

REPORT
ON THE
SEOUL NATIONAL UNIVERSITY HOSPITAL
COLLEGE OF MEDICINE
SEOUL NATIONAL UNIVERSITY

by

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of Seoulmi

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It has truly been an enjoyable year and a half. I am satisfied that much has been accomplished.

SUMMARY

Seoul National University Hospital is a 460 bed hospital attached to the College of Medicine. It has an old but well designed and soundly constructed physical plant.

Its organization within the University and Korean Government is similar to that in Western countries. It differs from them in that authority for its operation is less often delegated to the Hospital officials. The Medical staff is responsible to the Hospital Superintendent for the care of patients and to the Dean of the College of Medicine for teaching and research activities. Several organizational units are administered by the medical staff - Operating Rooms, X-Ray Laboratory, Blood Bank, Outpatient Clinics, Electro-encephalogram, Electro-cardiogram, and Basal Metabolic Rate Units. There are three other main sections - Nursing, Pharmacy and General Affairs - which are responsible to the Superintendent for all other Hospital functions. Two Medical staff committees meet regularly to discuss general Hospital activities and to advise on Hospital operation.

Some major changes in operation had occurred previous to May, 1957. Some areas of the Hospital were being operated using new administrative methods which staff exchange participants had observed in the United States. A centrally administered operating room suite, a central laboratory, and an area established for filing all X-Ray films were all operating. Some equipment ordered with 1955 and 1956 funds had arrived and was in use. The kitchen, psychiatric facility and one of the Hospital wings had been rehabilitated during January - March of 1957. A proposal for changing the financial system of the four National

University Hospitals had been agreed upon and submitted to the National Government. There were many other problems being studied.

During the period from May, 1957 - November, 1958 several major activities have been performed: a study of the best use of all facilities has been made and much of the area reallocated; many 1955 and 1956 rehabilitation projects have been completed and others started. The 1957, 1958 and 1959 rehabilitation and improvement projects are all in various stages of planning. New concepts for procuring, storing, distributing and using all equipment and supplies have been developed for both ICA-financed and locally procured items. A central admissions office, central supply, post-anesthesia recovery room and emergency room have been established and are functioning. A pediatric ward for all children admitted was established. A central Medical Record Library has been planned and will begin operation on January 1, 1959.

To best utilize the limited operating finances and the limited number of staff the Hospital has decreased the number of nursing stations from thirteen to seven.

In the immediate future a new hospital financing plan, based on the retaining by the Hospital of all income from patients, should be developed. Continuing efforts of Administration are needed to strengthen and expand all of the programs established. Also, the Hospital needs to expend increased effort to solve problems in the food service organization, to improve supervision of all employees, to establish the isolation station in the main Hospital building, to improve the training of employees, to develop a new patient clinic, and to further improve the purchasing system. In addition, the development of a new allocation of beds for each medical

service, the establishment of the physical therapy unit, and a program to increase the number of autopsies performed, are areas for which major attention is needed.

A Hospital Association could make significant contributions to Korea. The Seoul National University Hospital officials should be instrumental in organizing such an association.

The future of Seoul National University Hospital is uncertain because many of the important factors are beyond the control of the Hospital's officials.

The changing responsibilities and functions of Seoul National University Hospital Administration will require a change in its internal organization. In the main body of the report a plan is suggested indicating principles which should be followed in initiating this change.

INTRODUCTION

This report is a summary of observations and activities for the eighteen month period from May 6, 1957 to November 6, 1958, during which this adviser has served at Seoul National University.

Three members of the Minnesota College of Medical Sciences had served at Seoul National University previous to May, 1957. Dr. Gaylord Anderson had been the University of Minnesota's College of Medical Sciences representative on the survey team which preceded the signing of the Cooperative Project Contract. Dr. William Maloney, Assistant Dean at Minnesota, had made a three-month survey of the Seoul National University College of Medicine during the first half of 1956. Miss Margery Low, adviser in Nursing, had arrived during March of 1957.

