-6) Quirino Provincial Hospital

This hospital provides 73 beds at present out of the approved 100 beds. Its main departments are 4, internal medicine, surgery, pediatrics and OB-GYNE, and in addition, it offers services in the fields of family planning, laboratory, dentistry and radiology. With regard to the measures on malnutrition, the current situation involving the citizens' poverty problem in this province being particularly severe, the hospital has not been able to achieve the attempted target. Although 2 ∿ 5 beds are provided for malnutrition patients, the hospital does not have a serious plan to cope with this problem.

The distribution of its manpower is as follows: 5 doctors -- 1 medical specialist who is the Director of hospital, 1 dentist and 3 resident physicians. 27 nurses -- 1 chief nurse, 15 registered nurses and 11 nursing attendants. 6 medical technicians -- 1 pharmacist, 1 pharmacy aide, 1 dental aide, 1 medical radiation aide, 1 medical laboratory technician and 1 medical laboratory aide. 6 food service workers; 10 other services workers; 2 maintenance workers; 1 transportation worker; and 9 clerks. The manpower of this hospital consists of 66 staff members, which means 0.90 person per bed. The shortage of doctors is an acute problem in this hospital. One resident physician here is unable to work, thus only two doctors are substantially managing the patients. Realistically speaking, their personal burdens are too heavy to be shouldered. This area, which is recognized as an underdeveloped area, has a very low rate in bringing back the young doctors who went outside. The Hospital Director's energetic strategy in attracting these young doctors to this hospital has not yet been successful.

The number of inpatients in 1978 was 6,084, which evinces a steady increase. The number of outpatients was 14,024, having made a very rapid expansion in 1978. Regarding the variation of the ratio of inpatients in each department, that in the surgery and the OB-GYNE shows a rapid increase. During the past 5 years, the ratio of internal medicine plus pediatrics radically decreased from 91.7% to 61.8%. However, as both the internal surgery and the pediatrics made a steady growth, it therefore appears that this was offset by the expansion of that in the surgery and the OB-GYNE. With reference to the ratio of outpatients, that in the internal medicine plus pediatrics occupies 80 ∿ 84%, thus indicating a stable structure. As to the number of inpatients by diseases, malaria and URTI are numerous, and contagious diseases in the respiratory organs occur highly in the pediatrics. A-type diseases evince an extremely high rate of 88 ∿ 90%, which is 77 ∿ 94% in the case of outpatients, with indications of an annually increasing tendency. The number of patients varies greatly according to the seasons, and an increase by 30 ∿ 40% is noted in the rainy season (particularly in June ∿ Sept.).

The average hospitalization is 5.5 days, and the rate of bed occupancy is approximately 73%.

In respect to the departments of operation and delivery, the annual frequency of delivery is approximately 50 cases, and the annual frequency of abnormal delivery is approximately 5 cases. Only 3 Caesarian operations were conducted in 1978. There were 102 major operations in 1977, a radical increase in comparison with the previous year. The hospital has a single major operation room. The main types of operation are appendectomy, Caesarian and hemoloidectomy. However, the majority of cases are turned to the private hospitals at Santiago due to the shortage of anesthetists.

Its X-ray department performs chest and fracture X-rays alone.

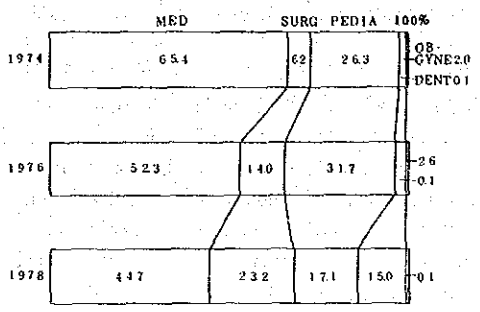
The laboratory offers general medical tests as well as chemical tests. The hospital performs emergency activities even though not extensive, and the emergency patients have been growing little by little. Their absolute number is, however, small -- 298 cases in 1978. The hospital owns no ambulance, but it has a jeep which is kept in good condition. The hospital offers food service, but laundry is sent to subcontractors.

The hospital offers no training at present, nor is there any training plan in the near future. Its resident physicians, one in the surgery and one in family planning, are receiving training in Manila.

A large number of family members usually attend the inpatients and they are allowed to stay in the hospital as far as beds are vacant. This phenomenon is not favourable from the viewpoint of hygiene, however, says the Chief of Hospital, it is unavoidable under the present circumstances involving custom and the shortage of staff members in the hospital.

PATIENT RATE BY DEPARTMENT OF QUIRINO PH

IN PATIENT



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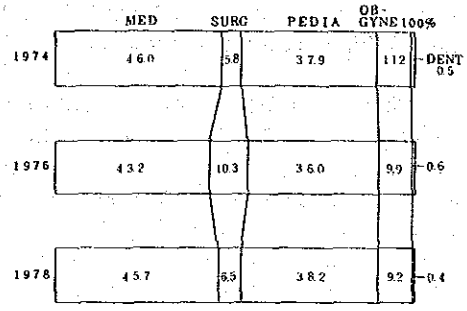
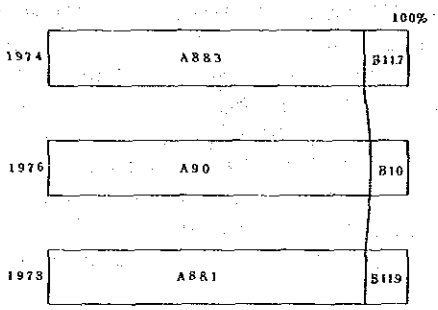
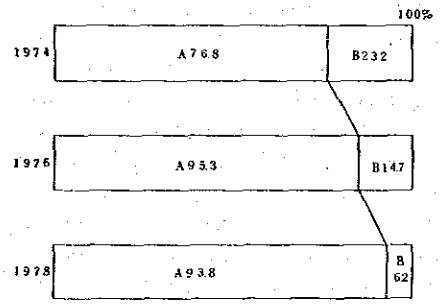


PATIENT RATE BY LEADING DISEASE OF QUIRINO PH





(II-7) Ifugao Provincial Hospital

This hospital provides 75 beds at present as authorized. It has 3 main departments internal medicine, pediatrics and OB-GYNE, and also offers services in the fields of general surgery, radiology, laboratory, dentistry, EENT, family planning, malnutrition and contagious diseases measures.

The distribution of its manpower is as follows: 5 doctors -- 1 medical specialist who is the director of hospital, 1 dentist and 3 resident physicians. 27 nurses -- 16 registered nurses including the chief nurse and 11 nursing attendants. 5 medical technicians -- 1 pharmacist and 1 aide, 1 radiologist, 1 laboratory technician and 1 social worker. 7 food service workers; 11 other services workers; 2 maintenance workers; 1 transportation workers; and 11 clerks. 73 staff members thus constitute its manpower, for a total of 0.973 person per 1 bed.

The number of inpatients was 2,678 in 1978, which has been growing little by little annually. The number of outpatients was 8,129 in the same year, which has been growing at a normal pace. In regard to the ratio of outpatients in each department, that in the internal medicine plus pediatrics is approximately the average of the Region II, which is however, extremely fluxional in secular variation. Especially that of pediatrics exceeds the average of Region II by large scale, and that in the surgery attests a steady increase annually, while that in the OB-GYNE is fluxional. The ratio of inpatients in the internal medicine plus pediatrics began to show an ascending tendency in 1978, which was mainly due to the growth of inpatients in pediatrics. As to the ratio of the number of inpatients by diseases, acute bronchitis, viral infection, URTI, influenza and malaria occupy the upper ranks, and Type A disease monopolizes the 10 upper ranks. As to the outpatients also, acute bronchitis, bronchopneumonia and influenza occupy the upper ranks, and their disease structure attests the monopoly of Type A disease in the 10 upper ranks.

That there are numerous patients in the pediatrics is due to the fact that upper respiratory track infections (URTI) occur frequently because of climatic changes in the mountain area. As regards the variation of the number of patients by seasons, patients peculiarly increase in the rainy season. This is due to the same reason mentioned above.

90% of patients consist of minority groups. Their customs claim that the family members ought to attend the patients, however the hospital permits only not more than one family member to attend.

The average hospital stay is 5 days, the details of which are as follows: 5 ∿ 7 days in the surgery, 4 ∿ 5 days in the internal medicine, 3 ∿ 4 days in the OB-GYNE and 4 ∿ 5 days in pediatrics.

The rate of bed occupancy is as low as 49.6%. This is due to the reason that the hospital cannot develop its capacity of accommodating patients because of the shortage of doctors. In respect to the surgery-OB departments, the annual frequency of operations during the past 5 years was 73 ∿ 85 cases, hardly showing any growth. This is again caused by the shortage of medical doctors and anesthetists. The main types of operation are Caesarian operation, hysterectomy, appendectomy and enterectomy. There were 137 deliveries in 1977, that is, approximately one case every 3 days, which is again quite low.

The radiology department conducts its duties involving chest, fracture, KVD and IVP.

The laboratory offers general medical tests. The hospital is attempting to strengthen the laboratory, particularly to achieve substantial accomplishments in blood tests. This ought to be evaluated as a wise judgment.

Also, the Philippine Red Cross is planning to construct a blood bank according to its original method of construction and management at the new site under the present scheme. Favourable effects may be expected to result if a close relationship can be established between the Red Cross and the hospital.

The hospital is not very active for emergency services as in the case of Bontoc, another hospital in the mountain area. The annual frequency of emergency services is 150 ∿ 180 cases, which is much less. The hospital owns one ambulance in good condition.

The hospital does not offer training at present and there is no planning for it for the time being.

PATIENT RATE BY DEPARTMENT OF IFUGAO PH

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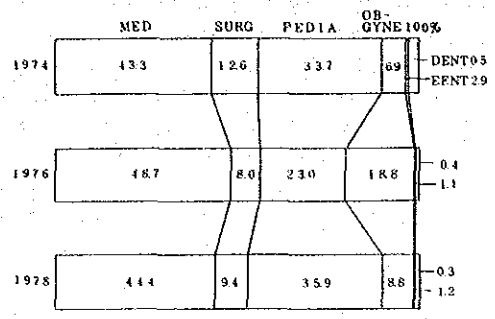

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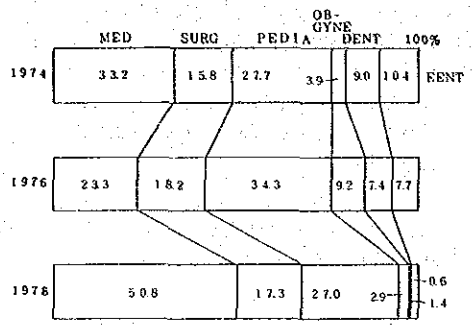
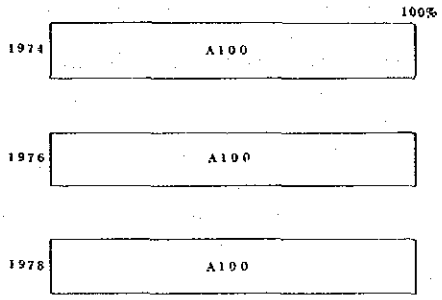


PATIENT RATE BY LEADING DISEASE OF IFUGAO PH

IN PATIENT



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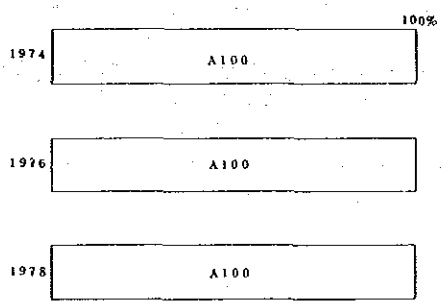


(II-8) Major F. Marcos Veteran Memorial Hospital

This hospital provides 115 beds although the number of beds authorized is 200. The hospital is equipped with 4 main departments, internal medicine, surgery, pediatrics and OB-GYNE. Besides, it offers services in the fields of orthopedics, radiology, laboratory, dentistry, family planning and malnutrition (Which is, however, said not to be working smoothly because of the number of patients being too small.).

The distribution of its manpower is as follows: 15 doctors -- 1 hospital director, 2 medical specialists and 12 resident physicians. 42 nurses -- 25 registered nurses including the chief nurse and 17 nursing attendants. 6 medical technicians -- 1 pharmacist, 1 pharmacy aide, 1 dental aide, 1 medical radiation technician, 1 medical laboratory technician and 1 medical laboratory aide. 7 food service workers; 13 other services workers, 2 maintenance workers, 3 transportation workers and 12 clerks. The total manpower of this hospital thus consists of 100 staff members, which means 0.87 persons per bed.