Personal conferences with Dr. Anderson and Dr. Maloney, study of their reports of observations and letters from Miss Low were valuable in helping the author to prepare for the advisory role at Seoul National University. Some knowledge of the general culture and mores of the Korean people was obtained and was, of course, very helpful. A rather limited contact with the Korean staff exchange participants then at Minnesota was likewise of assistance. General principles of approach had been discussed with Dr. James H. Matthews, who was to serve as Chief Medical Adviser in Korea, and Miss Low while still at the University of Minnesota. With the arrival of Dr. Matthews and this adviser on May 6, advisers from Minnesota were present in all three major areas of Seoul National University Medical College.

During the first few months the three advisers attended together many of the principal meetings at the Medical College, the School of

Nursing and the Hospital. In meeting the goals of the contract -- "Strengthening and developing medical education and research"; this was a logical approach to advising in the individual specialties since the three are necessarily interjoined. At other times, all the advisers met with the administrators of the three areas. In addition, of course, each adviser worked individually with the people responsible for their principal area of interest. Conferences among the three advisers have continued throughout the entire period covered by this report.

Orientation by College officials was not limited to the Seoul National University Medical College. Dean Myung Choc Wan, Dean of the Medical College, Dr. Kim Dong Ik, Superintendent of the Hospital and Mrs. Lee Kwi Hyang, Principal of the School of Nursing, made arrangements within the first few months so that all of the major medical institutions in Seoul were visited. Through these visits an opportunity to evaluate the quality of hospital care in the Seoul area was provided. It also indicated the status and role of the Seoul National University Hospital in the City.

During the first week in October the Medical Advisers, who now included Professor E. B. Flink who had arrived in August, 1957, took a five-day tour of the major medical institutions in the Republic of Korea. The Advisers were accompanied by Dean Myung, Mrs. Lee and Dr. Kwon, E Hyuk, of the Department of Preventive Medicine. Hospitals visited were operated by the Korean armed forces, missionary groups, ministries of the Korean Government, and foreign agencies. The three other national medical colleges and hospitals, at Taegu, Pusan, and Kwangju, were included.

Tours of these institutions provided a basis for the evaluation

of the comparative position of Seoul National University Medical College
and Hospital at present and in the future.

I. HISTORY OF SEOUL NATIONAL UNIVERSITY HOSPITAL

The very interesting history of the Medical College is included in the reports of Dr. Maloney and Dr. Matthews. The following statement taken from the "Bulletin of Seoul National University Hospital" relates the history of this part of the College:

"The Hospital was founded by the Korean government under the reign of King Kojong, on April 24, 1899. The institution, in the beginning performed medical treatment, was the central agency for control of Korean drug manufacturing, operated a laboratory for drug analyses, served as a vaccination center, and had a veterinary hospital. In the year of 1907, the name of the institution was changed to 'Dai Han (Great Korea) Hospital' and was composed of three major departments; patient clinic, medical education, and public health. New ward buildings were completed at the present location of the main building on December 27, 1907, and on February 4, 1908, Susumu Sato, the surgeon general of the Japanese Army (a member of Japanese Advisory Group to the Korean government), assumed the duties of Hospital Superintendent. In 1910, the year of Japanese occupation of this country, the Hospital became the 'Chosun (old name of Korea) Colonial Government Hospital', and had departments of medicine, surgery, ophthalmology, obstetrics-gynecology, dermatology, oto-rhino-laryngology, administration, and pharmacy. A dental department was established a year later. In April, 1916, departments of infectious and endemic diseases research were established. The Hospital began to train midwives and nurses in the same year.

"An out-patient clinic building was built in 1924, and in the succeeding year the Hospital became the medical students' practice center upon the establishment of 'Keijo (Seoul) Imperial University' under Japanese control. The Hospital was operated by the Japanese government until the liberation of Korea in 1945, at which time the Korean government took over its operation. Soon afterwards it became and was reformed into the 'Seoul National University Hospital'.

"The Communists' invasion of South Korea in June, 1950, forced the Hospital to discontinue operation. During the period of refuge, many staff members volunteered for military service as medical officers. In January 1951, the Hospital began on Cheju Island, as the 'National Relief Hospital'. The Hospital returned to Seoul, after taking a three-year refuge in Pusan, in September, 1953, and opened a temporary clinic until the 5th U.S. Air Force evacuated the Hospital buildings. The Hospital moved into its original site in March, 1954. All the buildings were completely empty without a remnant of equipment or furniture. Rehabilitation was started and has been continued to the present time."

III. PHYSICAL PLANT

The hospital facilities are located in an area immediately adjacent to the pre-clinical science buildings of the College of Medicine and the general University campus. There are four major structures in which patients are treated: (1) the main Hospital building, a corridor-connected series of five two-story wings with a capacity of about four hundred beds, plus all hospital services; (2) a two-story psychiatric facility with a capacity of forty beds; (3) a single-story communicable disease building (30 beds); and (4) a large two-story structure, connected by a corridor with the main hospital building, providing ample room for the out-patient service.

A 200-bed hospital located in a nearby section of Seoul is also the property of Seoul National University. It is currently being used by the Republic of Korea as its Capitol Army Hospital. It is understood that the Army will continue to use it for at least two more years. There is no assurance that it will be released at the end of that time.

As indicated in the previous chapter, the hospital buildings are from 34 to 58 years old. All are constructed of brick and/or concrete. They were all designed for use as a hospital and even today are fairly adequate in size, design and layout for a modern hospital plant.

The physical plant has two main deficiencies:

1. The large rooms and hallways with their very high ceilings (13-15 ft.), the lack of good insulating materials, and large window areas, cause the building to be exceedingly difficult to heat.
2. Periods of unuse, occupation by military organizations, and the difficult economic situation, during and after World War II and the Korean War, caused all of the buildings to depreciate to the point where they needed thorough rehabilitation.

III. ORGANIZATION AND GENERAL ADMINISTRATION

The Hospital is an attached organization of the College of Medicine. Its primary function is the same as any hospital's - to provide care for the sick. The main purpose, the reason for its existence, is to provide clinical experience for Seoul National University students in the health professions. A third important obligation is medical research.

The average daily inpatient census of the Hospital during the last year was 212, representing an occupancy of about 48% of capacity. The total 1957 census of both outpatients and inpatients for each medical specialty are listed in Appendix I. Appendix II shows the average length of stay of inpatients for each service.

The Hospital has four accommodation classifications ranging from superior class single room (1500 Hw., \$1.50) down through multiple bedrooms (300 Hw., \$.30). A separate charge is made for food. This charge ranges from 600 Hw. (\$.60) to 750 Hw. (\$.75) per day. The average charge per patient day is 1249 Hw. (\$1.25) and the average cost per patient day is 2846 Hw. (\$2.85). The difference between the total charges and total cost (total 134,694,803 Hw., \$134,695) represents, in effect, the amount of annual subsidy the Hospital currently receives from the Korean Government. (A hwan-dollar conversion rate of 1000 Hw. = \$1.00 is used throughout this report. It is the most realistic conversion rate at present.)

The operation of Seoul National University Hospital involves various administrative levels of responsibility including the President of the Republic; the National Assembly; the Ministers of Education, Health, and Finance; the President of the University; various offices of the

University; the Dean of the College of Medicine; and the Hospital Superintendent with his assistants. To receive ICA aid and Seoul National University Cooperative Project assistance, the Hospital must deal with an equally complex number of administrative areas.

While the organization of the Hospital within the Korean government is somewhat similar to that of university hospitals in Western countries, the actual operation is very dissimilar. The primary difference is that, although the higher levels of government have responsibility for the operation of university hospitals in both systems, the responsibility is more often delegated to Western administrators at the institutional level than it is in Korea today. Furthermore, laws, rules and regulations of the Korean Republic are more restrictive in granting the hospital officials authority for actual hospital operation. The following examples illustrate the dissimilarities:

1. A hospital superintendent's and his assistants' main authority rests in the right to select, discipline, promote and discharge personnel. In the Seoul National University Hospital even the Superintendent does not have this authority. It is vested at various levels ranging from the President of the University up to the President of the Republic of Korea. The Superintendent has only powers of persuasion and the right "to recommend" action to those above him. Persuasion is important; but, in some cases, it has not been enough. The Superintendent seldom makes recommendations for discharge since this action is regarded as a slow and ineffective measure. Within the last year only one employee has actually been discharged, and that process required months. As a result of these difficulties the Hospital Superintendent is plagued with cases of personnel incompetence, laziness, and flagrant violation of the Hospital rules about which he can do very little.
2. Government employees, including Hospital personnel, are regulated by a system similar to civil service systems in the United States. Hospital positions such as maintenance supervisor, admissions officer, dietician, and medical record librarian, require special training. These special requirements are not recognized in the Korean system. Instead it is

assumed that a person elsewhere in government can be rotated into one of these positions if he has the proper civil service grade. Promotion within the Hospital is not practiced and experienced people are not recruited from any of the other university hospitals.

Most of the individuals in the Hospital are earnest and intelligent. Many, however, do not have the experience or special talents necessary to perform their duties adequately. So often as they gain the necessary experience, they are transferred to a post elsewhere in the Government. The result is an impractical system which is dangerous to the Hospital patient.

3. Sound financial operation of a hospital should be one of the primary responsibilities of the hospital administrator. The Hospital Superintendent at Seoul National University is, in effect, not responsible for this operation since his authority is so limited. He is bound by a general financial law which is practically unworkable for a hospital. The Superintendent has little authority to alter patient charges as Hospital costs change. He is denied the use of Hospital income to provide services for more patients, and he has a fixed itemized budget which permits little administrative flexibility.
4. The Hospital has no permanent superintendent. A new superintendent is appointed from the medical staff, for a term of two years, by the Minister of Education upon recommendation of the University President. This practice causes the position of Superintendent to be one more of prestige than of authority. The instability of the other administrative officials has been mentioned previously. (More will be said about this by Dr. Matthews in his report since this problem likewise applies to, and presents considerable difficulty in, the administration of the Medical College.)

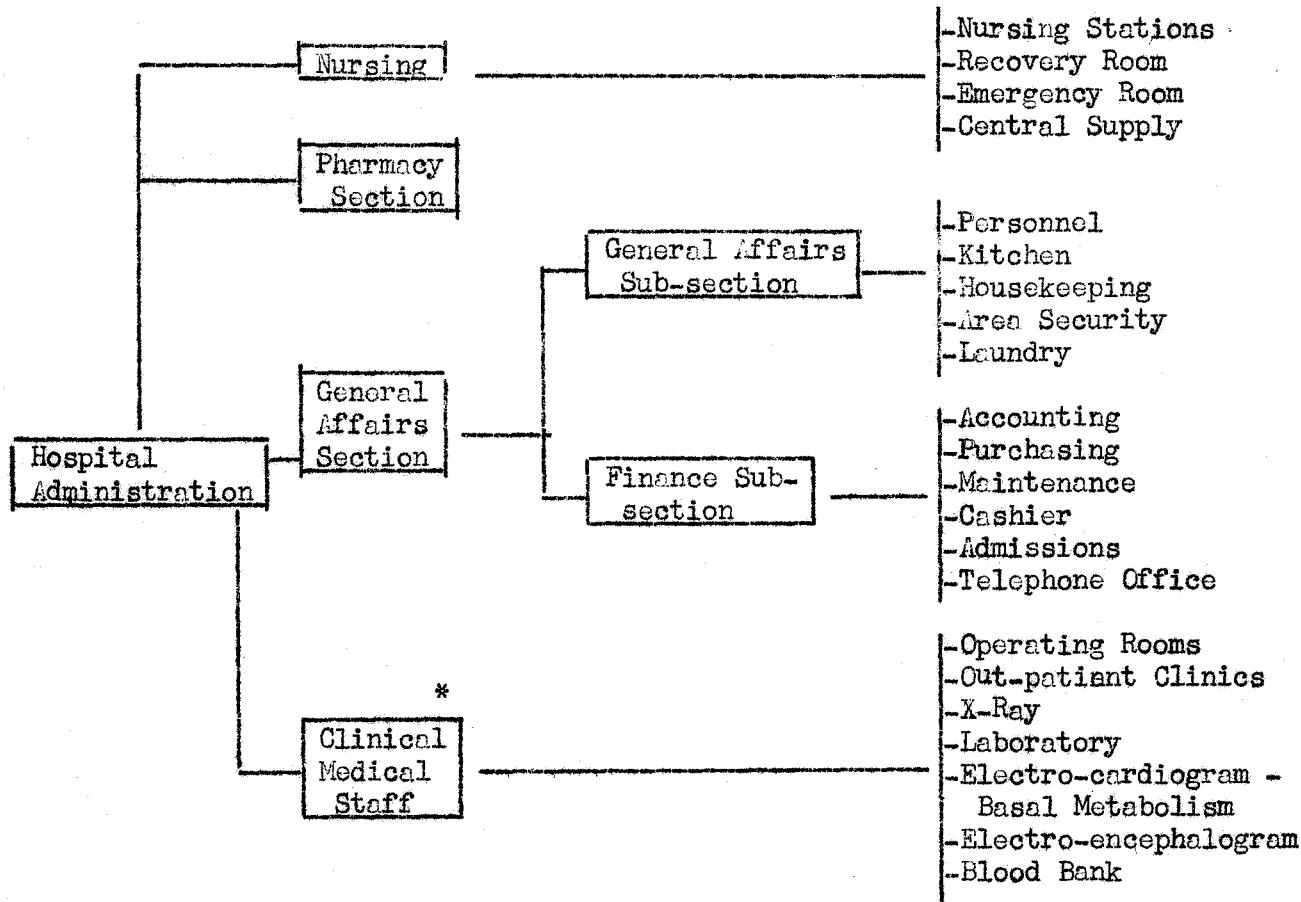
A government naturally has the responsibility for the operation of a nationalized university hospital. Part of this responsibility is met by providing the necessary budget and facilities with which to manage a hospital. The responsibility for the hospital's administration should be accomplished by selecting a qualified official and delegating to him full authority for its administration. The government should charge him to provide the best hospital care for patients, and a high quality "clinical laboratory" for the university students. Evaluation of the superintendent's performance can be accomplished by such methods as analysis of periodic