The number of inpatients was 5,300 in 1978, a rapid increase from 1976. The number of outpatients was 21,033, which evinces a steady expansion. Regarding the ratio of inpatients in each departments, that in the internal medicine as well as in the pediatrics attests an increasing tendency, and their total ratio in both departments grew to 70.6% (1978) from 58.9%. On the other hand, that in the surgery has been gradually becoming less. That in the OB-GYNE does not show any large variation. The secular variation of the ratio of outpatients was not obtainable. But that in the internal medicine plus pediatrics in 1978 was 69.1%, which roughly corresponds to the mean value for Region II.

On the subject of the number of inpatients by diseases, gastroenteritis, PTB, bronchitis, dermatosises, etc. interchange acutely every year, intimating its fluxional structure. The rate of Type A disease is 75.4 ∿ 79.3%. This figure appears to be high enough, but it is considerably low actually in the total outlook of the Philippine Islands. Also a note should be taken of the increase of Type C disease. The secular variation of outpatients was not obtainable, however the ratio of Type A disease in 1978 was 77.4%, which is again low in the overall background of the Philippine Islands. At a glance, these data appear to suggest that it has on the whole cast off the contagious disease structure. However, the rate of contagious diseases in Nueva Vizcaya area evinces the same overwhelming contagious disease structure as before. Therefore the phenomena above must have been derived from the condition of the reception setup on the side of the hospital.

The average days of hospitalization are 6.0 days, the details of which are as follows; 6.17 days in internal medicine, 10 days in surgery, 5.3 days in the pediatrics and 4 days in the OB-GYNE.

The average bed occupancy is 84%. The rate was as low as 50% when this survey was conducted, and this was likely due to it being the harvesting season.

Regarding the departments of surgery and OB, the hospital possesses 1 major operation room, 1 minor operation room and 1 delivery room. There were 210 major operation in 1978, the main types of which were lapalatomy, appendectomy, Caesarian and authopedic surgery. As to delivery, the monthly average for normal deliveries is 22 ∿ 26 cases, Caesarian operations, 6 ∿ 8 cases, and abnormal delivery about 4 cases.

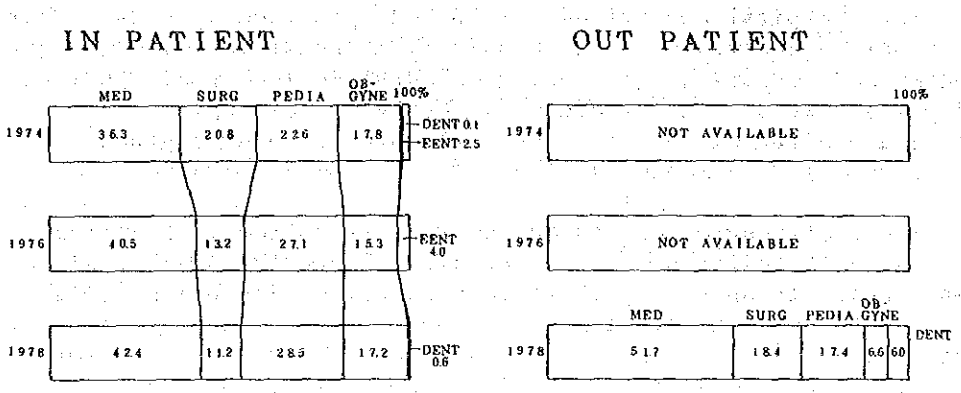
The department radiology conducts general X-ray photographing and G.I. series.

The laboratory offers general medical tests and chemical tests.

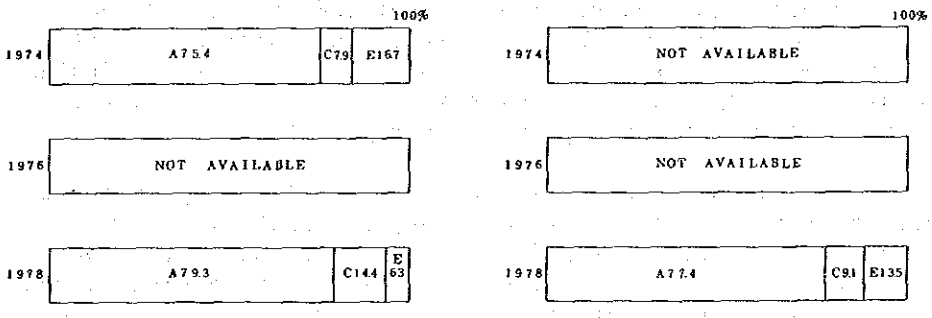
As to the emergency activities, the hospital makes use of 2 ambulances, however the number of patients was not established.

The hospital does not offer resident training at present. 2 nurses are expected to the trained in the near future. The hospital has just completed the training of one nurse for ICU and one nurse for OR. 8 nursing attendants receive training twice a month at present.

PATIENT RATE BY DEPARTMENT OF MAJ. F. MARCOS VETERAN MH



PATIENT RATE BY LEADING DISEASE OF MAJ. F. MARCOS VETERAN MH



(II-9) Nueva Vizcaya Provincial Hospital

This hospital authorized for 50 beds provides 56 beds. There are 4 main departments in the hospital, internal medicine, surgery, OB-GYNE and pediatrics (including malnutrition). It also offers medical services in the fields of laboratory testing, family planning and radiology. The hospital intends to strengthen its contagious disease measures.

The distribution of its manpower is as follows: 6 medical doctors -- the director of the hospital, 1 dentist and 4 resident physicians. 16 nurses -- 10 registered nurses including the chief nurse and 6 nursing attendants. 7 medical technicians -- 1 pharmacist, 1 dental aide, 1 medical radiation technician, 1 medical laboratory technician and 3 physical therapists. 5 food service workers, 6 other services workers, 3 maintenance workers, 1 transportation worker and 5 clerks. Its total manpower thus consists of 49 staff members, or 0.875 persons per bed.

The number of inpatients in 1978 was 4,034, which shows a gradual increase. That of outpatients was 14,745, which also evinces an increase. The ratio of inpatients evinces a slight increase in each department, and its overall structure is very stable. The ratio of inpatients in internal medicine was 53 ∿ 54%, slightly exceeding the average of Region II. On the other hand, that in the pediatrics and OB-GYNE was far in excess of the average for Region II. The number of outpatients increased rapidly during 1974 and 1976, but subsequently stabilized. The increase of outpatients in internal medicine is intense, that in the surgery is considerably high, however that in the pediatrics and the dentistry shows a considerable decrease. The ratio of outpatients in internal medicine plus pediatrics was 44 ∿ 58%. It indicates a gradual ascending tendency, which is however considerably low from the viewpoint of the Region II average.

As to the number of inpatients and outpatients by disease, there is a stable tendency for injuries, respiratory ailments, gastro-enteritis, pregnancy-related complications, etc. to occupy the upper ranks. The rate of inpatients with Type A disease was 52 ∿ 54%, while that of outpatients became 62 ∿ 63% after 1976, which indicate an extremely low rate. Type C disease and Type D disease occupy approximately 20%. From this it may appear at a glance as if the disease structure has changed, however the disease structure of Nueva Vizcaya area attests the contagious structure all the same. Therefore, this may be derived by the fact that the medical reception setup of the hospital has not yet arrived at the point of receiving the measures on the contageous diseases and malnutrition.

The average days of hospitalization are 6.0 days, the details of which are as follows: 3 days in the case of normal delivery and 7 days in the case of Caesarian operation in the OB-GYNE. The number of patients increases in the rainy season, particularly those

suffering from gastro-enteritis. The bed occupancy rate is approximately 90 ∿ 95%.

Regarding the departments of surgery and OB, there are 50 ∿ 70 cases of major surgery a year, which mainly consist of Caesarian operations, exploratory laps and appendectomies.

The radiology department performs general X-rays and G.I. series.

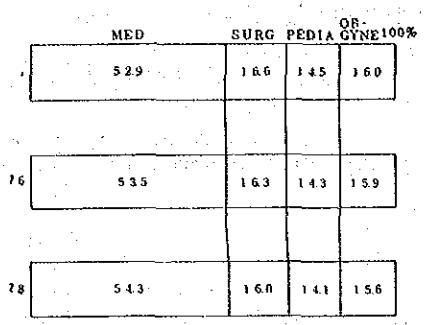
The laboratory offers normal tests, but chemical tests are not conducted.

There are approximately 2,000 patients every year in the emergency department, and the hospital is considerably active for the emergency services. It does not however own an ambulance, and makes use of the hospital director's private car. The hospital has been performing very enthusiastic medical services for emergency under these severe circumstances.

The hospital offers training for one resident in anaesthesiology and for one resident in traumatology, who are expected to accept the posts in this hospital in the near future. Moreover, nurses are trained here and the administrative training is also offered by the chief nurse.

PATIENT RATE BY DEPARTMENT OF NUEVA VIZCAYA PH

IN PATIENT



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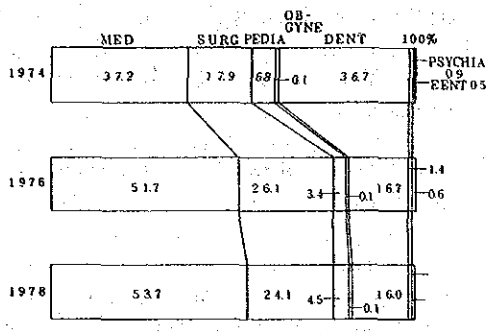
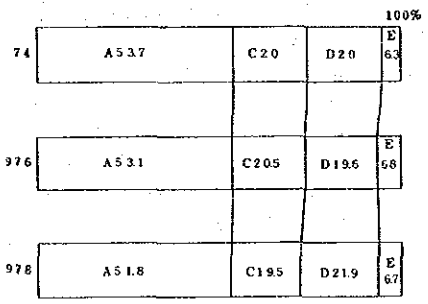
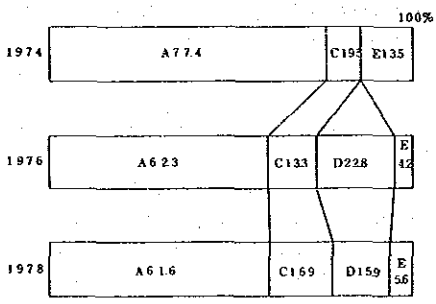


PATIENT RATE BY LEADING DISEASE OF NUEVA VIZCAYA PH

IN PATIENT



OUT PATIENT



(II-10) Batanes Provincial Hospital

This hospital which is placed under considerably uncommon geographical restrictions in comparison with the 18 other hospitals provides 25 beds although approval was made for the provision of 75 beds. (If 50 beds under construction at present were added, it makes 75 beds. 15 beds are temporarily squeezed into the conference room to meet the need, therefore this hospital may be considered to provide 40 beds.)

It offers services in the fields of general internal medicine (20 beds), pediatrics (15 beds), malnutrition (10 beds), contagious diseases (10 beds), OB-GYNE (10 beds) and surgery (10 beds). It actually accommodates men, women and children intermixed depending on the structure of patients at the time. The number of inpatients was 2,701 and that of outpatients was 11,085 in 1976. The number of inpatients was 2,588 and that of outpatients was 13,500 in 1977. Its structure is thus considered to be fluxional.

As to the number of inpatients in each department, those in the pediatrics are conspicuously numerous (45 ∿ 54% of the total number), followed by 37 ∿ 43% in internal medicine. The number of inpatients in the pediatrics as well as in the internal medicine amounts to a high ratio of approximately 90%. On the other hand, the ratio of inpatients in the OB-GYNE is low, approximately 1/4 of the average of Region II (nearly 3%). The ratio of outpatients shows a similar tendency, and the ratio of outpatients in internal medicine plus pediatrics is approximately 80%.

No data was obtainable as to the number of patients by disease, however bronchitis, bronchopneumonia and gastro-entritis are numerous. As regards the variation of patients by seasons, patients are inclined to increase in Feb. ∿ April and Oct. ∿ Dec. in particular, wherein the diseases of the bronchial type and URTI increase.

The average duration of hospitalization is about 7 days, and the bed occupancy rate is 80%.

The departments of operation and delivery lag far behind. As to the frequency of operations, 5 major operations, 2 Caesarian operations and 487 minor operations were conducted in 1977. The hospital provides the anesthetic instruments, but the medical doctor (Director of the hospital) is not the specialist in surgery, therefore the hospital has to request the local anesthetists to perform simple anesthesia. The main types of operations conducted here consist of appendectomies, laparotomies and Caesarians. There were 54 deliveries in 1977, out of which 2 cases required Caesarian operations. The hospital has one operation room and one delivery room.

The radiology department conducts general X-rays alone. The laboratory provides general tests, and chemical tests are not performed.

There were 400 emergency cases in 1978. The frequency of such cases has been increasing every year little by little. Its ambulance's lighting system is out of order and it is actually not in drivable condition. The emergency patients from the other islands are, it is said, sent by the rented motor boats 2 ∿ 3 times a week. The hospital also offers emergency treatment to foreign sailors who fall suddenly ill at sea.

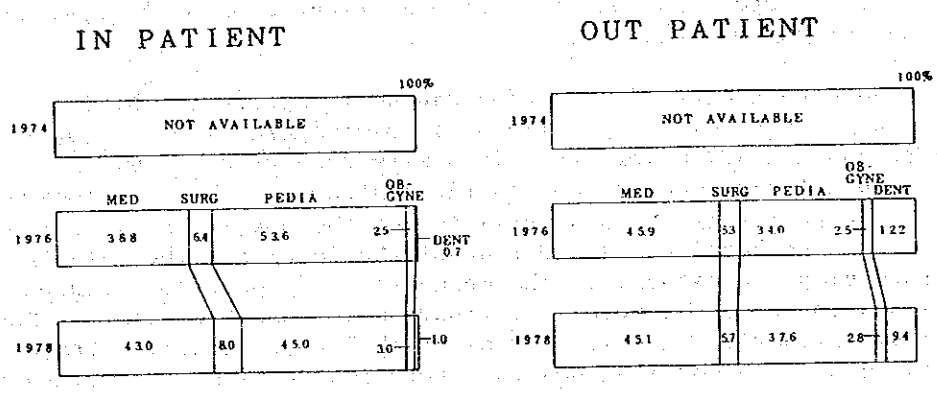
The sterilizer is out of order at present, and the hospital is using kerosene. 3 oxygen cylinders are procured by boat once every three months, and the hospital has 6 spare oxygen cylinders. It does not make use of anesthetic gas cylinders.

As to food service, the hospital cooks food for 46 persons including both patients and staff members, however it does not provide any special food. Laundry it done manually in the hospital, but sometimes outsiders' help is requested.

No training is offered at present, because the Director of the hospital is the only physician. Therefore, when he has to go to Manila for business, he asks a doctor in the Provincial Health Office to look after the hospital. Regarding nurses, it is not rare to recruit them from the mainland, and there are five nurses recruited from the mainland at present.

On the subject of the interrelationship relevant to medical services among the islands, patients are frequently brought in from Dequey Island and Sabtang Island. However it sometimes happens that unmanageable cases are brought in from the EH at Itbayat. When the cases are not manageable in this hospital, they are frequently sent by the sea to Manila or Laoag.

PATIENT RATE BY DEPARTMENT OF BATANES PH



E: Emergency Hospital
P: Provincial "
R: Regional :
M: Medical Center

LIST OF PROJECT HOSPITALS

		Name of hospital	Place	Rank	Bed capacity		Medical dept	Special medical services	Land area m^2	Total floor area m^2	Construction year of main building	Owner of site
					Authorized	Actual						
Region I	I-1	PANGASINAN PROVINCIAL HOSPITAL	Dagupan City	P	200	265	Med, Surg, OB-Gyne Pedia	TB, Malnutrition Infect. disease	16,000	8,460	1925	Owned by the Government
	I-2	BONTOC PROVINCIAL HOSPITAL	Bontoc	P	100	100	Med, Surg, OB-Gyne	Malnutrition	3,000	1,250	1906 Year R 1947	DOH
	I-3	BAGUIO GENERAL HOSPITAL & MEDICAL CENTER	Baguio City	M	350	249	Med, Surg, OB-Gyne Pedia	Physical therepy ICU, CCU Cancer center Infect. disease	26,000	6,500		DOH
	I-4	BENGUET PROVINCIAL HOSPITAL	La Trinidad	P	100	119	Med, Surg, OB-Gyne Pedia	Malnutrition Infect. disease	32,529	1,330	1946	DOH
	I-5	LA UNION PROVINCIAL HOSPITAL	San Fernande	P	150	150	Med, Surg, OB-Gyne Pedia	ICU, TB Malnutrition Infect. disease	40,700	2,250	1953	DOH
	I-6	ABRA PROVINCIAL HOSPITAL	Bangued	P	100	110	Med, Surg, OB-Gyne Pedia	Infect. disease	1,000	1,300	1974	DOH
	I-7	GABRIELA SILANG PROVINCIAL HOSPITAL	Bigan	P	100	88	Med, Surg, OB-Gyne Pedia	ICU, Malnutrition Infect. disease	2,756	2,240		DOH
	I-8	DON MARIANO MARCOS MEMORIAL HOSPITAL	Batac	R	200	100	Med, Surg, OB-Gyne Pedia	ICU, Infect. disease	24,245	2,170	1967	DOH
	I-9	ILOCOS NORTE PROVINCIAL HOSPITAL	Laoag City	P	100	163	Med, Surg, OB-Gyne Pedia	ICU, Infect. disease	12,000	1,690	1939	DOH
Region II	II-1	CAGAYAN REGIONAL HOSPITAL	Tuguegarao	R	200	200	Med, Surg, OB-Gyne Pedia	Infect. disease		1,520		
	II-2	(REGIONAL MENTAL) NON EXISTING	—	—	—	—	—	—	—	—	—	—
	II-3	KALINGA APAYAO PROVINCIAL HOSPITAL	Tabuk	P	100	100	Med, Surg, OB-Gyne Pedia	TB, Malnutrition Infect. disease	60,000	1,240	1973 ∿ 76	DOH
	II-4	APARRI EMERGENCY HOSPITAL	Aparri	E	25	32	(Emergency Hospital)		10,000	750	1971	DOH
	II-5	ISABELA PROVINCIAL HOSPITAL	Ilagan	P	100	100	Med, Surg, OB-Gyne Pedia	TB, Malnutrition Infect. disease	50,000	1,640	1941	DOH
	II-6	QUIRINO PROVINCIAL HOSPITAL	Cabarroguis	P	100	73	Med, Surg, OB-Gyne Pedia		25,000		1973	DOH
	II-7	IFUGAO PROVINCIAL HOSPITAL	Lagawe	P	75	75	Med, Surg, OB-Gyne Pedia		750	920	1952	DOH
	II-8	MAJ. MARCOS VETERAN MEMORIAL HOSPITAL	Bayombong	R	200	115	Med, Surg, OB-Gyne Pedia		23,325		1945	DOH
	II-9	NUEVA VIZCAYA PROVINCIAL HOSPITAL	Bombang	P	50	56	Med, Surg, OB-Gyne Pedia		116,257	1,320	1976	DOH
	II-10	BATANES PROVINCIAL HOSPITAL	Basco	P	75	75	Med, Surg, OB-Gyne Pedia			3,640		

MEDICAL SERVICES BY PROJECT HOSPITAL Region I

Name of Hospital	① Catchment Area: Main Center	Population 10^3 pop.	Annual Number ② of patient: OPD attend 10^3 person	New admission 10^3 person	③ Average Number of patient a day: OPD	In-patient	④ Annual number of deliveries	⑤ Annual number of operations (only major operations)	⑥ Average stay	⑦ Bed Occupancy rate	⑧ Leading disease	⑨ Main operation	⑩ Main infectious diseases	⑪ Medical staff: Physician / Nurse	Total staff	⑫ Number of ambulances
Pangasinan (P-265B)	Dagupan Calasiao Binmaley	598	53.1 60.6 70.7 90.4	10.7 11.5 13.8 15.5	247.7	250.7	1,233 1,424 2,023 2,067	401 357 928 957	5.3	125.4	Gastro-Ent Accident Broncho Pneumonia	Appendectomy Exploratory Lapratomy Radical Excision	PTB Typhoid Influenza	27/44	190	3
Bontoc (P-100B)	Bontoc Sagada Sabangan	153	(9.0) (9.6) (9.8) 17.1	(4.2) (4.3) (4.8) -	86.7	86.7	132 141 162 172	11 10 41 77	3.7	86.0	Bronchitis Upper Resp. Infect Influenza	Caesarian Section		17/23	103	1
Baguio (M-249B)	Baguio City Benguet Prov. Pangasinan	3,487 (Total population of Region I)	(80.9) (114.8) (121.5) 95.0	(11.4) (11.7) (12.3) 12.4	280.0	315.0			9.0	90.0	Upper Resp Gastro-Ent Thyroid		PTB Broncho Pneumonia Bronchitis	44/102	383	2
Benguet (P-119B)	La Trinidad Tublay Itogon	137	7.7 8.0 20.1 16.3	2.2 2.7 3.3 3.6	93.3	91.8	507 566 640 680	59 58 58 79	7.3	92.0	Upper Resp. Infect Gastro-Ent Broncho Pneumonia	Caesarian Section Appendectomy Thyroidectomy	Pneumonia Gastro-Ent Upper Resp. tract Infection	15/23	108	1
La Union (P-150B)	San Fernando San Juan Bauang	271	(20.8) (24.6) (26.8) -	6.7 6.8 7.5 -	148.0	153.0	470 588 680 649	 255	6.1	106.0	Gastro-Ent Pneumonia Influenza	Caesarian Section Appendectomy Exploratory Lap	Gastro-Ent Broncho Pneumonia Influenza	25/36	174	2
Abra (P-110B)	Bangued Tayum Bucay	176	5.2 8.3 10.4 11.3	4.2 4.3 2.3 2.1	1.0	75.0	173 164 171 215	69 65 49 64	7.0	75.0	PTB Gastro-Ent Bronchitis	Appendicitis Caesarian Section Excision Mass	Measles Tetanus Infectious Hepatitis	3/16	76	1
Gabriela Silang (P-88B)	Vigan Bantay Caoayan	142	22.7 26.5 30.4 30.2	4.4 5.7 6.2 5.3	65.0	80.0	279 298 308 313	183 173 189 196	4.5	80.0	PTB, URTI Influenza	Appendectomy Hysterectomy Caesarian Section	Measles Hepatitis Infect Viral Disease	9/23	96	1
Don M.Marcos (R-100B)	Ilocos Norte Ilocos Sur Cagayan	414	7.8 13.2 12.5 12.8	2.9 2.9 2.3 2.7	52.0	56.0	106 123 125 161	190 367 355 247	5.0	56.0	Gastro-Ent Influenza Eractures	Orthopedic Caesarian Section	Gastro-Ent Influenza TB	3/40	143	2
Ilocos Norte (P-163B)	Laoag San Nicolas Sarrit	201	18.2 17.2 20.1 21.9	4.8 5.3 5.1 6.4	81.0	85.0	286 350 386 443	530 663 633 507	4.0	85.0	Gastro-Ent Influenza Bronchitis	Appendectomy Gastro Expiorotory Lap	Measles Typhoid Tetanus	17/33	119	3

Note: 1. ① Data from DOH and DOH Comprehensive Hospital Survey CY1975
2. ② ∿ ⑫ Questionaire of Field Survey
3. ② ④ ⑤ from above to down 1975, 1976, 1977, 1978
4. Block letter of hospital (under the name of hospital) shows the rack of the hospital, and the number shows the actual Bed capacity