statistics and accounting reports, financial audits, fire and other safety inspections, the general status of physical plant and facilities maintenance, the quality of housekeeping, etc.

The superintendent must see that all governmental laws, rules, and regulations are obeyed. While enforcing the present ones, he and those in the organization above him should continually try to secure changes where they are warranted.

IV. THE HOSPITAL DEPARTMENTS

The following chart indicates, in boxes, on the left the present Hospital organization and on the right, the functions served.



*Responsible to the Superintendent for Hospital "duty" status
and responsible to the Dean of College of Medicine for teaching
and research activities.

Some of the areas listed in the right hand column are not part of the formal organization. They are included in the chart to show that the function is performed and by which section the responsibility is assumed. One example is "Area security". The Hospital employs 13 guards who have no separate organization but are directly supervised by the Chief of the Subsection of General Affairs. The telephone office and personnel office are operated similarly.

The Superintendent meets every morning except Tuesday with the heads of all the major administrative sections - Chief of General Affairs, the Finance and General Affairs Sub-section Chiefs, Chief Nurse, Pharmacist, Cashier, and Chief of Maintenance. This meeting provides an opportunity for them to discuss departmental or interdepartmental problems. It is at this meeting that most hospital administrative decisions have been made recently. The meeting is also used by the Hospital Superintendent and Chief of General Affairs for communication of work assignments to the departments.

The Hospital Superintendent has two medical staff advisory committees. The Chiefs of Services Meeting meets monthly, and is used for dissemination of information about Hospital activities to the Medical Staff, and for the discussion of activities involving them. The Hospital Administration Committee meets regularly once each month and often several times during the month. It is composed of the Hospital Superintendent, five professors, and the Chief of General Affairs. This group usually meets during the week before the Chiefs of Service Meeting. It has, at least in the past year and a half, been the group which the Superintendent relies upon for advice on Hospital operation and especially

formulation of Hospital policy. The Chief's meeting has become more and more a meeting at which decisions made by the Superintendent, after discussion with the Hospital Administration Committee, are presented to the Medical Staff.