P - Provincial hospital
R - Regional hospital
M - Medical Center

5 ② ( ) OPD consultation or total delivery, DOH comprehensive Hospital Survey

MEDICAL SERVICES BY PROJECT HOSPITAL Region II

Name of Hospital	① Catchment Area		② Annual Number of patient		③ Average Number of patients/day		④ Annual number of deliveries	⑤ Annual number of operations (only major operations)	⑥ Average stay	⑦ Bed Occupancy rate	⑧ Leading disease	⑨ Main operation	⑩ Main infectious diseases	⑪ Medical staff		⑫ Number of ambulances
	Main Center	Population 10^3 pup.	OPD attend 10^3 person	New admission 10^3 person	OPD	In-patient								Physician / Nurse	Total staff	
Cagayan (R-200B)	Tuguegarao	2,118 (Total population of Region II)	48.5 50.5 52.6 54.6	8.0 8.5 8.9 10.0	250	185	959 865 999 1,289	509 547 558 641	5.0	80.0	Gastro-Ent Bronchitis Influenza	Appendectomy Caesarian Section Hysterectomy	Typhoid Fever H-Fever Tetanus Nearatum	23/12	136	1
Kalinga-Apayao (P-100B)	Tabuk Lubuagan Pinkpuk	113	15.0 26.4 55.3 16.3	3.7 4.1 4.0 -	130	75	40 20 71 79	138 220 58 180	6.0	70.0	Malaria Pneumonia Influenza	Appendectomy Caesarian Section Exploratory Lap	(No infectious ward)	4/23	95	0
Aparri (E-32B)	Aparri Camalanugan Lal-lo	235	3.0 8.2 7.3 6.1	0.4 1.2 1.9 1.2	16.7	24.0	40	14 29 54 31	6.0	95.9	Gastro-Ent Broncho Pneumonia Bronchitis	Appendectomy C.S.	T.F. Malaria H.F. (No infectious ward)	1/4	21	1
Isabela (P-100B)	Ilagan Gamu San Mariano	550	12.4 12.6 14.6 16.8	5.5 5.7 6.1 6.8	40	77	300		4.2	74.9	Gastro-Ent Bronchitis Upper Respiratory	Laparotomy Caesarian Section Fractinus	Gastro-Ent Bronchitis Malaria	12/24	102	1
Quirino (P-73B)	Diffan Cabarroguis Sagdag	74	5.6 7.5 10.1 15.0	2.1 5.2 6.7 5.1	33	50	44 50 32 62		5.5		Malaria Gastro-Ent Bronchitis	Caesarian Section Appendectomy	Measles Hepatitis (No infectious word)	2/16	66	0
Ifugao (P-75B)	Potia Mayoyao Hungduan	96	4.3 5.0 7.1 8.1	2.4 2.4 2.6 2.7	80	15	91 38 102 137	73 74 81 85	5.0	49.6	Acute Bronchitis Influenza URI	Caesarian Section Hysterectomy Enterectomy	Measles Tetanus Hepatitis	2/19	73	1
Maj. F. Marcos (R-115B)	Bayombong Solano Villaverde	943	13.5 17.6 19.6 21.0	3.5 3.7 4.6 5.3	120	84		210	5.0	84.0	Bronchitis Gastro-Ent Inf. Hepatitis	Exploratory Lap Caesarian Section Appendectomy		12/25	103	1
Nueva Vizcaya (P-56B)	Bambang Dupax del Norte Dupax del Sur	214	10.2 13.5 13.7 14.7	3.9 3.9 4.0 4.0	60	25\40	70 82 90 98	52 58 62 70	6.0	95.0	Current Injuries Respiratory Gastro-Ent	Caesarian Section Exploratory Lap Appendectomy	(No infectious ward)	4/10	48	0
Batanes (P-75B)	Basco	3.98	- - 30.0 -	- - 2.6 -	70	55	- - 54 -	- - 5 -	7.0	80.0	Bronchitis Broucho Pneumonia Gastro-Ent	Appendectomy Caesarian Section Laparotomy	TB	1/17	57	1

PRESENT EMERGENCY SERVICE OF EACH PROJECT HOSPITAL

Upper column: satisfactory
Lower column: in need of repair

Name of hospital	Number of emergency cases					Nearest emergency hospital	Number of vehicles in use			Driver Mechanic
	1974	1975	1976	1977	1978		Ambulance	Jeep	Others	
Pangasinan						12KM	1	1	1	3
							1	0	0	*
Bontoc	185 %	330	294	269	229	None	1	0	1	3
							0	0	0	
Baguio						Several in the city	3			
Benguet	4,273	5,446	6,273	6,200	6,963	5KM				
La Union	6,217	7,277	7,343	8,099	10,151	3KM	1	0	1	3
							0	0	0	
Abra	372	438	873	610	356	None	0	0	0	2
							1	0	0	
Gabriela Silang	4,825	6,705	6,471	8,406	6,637	1.5KM	1			3
							1			*
Don M. Marcos	292	320	345	1,532	962		0			
							1			1
Ilocos Norte	831	898	1,103	1,137	1,130	Several in the city				
Cagayan	32,555	32,920	33,650	34,380	45,475		1	1		4
							0	0		*
Kalinga-Apayao	671	1,241	1,689	837	456	None				
Aparri						12KM	1	0	0	1
							0	0	0	
Isabela							2 - Old model			3
							0			1
Quirino	112	130	170	230	298		0	1	0	1
							0	0	0	
Ifugao	144	180	160	175	169		1	0	1	1
							0	0	2	1
Maj. F. Marcos						5KM	1	2	0	2
							1	0	0	1
Nueva Vizcaya	907	1,753	2,015	2,039	2,050	15KM	Director's personal car used as ambulance. →		1	0
									0	0
Batanes	210	230	241	370	400	None	0			1
							1			1

* Driver can also be a mechanic.

The number of emergency cases of Cagayan RH is questionable.

DISTRIBUTION OF INPATIENTS BY DEPARTMENT

Top fig. - 1974
Middle fig. - 1976
Bottom fig. - 1978

	NEW ADMISSION		MEDICINE		SURGERY		PEDIATRICS		OB-GYNE		DENTAL.		EENT.		PSYCHIATRICS		GU	
		%		%		%		%		%		%		%		%		%
1. PANGASINAN PH	10,066 13,015	100.0	3,274 3,661	32.5 28.1	2,002 2,603	19.9 20.0	2,697 2,813	26.8 21.6	2,805 3,938	27.9 30.3								
2. BONTOC PH					NOT AVAILABLE													
3. BAGUIO GENERAL HOSP. & NC					NOT AVAILABLE													
4. BAGUIO BENGUET PH	2,250 2,705 3,575	100.0	856 1,046 1,270	38.0 38.7 35.5	175 145 367	7.8 5.4 10.3	651 834 1,143	28.9 30.8 32.0	568 680 795	25.2 25.1 22.2								
5. LA UNION PH	5,860 6,779 7,512	100.0	2,727 3,036 3,196	46.5 44.8 42.5	775 779 794	13.2 11.5 10.6	1,586 1,906 2,232	27.0 28.1 29.7	693 1,007 1,236	11.8 14.9 16.5	7 6 5	0.1 0.1 0.1	72 45 49	1.2 0.7 0.7				
6. ABRA PH	3,189 4,194 2,138	100.0	1,124 1,863 952	35.2 44.4 44.5	422 560 347	13.2 13.4 16.2	1,332 1,471 613	41.8 35.0 28.7	301 279 206	9.4 6.7 9.6			10 20 20	0.3 0.5 0.9	0	0		
7. GABRIELA SILANG PH	4,171 5,709 5,323	100.0	2,351 3,484 2,590	56.4 61.0 48.7	525 588 939	12.6 10.3 17.6	833 1,017 782	20.0 17.8 14.7	437 580 960	10.5 10.2 10.0	25 40 52	0.6 0.7 1.0						
8. DON MARIANO MARCOS MH	3,542 2,867 2,717	100.0	1,764 1,485 1,347	49.8 51.8 49.6	963 680 619	27.2 23.7 22.8	419 267 301	11.8 9.3 11.1	269 276 361	7.6 9.6 13.3	0 4 1	0.1 0	126 154 84	3.6 5.4 3.1	1 1 4	0 0 0.1		
9. ILOCOS NORTE PH	4,761 5,449 6,388	100.0	2,058 2,224 3,110	43.2 40.8 48.7	900 1,004 1,149	18.9 18.4 18.0	1,007 1,144 1,106	21.2 21.0 17.3	650 832 843	13.7 15.3 13.2	2	0	39 53 69	0.8 1.0 1.0			107 190 109	2.2 3.5 1.7
REGION I TOTAL	23,773 38,447 40,668	100.0	10,880 16,412 16,126	45.8 42.1 39.7	3,760 5,758 6,818	15.8 15.0 16.8	5,828 9,336 8,990	24.5 24.2 22.1	2,918 6,459 8,339	12.3 16.4 20.5	32 50 60	0.1 0.1 0.1	247 272 220	1.0 0.7 0.5	1 2 4	0 1 0.1 0	107 190 109	0.5 0.5 0.3
1. CAGAYAN RH	7,208 8,507 10,026	100.0	3,056 3,821 3,434	42.4 44.9 34.3	954 1,051 2,121	13.2 12.4 21.2	1,560 1,593 1,985	21.6 18.7 19.8	1,081 1,457 1,839	15.0 17.1 18.3	28 30 50	0.4 0.4 0.5	529 555 597	7.3 6.5 6.0				
2. REGIONAL MENTAL H					NO EXISTING													
3. KALINGA-APAYAO PH	4,242 4,094 3,961	100.0	2,260 3,144 2,200	53.3 76.8 55.5	114 272 172	2.7 6.6 4.3	1,780 1,494 1,400	42.0 36.5 35.3	88 111 189	2.1 2.7 4.8								
4. APARRI EH	1,205 1,250	100.0	646 700	53.6 56.0	75 124	6.2 9.9	353 358	29.3 28.6	131 68	10.9 5.4								
5. ISABELA PH	4,549 5,746 6,800	100.0	2,264 2,990 3,129	0.5 0.7 0.5	874 722 1,854	0.2 0.1 0.3	478 1,406 2,214	0.1 0.2 0.3	8 519 622	0 0.1 0.1	12 16 1	0 0 0	33 12	0 0				
6. QUIRINO PH	2,747 5,175 6,084	100.0	1,796 2,706 2,722	65.4 52.3 44.7	170 722 1,410	6.2 14.0 31.2	722 1,608 1,038	26.3 31.1 17.1	56 136 910	2.0 2.6 15.0	3 3 4	0 0 0						
7. IFUGAO PH	2,386 2,446 2,678	100.0	1,034 1,192 1,190	43.3 48.7 44.4	301 195 252	12.6 8.0 9.4	804 564 961	33.7 23.0 35.9	165 460 235	6.9 18.8 8.8	12 9 8	0.5 0.4 0.3	70 26 32	2.9 1.1 1.2				
8. MAJ. F. MARCOS VETERAN MH	3,133 3,685 5,300	100.0	1,138 1,491 2,247	36.3 40.5 42.4	651 486 594	20.8 13.2 11.2	708 998 1,511	22.6 27.1 28.5	412, 146 393, 169 633, 281	17.8 15.3 17.2	1 34	0 0.6	77 35,113	2.5 4.0				
9. NUEVA VIZCAYA PH	3,804 3,926 4,034	100.0	2,012 2,102 2,112	52.9 53.5 54.3	633 639 645	16.6 16.3 16.0	550 561 567	14.5 14.3 14.1	609 624 630	16.0 15.9 15.6								
10. BATANES PH	2,701 2,588	100.0	995 1,112	36.8 43.0	172 208	6.4 8.0	1,447	53.6	68	2.5	12 19 34	100.0 0.7 100.0						
REGION II TOTAL	27,156 38,412 43,753		13,560 19,087 18,926	49.9 49.7 44.3	3,697 4,334 7,256	13.6 11.3 16.6	6,602 10,084 11,198	24.3 26.3 25.6	2,565 4,068 5,485	9.4 10.6 12.5	28 127	0.3	641	1.6				

*1. Based on the direct hearing on the hospital
*2. Include EENT patients

SOURCES FIELD STUDY QUESTIONNAIRE

DISTRIBUTION OF OUTPATIENTS BY DEPARTMENT

Top fig. - 1974
Middle fig. - 1976
Bottom fig. - 1978

	OPD-ATTENDANCE		MEDICINE		SURGERY		PEDIATRICS		OB-GYNE		DENTAL		PSYCHIATRICS		EENT		GU	
		%		%		%		%		%		%		%		%		%
1. PANGASINAN PH	61,397 60,630 90,426	100.0																
2. BONTOC PH			NOT AVAILABLE															
3. BAGUIO GENERAL HOS. & MC			NOT AVAILABLE															
4. BENGUET PH	5,625 7,962 16,282	100.0	2,288 3,208 9,037	40.7 40.3 55.5	674 1,014 1,568	12.0 12.7 9.6	2,370 3,225 1,258	42.1 40.5 7.7	293 387 2,275	5.2 4.9 14.0	133 2,144	1.7 13.2						
5. LA UNION PH			NOT AVAILABLE															
6. ABRA PH	4,276 8,272 11,307	100.0	1,420 3,536 5,255	33.2 42.7 46.5	450 1,413 2,009	10.5 17.1 17.8	1,146 1,909 2,368	26.8 23.1 20.9	558 339 484	13.0 4.1 4.3	672 1,055 1,161	15.7 12.8 10.3	30 30 30	0.7 0.2 0.3	1	0		
7. GABRIELA SILANG PH	19,825 26,473 30,174	100.0	4,252 5,421 6,929	21.4 20.5 23.0	2,586 4,698 4,620	13.0 17.7 15.3	3,892 6,385 7,411	19.6 23.8 24.6	2,645 2,981 3,630	13.3 11.1 12.0	6,450 6,988 7,584	32.5 26.4 25.1						
8. DON MARIANO MARCOS MH	12,839 13,254 12,811	100.0	5,003 5,538 8,102	39.0 41.8 63.2	537 272 202	4.2 2.1 1.6	1,779 1,346 1,868	13.9 10.2 14.6	246 147 299	1.9 1.1 2.3	2,227 3,438 2,171	17.3 25.9 16.9	2,904 2,503 169	22.6 9.5 1.3	143 10 0	1.1 0.1 0		
9. ILOCOS NORTE PH	16,168 17,197 16,794	100.0	7,531 6,282 8,396	46.6 45.0	3,108 3,166 585	19.2 3.5	2,998 2,412 3,818	18.5 22.7	381 580 725	2.4 3.4 4.3	1,990 4,274 2,749	12.3 16.4	109 385 311	0.7 1.9			51 98 215	0.3 0.6 1.3
REGION I TOTAL	58,733 73,158 87,368	100.0	20,494 23,985 37,719	34.9 32.8 43.2	7,355 10,563 8,984	12.5 14.4 10.3	12,185 15,277 16,723	20.7 20.9 19.1	4,123 4,434 7,413	7.0 6.1 8.5	11,339 15,888 15,806	19.3 21.7 18.1	3,043 2,908 510	5.2 4.0 0.6	143 11 0	0.2 0.1	51 98 215	0.1 0.1 0.2
1. CAGAYAN RH	46,396 50,512 54,628	100.0	12,557 13,243 13,929	27.1 26.2 25.5	7,646 8,332 9,018	16.5 16.5 16.5	12,786 13,472 14,158	27.6 26.7 25.9	8,985 1,671 10,357	19.4 19.1 19.0	2,456 3,142 3,828	5.3 6.2 7.0	1,966 2,652 3,338	4.2 5.3 6.1				
2. REGIONAL MENTAL H			NO EXISTING															
3. KALINGA-APAYAO PH	5,543 26,745 16,254	100.0	2,592 12,277 4,807	46.8 45.9 29.6	1,468 4,910 2,521	26.5 18.4 15.5	1,392 7,378 2,678	25.1 27.6 16.5	91 329 494	1.6 1.2 3.0	1,851 5,754	6.9 35.4						
4. APARRI EH	8,160 6,103	100.0	3,141 2,324	38.4 38.1	836 721	10.2 11.8	3,993 2,775	48.9 45.5	190 283	2.3 4.6								
5. ISABELA PH	11,120 12,588 16,792	100.0	4,890 4,847 7,287	44.0 38.5 43.4	1,958 2,917 4,593	17.6 23.2 27.4	2,676 2,774 3,176	24.1 22.0 18.9	1,297 1,527 1,236	11.7 12.1 7.4	144 217 214	1.3 1.7 1.3	155 306 286	1.4 2.4 1.7				
6. QUIRINO PH	7,638 7,492 14,024	100.0	3,512 3,235 6,410	46.0 43.2 45.7	446 774 909	5.8 10.3 6.5	2,891 2,696 5,361	37.1 36.0 38.2	853 742 1,288	11.2 9.9 9.2	36 45 56	0.5 0.6 0.4						
7. IFUGAO PH	4,221 5,015 8,129	100.0	1,401 1,166 4,128	33.2 23.3 50.8	668 912 1,410	15.8 18.2 17.3	1,171 1,721 2,198	27.7 34.3 27.0	165 460 235	3.9 9.2 2.9	379 372 47	9.0 7.4 0.6	437 384 111	10.4 7.7 1.4				
8. MAJ. F. MARCOS VETERAN MH	11,362 17,643 21,033	100.0	10,864	51.7	3,880	18.4	3,653	17.4	1,384	6.6	1,252	6.0						
9. NUEVA VIZCAYA PH	5,897 13,562 14,745	100.0	2,191 7,015 7,919	37.2 51.7 53.7	1,054 3,536 3,550	17.9 26.1 24.1	400 456 667	6.8 3.4 4.5	8 10 16	0.1 0.1 0.1	2,166 2,268 2,363	36.7 16.7 16.0	51 195 209	0.9 1.4 1.4	27 82 21	0.5 0.6 0.1		
10. BATANES PH	11,085 13,500	100.0	5,085 6,091	45.9 45.1	591 685	5.3 5.1	3,773 5,078	34.0 37.6	281 382	2.5 2.8	1,355 1,264	12.2 9.4						
REGION II TOTAL	80,815 135,159 165,200	100.0	27,143 50,009 63,759	33.6 37.0 38.6	13,240 22,808 27,287	16.4 16.9 16.5	21,316 36,263 39,744	26.4 26.8 24.1	11,399 13,210 15,675	14.1 9.8 9.5	5,181 9,250 14,778	6.4 6.8 8.9						
			SOURCES: FIELD STUDY QUESTIONNAIRE															

REGION I: OUTPATIENT DISTRIBUTION BY MAIN DISEASES

Upper - 1974
Middle - 1976
Lower - 1978

(Note): Re. the Philippine National Disease Incidence, the upper columns are the 1969 ~ 72 average and lower columns for 1974.

Philippines Health Statistics DOH

	1st place		2nd place		3rd place		4th place		5th place		6th place		7th place		8th place		9th place		10th place			
	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%		
PHILIPPINE NATIONAL DISEASE INCIDENCE (per 1,000 pop.)	Influenza (A)		Gastro-ent. (A)		TB (A)		Pneumonia (A)		Malaria (A)		Pertussis (A)		Measles (A)		Dysentery (A)		Malig. growth (B)		Infect. hepatitis (A)			
	790.6	34.9	589.3	26.0	371.1	16.4	231.9	10.2	75.7	3.3	60.8	2.7	60.8	2.7	48.2	2.1	26.5	1.2	12.2	0.5		2,267.1
	Influenza (A)		Gastro-ent. (A)		TB (A)		Pneumonia (A)		Malaria (A)		Dysentery (A)		Measles (A)		Pertussis (A)		Malig. growth (B)		Infect. hep. (A)			
	717.5	33.3	592.9	29.5	343.1	15.9	224.4	10.4	66.1	3.1	56.8	2.6	55.5	2.6	53.2	2.5	30.8	1.4	14.4	0.7		2,154.7
1. PANGASINAN MC (Lower column is for 1977)	Accidents (D)		Bronchitis (A)		Gastro-ent. (A)		PTB (A)		Pneumonia (A)		Gastritis (A)											
	4,309	36.5	1,823	15.4	1,824	15.4	1,824	15.4	1,171	9.9	868	7.3										1,181.9
	Pneumonia (A)		Accidents (D)		Bronchitis (A)		Gastro-ent. (A)		PTB (A)		Gastritis (A)		Preg. related complic. (C)									
	1,676	18.9	1,631	18.4	1,629	18.4	1,312	14.8	1,103	12.4	1,008	11.4	504	5.7								8,863
	PTB (A)		Gastro-ent. (A)		Accidents (D)		Bronchitis (A)		Pneum. (A)		Gastritis (A)											
	3,408	26.0	2,772	21.1	2,174	16.6	1,909	14.6	1,446	11.0	1,398	10.7										13,107
2. BONTOC PH	Bronchitis (A)		URTI (A)		PTB (A)		Influenza (A)		Dermatitis (E)		Ulcer (B)		EEN diseases (D)		Gastro-ent. (A)		Dysentery (A)		Pneumonia (A)			
	354	25.3	276	19.7	186	13.3	153	10.9	128	9.2	123	8.8	65	4.6	52	3.7	51	3.6	10	0.7		1,398
	URTI (A)		Bronchitis (A)		Dermatitis (E)		Influenza (A)		Ulcer (B)		PTB (A)		Gastro-ent. (A)		EEN Diseases (E)		Dysentery (A)		Pneumonia (A)			
	500	29.7	303	18.0	203	12.1	160	9.5	152	9.0	138	8.2	82	4.9	66	3.9	48	2.9	31	1.8		1,683
	Bronchitis (A)		URTI (A)		Dermatitis (E)		PTB (A)		EEN Diseases (E)		Gastro-ent. (A)		Ulcer (B)		Dysentery (A)		Influenza (A)		Pneumonia (A)			
	1,195	28.3	1,188	28.1	346	8.2	339	8.0	295	7.0	272	6.4	258	6.1	156	3.7	152	3.6	27	0.6		4,228
3. BAGUIO MC																						
4. BENGUET PH	URTI (A)		Bronchitis (A)		Gastro-ent. (A)		Broncho-pneumonia(A)		Influenza (A)		Pneumonia (A)		PTB (A)		Dermatitis (E)		Gastritis (A)		Measles (A)			
	1,178	40.7	474	16.4	355	12.3	320	11.0	213	7.4	96	3.3	74	2.6	71	2.5	70	2.4	45	1.6		2,896
	URTI (A)		Bronchitis (A)		Broncho-pneumonia(A)		Influenza (A)		Gastro-ent. (A)		Pneumonia (A)		PTB (A)		Gastritis (A)		Measles (A)		Dermatitis (E)			
	2,218	27.8	2,048	25.7	1,778	22.3	1,034	13.0	275	3.4	176	2.2	188	2.4	148	1.9	56	0.7	51	0.6		7,972
	Gastro-ent. (A)		Bronchitis (A)		Influenza (A)		URTI (A)		PTB (A)		Gastritis (A)		Pneumonia (A)		Broncho-pneum. (A)		Dermatitis (E)		Measles (A)			
	1,253	21.3	1,171	19.9	1,122	19.1	903	15.4	371	6.3	314	5.3	298	5.1	290	4.9	84	1.4	69	1.2		5,875
5. LA UNION PH	Gastro-ent. (A)		Influenza (A)		Bronchitis (A)		PTB (A)		Pneumonia (A)													
	653	33.0	574	29.0	318	16.1	355	18.0	77	3.9												1,977
	Gastritis		Influenza (A)		Bronchitis (A)		PTB (A)		Pneumonia (A)													
	743	29.3	474	18.7	580	22.9	373	14.7	367	14.5												2,537
			Influenza (A)		Bronchitis (A)		PTB (A)		Pneumonia (A)													
	887	31.4	564	22.2	527	20.8	325	12.8	523	20.6												2,826
6. ABRA PH	PTB (A)		Influenza (A)		Ulcer (B)		Bronchitis (A)		UTI (A)		Accidents (D)		Gastro-ent. (A)		Normal deliv. (C)		Tetanus (A)		Other respir. diseases (A)			
	351	17.9	220	11.2	211	10.8	208	10.6	200	10.2	193	9.9	192	9.8	150	7.7	121	6.2	112	5.7		1,958
	PTB (A)		Ulcer (B)		Gastro-ent. (A)		Bronchitis (A)		Influenza (A)		Normal deliv. (C)		Accidents (D)		UTI (A)		Tetanus (A)		Other respir. diseases (A)			
	597	23.8	324	12.9	321	12.8	306	12.2	282	11.2	172	6.9	150	6.0	126	5.0	118	4.7	114	4.5		2,510
	Bronchitis (A)		PTB (A)		Gastro-ent. (A)		Normal deliv. (C)		UTI (A)		Influenza (A)		Accidents (D)		Ulcer (B)		Other respir. diseases (A)		Tetanus (A)			
	462	26.0	350	19.7	311	17.5	188	10.6	138	7.8	125	7.0	112	6.3	39	2.2	37	2.1	18	1.0		1,780
7. GABRIELA SILANG PH	Influenza (A)		Traffic accid. (D)		URTI (A)		Gastro-ent. (A)		PTB (A)		Pneumonia (A)		Acute gastritis (A)		Heart diseases (B)		Bronchitis (A)					
	592	21.8	545	20.1	421	15.5	241	8.9	221	8.1	193	7.1	186	6.9	158	5.8	135	5.0				2,712
	Influenza (A)		Traffic accid. (D)		URTI (A)		Acute gastritis (A)		Bronchitis (A)		Gastro-ent. (A)		Pneumonia (A)		PTB (A)		Heart diseases (B)					
	782	18.6	675	16.1	598	14.2	435	10.4	428	10.2	386	9.2	345	8.2	333	7.9	178	4.2				4,198
	Influenza (A)		Traffic accid. (D)		URTI (A)		PTB (A)		Acute gastritis (A)		Bronchitis (A)		Gastro-ent. (A)		Pneumonia (A)		Heart diseases (A)					
	1,543	21.6	1,401	19.6	1,085	15.2	798	11.2	629	8.8	608	8.5	487	6.8	345	4.8	209	2.9				7,145
8. DON MARIANO MARCOS MH	Gastro-ent. (A)		Influenza (A)		PTB (A)		Bronchial asthma (E)		Heart diseases (B)		Acute resp. organ infection (A)		Gastritis (A)		Pneumonia (A)		Fractures (E)		Dysentery (A)			
	774	31.9	337	13.9	312	12.9	284	11.7	208	8.6	152	6.3	129	5.3	112	4.6	67	2.8	52	2.1		2,427
	Gastro-ent. (A)		Influenza (A)		Heart diseases (B)		Bronchial asthma (E)		PTB (A)		Pneumonia (A)		Gastritis (A)		Fractures (E)		Acute resp.infect.(A)		Dysentery (A)			
	520	20.4	369	14.5	326	12.8	301	11.8	295	11.6	259	10.1	186	7.3	150	5.9	92	3.6	55	2.2		2,553
	Influenza (A)		Gastro-ent. (A)		Fractures (E)		Acute resp. organ infection (A)		PTB (A)		Bronchial asthma (E)		Gastritis (A)		Dysentery (A)		Heart diseases (B)		Pneumonia (A)			
	278	24.1	225	19.5	130	11.3	128	11.1	113	9.8	101	8.8	54	4.7	50	4.3	46	4.0	29	2.5		1,154
9. ILOCOS NORTE PH	Gastro-ent. (A)		Bronchitis (A)		PTB (A)		Influenza (A)		Dysentery (A)		Diarrhea (A)		Hepatitis		Broncho-pneumonia		Pneumonia		Measles			
	1,856	23.5	970	12.3	960	12.2	790	10.0	760	9.6	636	8.1	612		552		478		284			7,898
	PTB (A)		Gastro-ent. (A)		Hepatitis (A)		Influenza (A)		Broncho-pneumonia (A)		Bronchitis (A)		Dysentery (A)		Diarrhea (A)		Pneumonia (A)		Measles (A)			
	1,935	20.0	1,440	14.9	960	9.9	946	9.8	936	9.7	825	8.5	804	8.3	792	8.2	744	7.7	298	3.1		9,680
	PTB (A)		Influenza (A)		Gastro-ent. (A)		Bronchitis (A)		Diarrhea (A)		Hepatitis (A)		Pneumonia (A)		Broncho-pneumonia(A)		Dysentery (A)		Measles (A)			
	2,036	17.1	1,560	13.1	1,530	12.8	1,280	10.7	1,176	9.9	1,098	9.2	990	8.3	912	7.6	869	7.3	484	4.1		11,935