Until three months ago the Superintendent held a monthly meeting of the Chief Assistants and Head Nurses. This meeting was held primarily so that Administration could communicate information and Hospital policy to these two groups. It was discontinued so as to encourage the Nursing and Medical services to communicate to their own staffs.

Temporary committees composed of members of the medical and hospital administration staff are formed for special studies. During the past year such committees have worked on problems in the areas of dietary, admissions and medical records, pharmacy, medical internship program and infectious disease care.

Korean administrative custom uses an "executive suite". All of the section and service chiefs are located as near to the Superintendent's office as office space permits. The subordinate personnel function with only occasional visits from their supervisors. This has, to some extent, been developed because of the absence of good telephone communication.

Administrative section and sub-section chiefs have less freedom of action than is true of the typical American hospital. The top administration prefers to take a more active role in the operations of these units.

All of the areas with departmental status in the United States are in Korea called Divisions, Classes, Sections or Sub-sections. The

literal translation of Korean does not give any of the units discussed in this chapter departmental status. Technically there is only one Department, the College of Medicine, which is officially Seoul National University's Department of Medicine.

Medical Staff

Dr. E. B. Flink, Adviser in Internal Medicine, has discussed in detail the organization and staff of the Seoul National University Internal Medicine Department. Dr. Matthews will thoroughly discuss the entire Medical Staff in his report.

In order to indicate the specialties present in the Hospital and their basic organization, the following chart is included in this report:

<u>Departments</u>	<u>Divisions</u>
Internal Medicine	Respiratory Gastro-Intestinal Cardiology Infectious Disease
Pediatrics	
Obstetrics-Gynecology	
Urology	
Dermatology	
Surgery	General Thoracic Neuro-Surgery Orthopedics
Anesthesiology	
Otolaryngology	
Ophthalmology	
Psychiatry	
Dentistry	

Radiology

Central Clinical Laboratory*

Blood Bank**

The medical departments are responsible to the Hospital Superintendent for the medical care given to patients. They are responsible for their teaching and research activities to the Dean of the College of Medicine. The Chiefs of the medical departments are responsible for the supervision of all personnel of their department or division including assistants (Residents). Each medical department manages its own out-patient clinic. Formerly they were also responsible for the operation of nursing stations that cared for their patients. This responsibility has recently been assigned to the nursing service, except that the medical departments still have responsibility for some items of specialized equipment.

The Departments of Surgery, Radiology, and Pathology are responsible for the administration of the Operating Rooms, X-Ray, and Central Clinical Laboratory, respectively.

The Hospital's first formal internship program was begun on July 1, 1958. It is a rotating type internship. Eighteen interns were selected and are now serving. They are responsible to the Hospital Superintendent. An Intern Committee composed of five members of the medical staff is functioning.

Nursing Service Department

The official Table of Organization of the Hospital allows the Hospital to employ 84 graduate nurses. In addition, the Hospital has 10 nurses who receive no pay. They do so in order to gain clinical experience,

*Operated by the College's Department of Pathology

**Supervised by the Chief of Obstetrics-Gynecology

because there are no other jobs available in the Seoul area, and with the hope that they will be appointed to the regular staff when vacancies occur.

Of the 94 nurses, 50 work on the present seven nursing stations, 14 in the out-patient clinics, 8 in the Central Operating Rooms and the remainder in the Nursing Office, Recovery Room, Emergency Room and Central Supply.

Miss New Soon Han, the present Chief Nurse, is one of only three graduates on the Nursing Service staff who are not graduates of the Seoul National University School of Nursing. She has had 7 years of nursing and physical therapy experience in California. Two nursing supervisors supervise the nursing stations, Emergency Room, Recovery Room, and Central Supply. Another supervisor is responsible for nursing activities in the out-patient clinics. The Nursing Department has one evening and one night supervisor.

Thirty-five Nurses aides are employed by the Hospital and they work primarily on the nursing stations.