REGION I: INPATIENT DISTRIBUTION BY MAIN DISEASES

Upper - 1974 (Note): Re. the Philippine National Disease Incidence, the upper columns are
Middle - 1976 the 1969 ~ 72 average and lower columns for 1974.
Lower - 1978

Philippine Health Statistics DOH

	1st place		2nd place		3rd place		4th place		5th place		6th place		7th place		8th place		9th place		10th place			
	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%		
PHILIPPINE NATIONAL DISEASE INCIDENCE (per 1,000 pop.)	Influenza (A)		Gastro-ent. (A)		TB (A)		Pneumonia (A)		Malaria (A)		Pertussis (A)		Measles (A)		Dysentery (A)		Malig. growth (B)		Infect. hepatitis (A)			
	790.6	34.9	589.3	26.0	371.1	16.4	231.9	10.2	75.7	3.3	60.8	2.7	60.8	2.7	48.2	2.1	26.5	1.2	12.2	0.5		2,267.1
	Influenza (A)		Gastro-ent. (A)		TB (A)		Pneumonia (A)		Malaria (A)		Dysentery (A)		Measles (A)		Pertussis (A)		Malig. growth (B)		Infect. hepatitis (a)			
	717.5	37.3	592.9	27.5	343.1	15.9	224.4	10.4	66.1	3.1	56.8	2.6	55.5	2.6	53.2	2.5	30.8	1.4	14.4	0.7		2,154.7
1. PANGASINAN MC	Gastro-ent. (A)		Accidents (D)		Gastritis (A)		Abortion (C)		Abnormal deliv. (C)		Pneumonia (A)		PTB (A)		Bronchitis (A)							
	1,175	27.5	691	16.2	481	11.3	472	11.1	410	9.6	399	9.4	379	8.9	259	6.1						4,266
	Gastro-ent. (A)		Accidents (D)		Abortion (C)		Gastritis (A)		Abnormal deliv. (C)		Pneumonia (A)		PTB (A)		Bronchitis (A)							
	934	20.9	753	16.9	563	12.6	511	11.4	482	10.8	461	10.8	437	9.8	327	7.3						4,468
	Abnormal deliv. (C)		Gastro-ent. (A)		Accidents (D)		Pneumonia (A)		PTB (A)		Abortion (C)		Gastritis (A)		Bronchitis (A)							
	1,823	27.2	1,045	15.6	918	13.7	719	10.7	626	9.4	615	9.2	574	8.6	373	5.6						6,693
2. BONTOC PH	Bronchitis (A)		Influenza (A)		Gastro-ent. (A)		Pneumonia (A)		URTI (A)		Ulcers (B)		PTB (A)		Dysentery (A)		Dermatitis (E)		EEN Diseases (E)			
	748	29.3	475	18.6	323	12.7	224	8.8	189	7.4	181	7.1	164	6.4	149	5.8	61	2.4	35	1.4		2,549
	Bronchitis (A)		Influenza (A)		Gastro-ent. (A)		URTI (A)		PTB (A)		Ulcers (B)		Dermatitis (E)		Dysentery (A)		Pneumonia (A)		EEN diseases (E)			
	823	23.9	672	19	541	15.7	516	15.0	234	6.8	283	6.8	207	6.0	178	5.2	25	0.7	10	0.3		3,439
	Bronchitis (A)		Gastro-ent. (A)		Influenza (A)		URTI (A)		Dysentery (A)		Pneumonia (A)		Ulcers (B)		PTB (A)		Dermatitis (E)		EEN diseases (E)			
	1,174	36.0	386	11.8	353	10.8	299	9.2	251	7.7	243	7.4	230	7.0	175	5.4	90	2.8	62	1.9		3,263
3. BAGUIO MC																						
4. BENGUET PH	URTI (A)		Bronchitis (A)		Broncho-pneumonia(A)		Gastro-ent. (A)		Influenza (A)		Gastritis (A)		PTB (A)		Measles (A)		Dermatitis (E)		Pneumonia (A)			
	1,340	39.7	566	16.8	406	12.0	358	10.6	238	7.0	109	3.2	105	3.1	99	2.9	99	2.9	56	1.7		3,376
	URTI (A)		Broncho-pneumonia(A)		Bronchitis (A)		Influenza (A)		Gastro-ent. (A)		Pneumonia (A)		PTB (A)		Gastritis (A)		Measles (A)		Dermatitis (E)			
	2,579	26.3	2,366	24.1	2,284	23.3	1,133	11.6	468	4.8	404	4.1	233	2.4	193	2.0	85	0.9	55	0.6		9,800
	URTI (A)		Influenza (A)		Pneumonia (A)		Gastro-ent. (A)		Bronchitis (A)		Gastritis (A)		Broncho-pneumonia(A)		PTB (A)		Measles (A)		Dermatitis (E)			
	1,112	20.6	809	15.0	654	12.1	632	11.7	600	11.1	575	10.7	489	9.1	290	5.4	142	2.6	93	1.7		5,396
5. LA UNION RH (Lower column is for 1977)	Gastro-ent. (A)		Influenza (A)		PTB (A)		Bronchitis (A)		Pneumonia (A)													1,980
	653	33.0	577	29.1	355	17.9	318	16.1	77	3.9												
	Gastro-ent. (A)		Bronchitis (A)		Influenza (A)		PTB (A)		Pneumonia (A)													2,537
	743	29.3	580	22.9	474	18.7	373	14.7	367	14.5												
	Gastro-ent. (A)		Influenza (A)		Bronchitis (A)		Pneumonia (A)		PTB (A)													2,826
	887	31.4	564	20.0	527	18.6	523	18.5	325	11.5												
6. ABRA PH	PTB (A)		Normal deliv. (C)		UTI (A)		Gastro-ent. (A)		Bronchitis (A)		Influenza (A)		Accidents (D)		Ulcers (B)		Tetanus (A)		Other respir. diseases(A)			
	342	19.3	220	12.4	212	11.9	200	11.3	199	11.2	180	10.0	112	6.3	111	6.3	100	5.6	100	5.6		
	PTB (A)		Gastro-ent. (A)		Ulcers (B)		Bronchitis (A)		Influenza (A)		Normal deliv. (C)		UTI (A)		Other respir.dis. (A)		Accidents (D)		Tetanus (A)			
	304	15.1	301	14.9	301	14.9	284	14.1	263	13.1	164	8.1	110	5.5	100	5.0	98	4.9	90	4.5		
	Bronchitis (A)		Gastro-ent. (A)		PTB (A)		Normal deliv. (C)		UTI (A)		Influenza (A)		Accidents (D)		Ulcers (B)		Other respir.dis.(A)		Tetanus (A)			
	460	25.7	350	19.6	344	19.3	185	10.4	134	7.5	122	6.8	109	6.1	34	1.9	34	1.9	15	0.8		
7. GABRIELA SILANG PH	Influenza (A)		Heart diseases (B)		Pneumonia (A)		PTB (A)		Traffic accidents (D)		Gastro-ent. (A)		Acute gastritis (A)		Bronchitis (A)		URTI (A)					
	152	12.0	140	11.1	132	10.5	130	10.3	128	10.1	126	10.0	118	9.3	105	8.3	98	5.5				
	Bronchitis (A)		URTI (A)		Traffic accidents (D)		Pneumonia (A)		Gastro-ent. (A)		PTB (A)		Influenza (A)		Acute gastritis (A)		Heart diseases (B)					
	176	12.3	165	11.6	159	11.1	156	10.9	155	10.9	152	10.7	149	10.4	145	10.2	120	8.4				
	Traffic accidents(D)		URTI (A)		Gastro-ent. (A)		Pneumonia (A)		PTB (A)		Acute gastritis (A)		Pneumonia (A)		Bronchitis (A)		Heart diseases (B)					
	298	14.7	228	11.3	219	10.8	215	10.6	215	10.6	214	10.6	211	10.4	179	8.9	132	6.5				
8. DON MARIANO MARCOS MH	Influenza (A)		Gastro-ent. (A)		Acute respir. infect. (A)		Gastritis (A)		Heart diseases (B)		PTB(A)		Bronchial asthma (E)		Pneumonia (A)		Fractures (D)		Dysentery (A)			
	211	23.4	170	18.9	149	16.6	88	9.8	59	6.5	58	6.4	44	4.9	43	4.8	40	4.4	48	4.2		900
	Gastro-ent. (A)		Influenza (A)		Fractures (D)		Gastritis (A)		Heart diseases (B)		Acute respir. infect. (A)		PTB (A)		Bronchial asthma (E)		Fractures (D)		Dysentery (A)			
	200	19.9	183	18.2	137	13.6	129	12.8	95	9.4	72	7.2	65	6.5	56	5.6	47	4.7	22	2.2		1,006
	Gastro-ent. (A)		Influenza (A)		Fractures (D)		Bronchial asthma (E)		Gastritis (A)		Heart diseases (B)		PTB (A)		Bronchial asthma (E)		Pneumonia (A)		Dysentery (A)			
	205	22.4	165	18.1	110	12.0	107	11.7	83	9.1	58	6.3	56	6.1	51	5.6	41	4.5	38	4.2		914
9. ILOCOS NORTE PH	Gastro-ent. (A)		Influenza (A)		PTB (A)		Bronchitis (A)		Broncho-pneumonia(A)		Hepatitis (A)		Dysentery (A)		Diarrhea (A)		Measles (A)		Pneumonia (A)			
	298	30.6	251	25.8	147	15.1	143	14.7	56	5.8	25	2.6	24	2.5	23	2.4	3	0.3	2	0.2		972
	Gastro-ent. (A)		Influenza (A)		Bronchitis (A)		PTB (A)		Broncho-pneumonia(A)		Dysentery (A)		Diarrhea (A)		Hepatitis (A)		Pneumonia (A)		Measles (A)			
	411	32.7	398	31.6	162	12.9	139	11.0	63	5.0	25	2.0	19	1.5	15	1.2	15	1.2	11	0.9		1,258
	Gastro-ent. (A)		Influenza (A)		Bronchitis (A)		PTB (A)		Broncho-pneumonia (A)		Diarrhea (A)		Hepatitis (A)		Measles (A)		Dysentery (A)		Pneumonia (A)			
	790	38.6	508	24.8	217	10.6	155	7.6	135	6.6	92	4.5	45	2.2	38	1.9	34	1.7	34	1.7		2,048

REGION II: OUTPATIENT DISTRIBUTION BY MAIN DISEASE

Upper - 1974
Middle - 1976
Lower - 1978

(Note): The Cagayan Provincial Hospital Data is for Aparri Emergency Hospital.

	1st place		2nd place		3rd place		4th place		5th place		6th place		7th place		8th place		9th place		10th place			Total No.
	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%	No. patients	%		
1. CAGAYAN RH	Gastro-ent. (A)		Bronchitis (A)		Influenza (A)		Malaria (A)		Pneumonia (A)		Pertussis (A)		Measles (E)		Dysentery (A)		Diarrhea(A)					
	4,275	21.3	3,210	16.0	2,903	14.5	2,730	13.6	2,545	12.7	1,641	8.2	1,535	7.6	998	5.0	246	1.2				20,083
	Gastro-ent.		Bronchitis		Influenza		Malaria		Pneumonia		Diarrhea (A)		Dysentery (A)		Pertussis (A)		Measles (E)					
	4,505	17.8	3,438	13.6	3,131	12.3	2,958	11.7	2,773	10.9	2,689	10.6	2,126	8.4	1,872	7.4	1,872	7.4				25,364
	Gastro-ent.		Bronchitis		Influenza		Malaria		Pneumonia		Diarrhea		Dysentery		Pertussis		Measles					
	4,731	17.3	3,666	13.4	3,359	12.3	3,186	11.7	3,001	11.0	2,917	10.7	2,354	8.6	2,100	7.7	2,000	7.3				27,317
2. REGIONAL MENTAL H																						
3. KALINGA-APAYAO PH	Malaria (A)		Influenza (A)		URTI (A)		Bronchitis (A)		Gastro-ent. (A)		Gastritis (A)		Pneumonia (A)		Accidents (D)		Anemia (E)		Diarrhea (E)			
	609	21.5	471	16.7	332	11.7	317	11.2	277	9.8	221	7.8	196	6.9	155	5.5	138	4.9	110	3.9		2,826
	URTI (A)		Malaria (A)		Accidents (D)		Influenza (A)		Bronchitis (A)		Gastritis (A)		Anemia (E)		Gastro-ent. (A)		Pneumonia (A)		Diarrhea (E)			
	3,928	27.4	2,700	18.8	1,473	10.3	1,364	9.5	1,227	8.6	982	1.9	747	5.2	736	5.1	684	4.8	491	3.4		14,332
	Malaria (A)		Influenza (A)		Bronchitis (A)		URTI (A)		Gastro-ent. (A)		Gastritis (A)		Pneumonia (A)		Accidents (D)		Anemia (E)		Diarrhea (E)			
	1,155	21.0	1,120	20.3	735	13.3	635	11.5	472	8.6	425	7.7	297	5.4	280	5.1	225	4.1	162	2.9		5,506
4. CAGAYAN PH	Others		Gastro-ent.		Broncho-pneumonia		Influenza		Dermatosis		Respir. infect.		OB-GYNE		Complications surgery req. diseases		Hepatitis (A)		Bronchitis (A)			
	3,537	45.0	650	8.3	527	6.7	505	6.4	496	6.3	491	6.2	460	5.9	427	5.4	394	5.0	372	4.7		7,859
	Others		Gastro-ent.		Broncho-pneumonia		Influenza		Resp. infections		Surg. req. disease		Bronchitis (A)		OB-GYNE		Hepatitis		Nephritis (A)			
	1,983	32.6	610	10.3	581	9.8	540	9.1	506	8.5	498	8.4	401	6.7	340	5.7	340	6.7	187	3.1		5,941
5. ISABELA PH	Gastro-ent. (A)		Bronchitis (A)		Malaria (A)		URTI (A)		Accidents (D)		PTB (A)		Influenza (A)		Urinogenital infections (E)		Pneumonia (A)					
	2,320	36.1	732	11.4	633	9.8	581	9.0	570	8.9	445	6.9	456	7.1	456	7.1	242	3.8				6,435
	Gastro-ent. (A)		Bronchitis (A)		Malaria (A)		URTI (A)		Accidents (D)		PTB (A)		Influenza (A)		"		Pneumonia					
	1,843	25.5	992	13.7	830	11.5	689	9.5	704	9.7	698	9.7	573	7.9	594	8.2	309	4.3				7,232
	Gastro-ent. (A)		Bronchitis (A)		Malaria (A)		URTI (A)		Accidents (D)		PTB (A)		Influenza (A)		"		Pneumonia					
	1,924	22.3	1,203	14.0	1,019	11.8	796	9.2	864	10.0	739	8.6	768	8.9	718	8.3	578	6.7				8,609
6. QUIRINO PH (Lower column is for 1977)	Malaria (A)		Koch's (A)		Gastro-ent. (A)		High blood pressure (B)		Ulcer (B)		Influenza (A)		Bronchitis (A)		URTI (A)		UTI (A)		Pneumonia (A)			
	2,022	31.6	1,258	19.6	1,055	16.5	934	15.4	502	7.8	201	3.1	151	2.4	122	1.9	63	1.0	45	0.7		6,403
	Malaria (A)		Gastro-ent. (A)		Koch's (A)		High blood pressure (B)		Influenza (A)		Ulcers (B)		URTI (A)		Bronchitis (A)		UTI (A)		Pneumonia (A)			
	1,530	26.0	1,255	21.3	1,120	19.0	554	9.4	350	6.0	310	5.3	250	4.3	221	3.8	190	3.2	101	1.8		5,881
	Malaria (A)		Gastro-ent. (A)		Koch's (A)		High blood pressure (B)		URTI (A)		Influenza (A)		Pneumonia (A)		UTI (A)		Ulcers (B)					
	2,432	30.7	2,050	25.9	1,851	23.4	374	4.7	362	4.6	260	3.3	255	3.2	211	2.7	115	1.5				7,910
7. IFUGAO PH	Acute respir. infect. (A)		Broncho-pneumonia(A)		Acute tonsilitis(A)		Influenza (A)		URI (A)		PTB (A)		Malaria (A)		Acute colitis (A)		Pneumonia (A)		Acute gastro-enteritis (A)			
	448	16.2	378	13.7	369	13.4	360	13.0	290	10.5	250	9.0	220	8.0	188	6.8	156	5.6	105	3.8		2,764
	Acute respir. infec. (A)		Broncho-pneumonia(A)		URI (A)		Influenza (A)		PRB (A)		Acute colitis (A)		Malaria (A)		Acute tonsilitis(A)		Pneumonia (A)		Acute gastro-ent.(A)			
	520	22.1	390	16.5	338	14.3	220	9.3	180	7.6	174	7.4	168	7.1	159	6.7	110	4.7	99	4.2		2,358
	Broncho-pneumonia (A)		URI (A)		Acute respir. infection (A)		Malaria (A)		Acute colitis (A)		Acute gastro-ent.(A)		Influenza (A)		PTB (A)		Acute tonsilitis (A)		Pneumonia (A)			
	430	24.1	270	11.8	260	14.6	140	7.8	136	7.6	135	7.6	118	6.6	108	6.1	98	5.5	90	5.0		1,785
8. MAJ. F. MARCOS VETERAN MH			Bronchitis (A)		PTB (A)		Gastro-ent. (A)		Dermatosis (E)		Other digest. tract ailments (A)		Pregnancy rel. complications (C)		Influenza (A)		Hepatitis (A)		Malaria (A)			
			467	19.5	411	17.2	400	16.7	327	13.7	304	12.7	217	9.1	109	4.6	106	4.4	54	2.3		2,395
9. NUEVA VIZCAYA PH	Respiratory diseases (A)		External injuries(D)		Bronchitis (A)		Gastro-ent. (A)		Influenza (A)		Normal deliv. (C)		Pregnancy rel. complications (C)		Uro-genital tract ailments (E)		Digestive tract ailments (A)		PTB (A)			
	907	30.5	692	23.2	384	12.9	296	9.9	199	6.7	146	4.9	143	4.8	106	3.6	68	2.3	36	1.2		2,977
	Respirat. diseases (A)		External injuries(D)		Gastro-ent. (A)		Normal deliv. (C)		Pregn. relat. complications (C)		PTB(A)		Uro-genital ailments (E)		Influenza (A)		Digest. tract ailments (A)		Bronchitis (A)			
	2,015	26.3	1,744	22.8	1,308	17.1	525	6.9	486	6.4	387	5.1	336	4.4	225	4.2	265	3.5	257	3.4		7,648
	Respirat. diseases (A)		External injuries(D)		Gastro-ent. (A)		Digestive tract ailments (A)		Pregn. related complic. (C)		PTB (A)		Normal deliv. (C)		Uro-genital tract ailments (E)		Influenza (A)		Bronchitis (A)			
	2,048	25.2	1,296	15.9	1,098	13.5	738	9.1	839	10.3	558	6.9	537	6.6	457	5.6	350	4.3	213	2.6		8,128
10. BATANES PH																						

REGION II: INPATIENT DISTRIBUTION BY MAIN DISEASE

Upper - 1974 (Note): The Cagayan Provincial Hospital (4) data is for Aparri Emergency Hospital
Middle - 1976
Lower - 1978

	1st place	2nd place	3rd place	4th place	5th place	6th place	7th place	8th place	9th place	10th place		
	No. patients / %	No. patients / %	No. patients / %	No. patients / %	No. patients / %	No. patients / %	No. patients / %	No. patients / %	No. patients / %	No. patients / %		
1. CAGAYAN RH	Gastro-ent. (A)	Bronchitis (A)	Influenza (A)	Malaria (A)	Pneumonia (A)	Diarrhea (A)	PTB (A)	Dysentery (A)	Pertussis (A)	Gonorrhea (A)		
	952 / 31.6	930 / 30.9	352 / 11.7	292 / 9.7	143 / 4.8	81 / 2.7	71 / 2.4	71 / 2.4	63 / 2.1	55 / 1.8		3,010
	Gastro-ent. (A)	Bronchitis (A)	Influenza (A)	Malaria (A)	Pneumonia (A)	Diarrhea (A)	PTB (A)	Pertussis (A)	Gonorrhea (E)	Dysentery (A)		
	1,214 / 31.1	1,058 / 29.1	440 / 11.3	380 / 9.7	231 / 5.9	169 / 4.3	156 / 4.0	88 / 2.3	82 / 2.1	81 / 2.1		3,899
	Gastro-ent. (A)	Bronchitis (A)	Influenza (A)	Malaria (A)	Pneumonia (A)	Diarrhea (A)	PTB (A)	Dysentery (A)	Pertussis (A)	Gonorrhea (A)		
	1,544 / 30.3	1,177 / 23.1	559 / 11.0	499 / 9.8	350 / 6.7	288 / 5.6	275 / 5.4	200 / 3.9	110 / 2.2	98 / 1.9		5,100
2. REGIONAL MENTAL H												
3. KALINGA-APAYAO PH	URT (A)	Influenza (A)	Malaria (A)	Bronchitis (A)	Accidents (D)	Gastritis and digest. tract ulcers (A)	Gastro-ent. (A)	Diarrhea (A)	Anemia (E)	Pneumonia (A)		
	1,402 / 25.4	1,003 / 18.2	860 / 15.6	744 / 13.5	416 / 7.5	354 / 6.4	252 / 4.6	202 / 3.7	178 / 3.2	104 / 1.9		5,515
	Malaria (A)	Influenza (A)	URTI (A)	Bronchitis (A)	Gastritis dig. tract ulcers (A)	Gastro-ent. (A)	Pneumonia (A)	Accidents (D)	Anemia (E)	Diarrhea (A)		
	880 / 23.6	753 / 20.2	420 / 11.3	364 / 9.8	315 / 8.5	295 / 7.9	244 / 6.5	216 / 5.8	124 / 3.3	116 / 3.1		3,727
	Pneumonia (A)	Malaria (A)	Influenza (A)	Bronchitis (A)	URTI (A)	Accidents (D)	Gastro-ent. (A)	Gastritis and dig. tract ulcers(A)	Anemia (E)	Diarrhea (A)		
	910 / 30.1	470 / 15.5	369 / 12.2	304 / 10.0	271 / 9.0	176 / 5.8	175 / 5.8	128 / 4.2	113 / 3.7	109 / 3.6		3,025
4. CAGAYAN PH		Broncho-pneumonia(A)	Gastro-ent.	Respiratory infections	Bronchitis (A)	Cuts and abrasions	Disease req. surgery	Malaria (A)	Pyelitis and nephritis	Influenza	OB-GYNE ailments	
		152 / 17.5	148 / 17.1	96 / 11.1	94 / 10.8	92 / 10.6	92 / 10.6	81 / 9.3	41 / 4.7	37 / 4.3	34 / 3.9	867
		Broncho-pneumonia(A)	Respiratory infections	Gastro-ent.	Diseases req. surgery	Influenza	Malaria	OB-GYNE ailments	Bronchitis	Pyelitis and nephritis	Cuts and abrasions	
		181 / 18.6	126 / 12.9	98 / 10.1	92 / 9.4	87 / 8.7	85 / 8.7	82 / 8.4	81 / 8.3	81 / 8.3	62 / 6.4	975
5. ISABELA PH (Lower column is for 1977)	Gastro-ent. (A)	Malaria (A)	Accidents (D)	URTI (A)	Bronchitis (A)	Broncho-TB (A)	Influenza (A)	Uro-genital ailments (E)	Pneumonia (A)			
	512 / 29.4	324 / 18.6	210 / 12.0	176 / 10.1	156 / 8.9	143 / 8.2	97 / 5.6	83 / 4.8	43 / 2.5			1,744
	Gastro-ent. (A)	Bronchitis (A)	Malaria (A)	Broncho PTB (A)	URTI (A)	Influenza (A)	Uro-genital ailments (E)	Pneumonia (A)	Accidents (D)			
	681 / 23.6	401 / 13.9	380 / 13.2	345 / 12.0	285 / 9.9	263 / 9.1	233 / 8.1	159 / 5.5	139 / 4.8			2,886
	Gastro-ent. (A)	Bronchitis (A)	Malaria (A)	URTI (A)	Accidents (D)	Broncho-TB (A)	Influenza (A)	Uro-genital ailments (E)	Pneumonia (A)			
	914 / 24.1	496 / 13.1	429 / 11.3	396 / 10.4	388 / 10.2	384 / 10.1	310 / 8.2	309 / 8.2	164 / 4.3			3,790
6. QUIRINO PH	Malaria (A)	Gastro-ent. (A)	High blood pressure (B)	Influenza (A)	URTI (A)	Bronchitis (A)	Ulcers (B)	UTI (A)	TB (A)	Pneumonia (A)		
	732 / 29.1	680 / 27.0	169 / 6.7	160 / 6.4	146 / 5.8	138 / 5.5	127 / 5.0	123 / 4.9	122 / 4.8	121 / 4.8		2,518
	Malaria (A)	Gastro-ent. (A)	UTI (A)	Bronchitis (A)	TB (A)	Influenza (A)	Pneumonia (A)	High blood pressure (B)	Ulcers (B)	URTI (A)		
	1,056 / 24.5	925 / 21.4	462 / 10.7	391 / 9.1	310 / 7.2	282 / 6.5	250 / 5.8	221 / 5.1	212 / 4.9	205 / 4.8		4,316
	Malaria (A)	Gastro-ent. (A)	Ulcers (B)	Pneumonia (A)	Influenza (A)	URTI (A)	Bronchitis (A)	UTI (A)	TB (A)	High blood pressure (B)		
	750 / 27.3	700 / 25.4	210 / 7.6	191 / 6.9	182 / 6.6	180 / 6.5	152 / 5.5	140 / 5.1	135 / 4.9	120 / 4.3		2,760
7. IFUGAO PH	Acute bronchitis(A)	Infectious virus(A)	Acute tonsillitis(A)	Influenza (A)	URI (A)	Malaria (A)	PTB (A)	Acute colitis (A)	Pneumonia (A)	Acute gastro-enteritis (A)		
	445 / 16.6	370 / 13.8	367 / 13.7	349 / 13.0	285 / 10.7	218 / 8.1	204 / 7.6	184 / 6.9	154 / 5.8	99 / 3.7		2,675
	Acute broncitis (A)	Infectious virus (A)	URI (A)	Influenza (A)	Malaria (A)	Acute tonsilitis(A)	PTB (A)	Acute colitis (A)	Pneumonia (A)	Acute gastro-enteritis (A)		
	518 / 21.2	378 / 14.1	328 / 12.3	218 / 8.1	158 / 5.9	153 / 5.7	121 / 4.5	109 / 4.1	107 / 4.0	93 / 3.5		2,183
	Infections virus (A)	Acute bronchitis(A)	URI (A)	Malaria (A)	Acute colitis (A)	Acute gastro-ent.(A)	Influenza (A)	Acute tonsilitis(A)	Pneumonia (A)	Acute gastro-ent. (A)		
	427 / 25.2	255 / 15.0	254 / 15.0	134 / 7.9	132 / 7.8	129 / 7.6	106 / 6.3	92 / 5.4	87 / 5.1	79 / 4.7		1,695
8. MAJ. F. MARCOS VETERAN MH		Gastro-ent. (A)	Other digest. tract ail. (A)	Dermatosis (E)	Influenza (A)	Pregn. related ail. (A)	Bronchitis (A)	PTB (A)	Malaria (A)			
		402 / 23.3	334 / 19.3	289 / 16.7	260 / 15.0	136 / 2.9	128 / 7.4	116 / 6.7	64 / 3.7			1,729
		PTB (A)	Bronchitis (A)	Gastro-ent. (A)	Pregn. related ail. (C)	Other digest. tract. ail. (A)	Dermatosis (E)	Influenza (A)	Hepatitis (A)	Malaria (A)		
		401 / 21.0	331 / 17.4	313 / 16.4	275 / 14.4	228 / 12.0	119 / 6.2	93 / 4.9	85 / 4.5	60 / 3.1		1,905
9. NUEVA VISCAYA PH	External injury (D)	Respiratory disease (A)	Gastro-ent. (A)	Pregnancy related ail. (C)	Normal delivery (C)	PTB (A)	Influenza (A)	Uro-genital ail. (E)	Bronchitis (A)	Digestive tract ail. (A)		
	431 / 20.1	307 / 14.3	260 / 12.1	260 / 12.1	170 / 7.9	169 / 7.9	165 / 7.7	135 / 6.3	130 / 6.1	120 / 5.6		2,147
	External injury (D)	Respiratory disease (A)	Gastro-ent. (A)	Pregnancy related ail. (C)	Normal delivery (C)	PTB (A)	Influenza (A)	Uro-genital ail. (E)	Bronchitis (A)	Digestive tract ail. (A)		
	447 / 19.6	312 / 13.6	275 / 12.0	269 / 11.8	200 / 8.7	191 / 8.4	157 / 6.9	156 / 6.8	147 / 6.4	132 / 5.8		2,286
	External injury (D)	Respiratory disease	Gastro-ent. (A)	Pregnancy related ail. (C)	Normal delivery(C)	PTB(A)	Influenza (A)	Uro-genital ail. (E)	Bronchitis (A)	Digestive tract ail. (A)		
	570 / 21.9	330 / 12.7	292 / 11.2	289 / 11.1	219 / 8.4	211 / 8.1	195 / 7.5	173 / 6.7	163 / 6.3	155 / 6.0		2,597
10. BATANES PH												

III-2 PRESENT INFRASTRUCTURE SITUATION

1. Building Facilities

(I-1) Pangasinan Provincial Hospital

1) Existing Buildings

At about 500m from the center of Dagupan toward the seashore, palm trees along a national road are replaced by cypress trees, and a white building of colonial style can be seen between the two kinds of trees. In the site, a garden with cypress trees is presented in front to face the national road, and across a road in the center, there is a two-storied wooden building with a carriage porch, having an office on the right side and an out-patient ward on the left symmetrically. Behind them, there are a clinic, ICU-CCU building, ward, laundry, kitchen, etc. built close to each other, to fully occupy the 1.6 ha site. Because of many years of repeated extensions for expansion of scale, new and old buildings of wooden, reinforced concrete and other construction are mixed randomly. Since the buildings are maintained well, they can still be used now. However, the narrow clearances of the buildings and the continuous arrangement of one-storied houses make ventilation insufficient and traffic lines complicated, which is not a good environment for patients. The most serious problems is that on the occasion of a disaster such as fire or earthquake, the wooden buildings and intricate roads are feared to increase casualities in the evacuation of patients.

2) New Site

A new site is located along the seashore about 7km distant from the existing hospital in Dagupan. This region is called Bonuan district, and is designated as a city planning zone of Dagupan. Now, there are palm trees and private houses scattered on sanddunes, forming a fishing village where ponds for culturing fish and others can be seen along a national road. The construction of houses is partially started in the residential area, in which 25,000 people are scheduled to dwell in the future. In addition, elementary schools, junior high schools, senior high schools and a college are scheduled to be constructed, and furthermore, the construction of a shopping center and sports facilities is considered. However, since this region is on the extension of a seashore, having sanddunes, soil survey must be made thoroughly, to take any measures to prevent the damage due to the liquefactive apparition * caused during earthquake, and also, especially, countermeasures must be considered against it.

The new site has an area of 6 ha, and at present, there is the Dona Teodora D. Manaois Memorial Hospital with 25 beds, of cross-shaped layout, in the northeast corner, adjacent to a national road (San Fabian Road). The building is of one-storied reinforced concrete construction (the roof is covered with galvanized iron sheet on wooden truss) of about 950m^2, being completed 4 years ago. It is still new and can be converted into an office or ward. This building is surrounded by concrete block fence of about 120m per side and wire net fence provided at the boundary with the national road in front, and there is a water supply tower on the north side. There are no other facilities, and only flat topography continues toward the sea, with palm trees scattered on the broad site.

* Liquefactive apparition: A phenomenon in which sand containing water becomes fluid like a liquid, when given strong vibration. This comes into question on the occasion of a large earthquake. In the Niigata Earthquake (1964), this phenomenon inclined, settled and upset buildings.

New site from approach road

Main building in old site

Existing emergency hospital in new site

(I-2) Bontoc Provincial Hospital

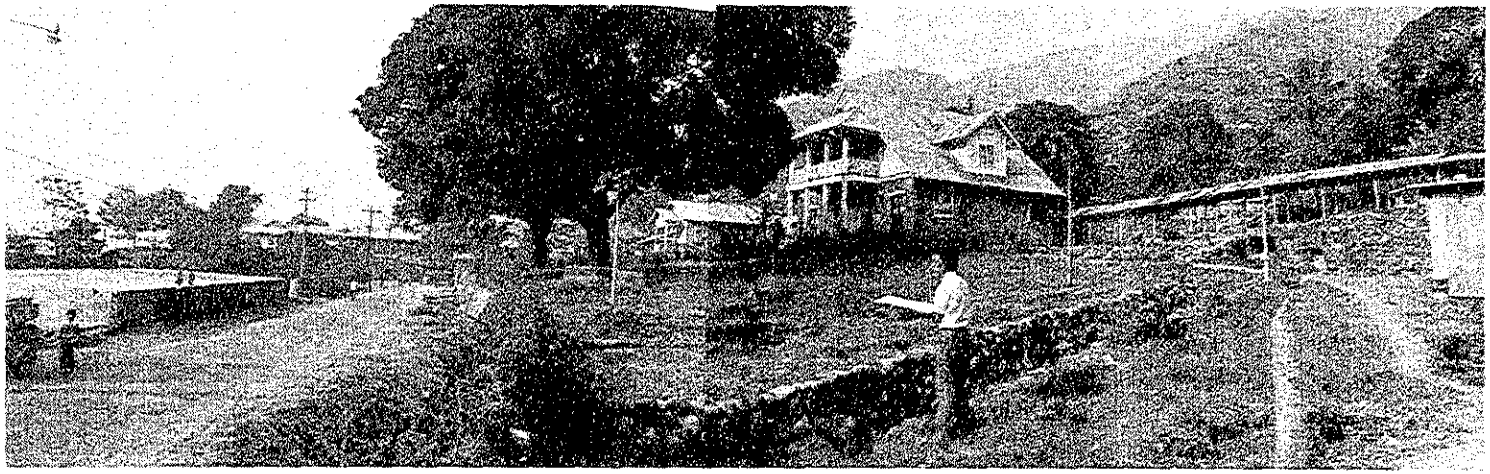
Bontoc Provincial Hospital located in the north of Bontoc City is on a height at the foot of a mountain. On the east, private houses continue toward a river (Chico River) flowing on the east of the town, and on the west, a steep mountain comes close to the site. On the north, there is arable land, and on the south, private houses continue along the foot of the mountain. The site faces the east. The land is irregularly square, and at the center, a 12m wide entrance road runs from south to north. Existing facilities are on the mountain side prepared in tiers. The difference in height between the entrance road and the site boundary on the west is about 10m, giving a large slope, for a depth of 60 to 70m.

There are nine existing buildings including a central clinic, wards, nurse dormitory, doctors residences, dining hall, kitchen, canteen, etc. The building of brick construction constructed in 1906 is the oldest, and in 1972 an out-patient clinic was constructed. For further expansion of the clinic department, a two-storied building of reinforced concrete construction is now being constructed, and is scheduled to be completed before long.

As for the arrangement of the main buildings, on the north of the site, there is the central clinic in front, and behind it there are a one-storied ward of brick construction and, one step above, a two-storied ward of brick construction which is surmised to be the oldest. Further in the rear to the north is a one storied malnutrition children ward of brick construction. On the left of the wards is a onestory kitchen and dining hall building of brick construction, and on the west of the site a two-storied nurse dormitory and a doctors quarter. A 2m wide drainage ditch is provided to pass through the site, to serve for the drainage from the mountain behind at the time of rainfall.

A problem in the building facilities of this hospital is that the buildings of brick and wooden construction are very superannuated, and are now reaching the limits of their use.

Newly constructed and partly renovated main building



View to hospital site with nurse dormitory