The Nursing Department is responsible for the administration of the nursing stations, the Post Anesthesia Recovery Room, the Central Supply and the Emergency Room. Each of these areas is under the direction of a head nurse.

Officially the Chief Nurse reports directly to the Hospital Superintendent; however, in actual operation, she more frequently reports to and receives directions from the Chief of General Affairs.

More discussion of the Nursing Department is included in Chapter

VI of this report ("Major Activities of the Hospital During the Period May 6, 1957 - November 6, 1958") and also in Miss Low's report on Nursing.

Pharmacy

The Chief Pharmacist is responsible directly to the Hospital Superintendent. He has a staff of ten, including five pharmacists. Students of the Seoul National University School of Nursing and the Seoul National University College of Pharmacy receive their pharmacy experience in this department.

The facilities of the Pharmacy are adequate in size. The utility services are as yet poor but will be rehabilitated. The addition of a new oil-operated boiler within the last year provides the Pharmacy with year-round steam supply for operation of its sterilizing and distilling equipment.

Two classifications of medicines are supplied by the Pharmacy; "ordinary" drugs compounded by the Pharmacy and given to patients in powdered or liquid form and "high quality medicines" procured on the Korean market and sold to the patients. The two classifications are kept separate for budgetary purposes since they are procured with two separate funds.

Equipment ordered in 1958 will enable the Pharmacy to manufacture more products. A machine for the production of pills was present at the beginning of the contract, but the absence of the die attachments has prevented the Hospital from using it. These attachments will be received within the next six months.

In order to analyze the safety of the locally manufactured and/or purchases supplies the Pharmacy operates a drug testing laboratory, which

routinely tests all drugs purchased. This is a necessary function because of the unreliability of Korean manufactured drugs.

A major problem in the Hospital (and in Korea) is the unavailability of many important drugs on the Korean market. Securing of drugs through legal importation is administratively complicated. The original high cost, shipping costs, expense of buying U.S. dollars, and high tariff rates often cause imported drugs to be prohibitively expensive.

Distribution of drugs within the Hospital has been and continues to be a major problem. Although the Pharmacy does stock the drugs available on the Korean market, and would be willing to stock any of them, they are not used. The more usual method is for the relatives or patients to go into the market and obtain their own medicines. Hospital Administration has so far been unable to stop this practice, primarily because of a lack of cooperation from some of the Medical Staff. Although it is illegal for downtown stores to sell certain drugs without prescriptions, it is a widely disregarded regulation. The Hospital Pharmacy is open daily from 8:30 A.M. to 5 P.M. Drugs are available on an emergency basis from two sources during the hours when it is closed: the night nursing supervisor has a small room from which she can obtain certain drugs; a pharmacist is on "night duty" (sleeps in the Pharmacy area) and can be awakened in emergencies. Stations have a very small supply of drugs as it has been impossible to prevent excessive loss of drugs kept on some of these areas.

The list of accepted hospital drug abbreviations has recently been revised. The wisdom of accepting the use of any abbreviations is questioned by this adviser, since it is felt that it increases the possi-

bility of error in filling the prescriptions.

Recent efforts to secure an acceptable locally manufactured rubber stopper have been successful, so that the Hospital can now produce more intravenous solutions. The charge for intravenous solutions includes the cost of the drug and its administration. Patients continue to bring solutions from outside since a separate "administration of IV solution" charge is often disregarded by the Hospital staff.

The Pharmacy currently operates without refrigeration equipment. Since the Blood Bank has received a new refrigerator one of the old ones from that area can now meet the immediate needs of the Pharmacy Department until the refrigerator ordered for them arrives.

Central Clinical Laboratory

The Central Laboratory is currently administered by the Department of Pathology. The faculty meeting (a college level committee) has recently approved the establishment of a new Department of Clinical Pathology. This is considered desirable since the laboratory is a large complex area requiring the full time efforts of specially trained physicians. The Department of Pathology has been unable to provide this service since most of their efforts are needed to operate the Pathology Department's extensive preclinical teaching responsibilities. The proposed contract extension includes staff exchange provisions for 4 man-years of United States training for the new department.

The Laboratory is provided positions for 13 technicians. The only formal training of Laboratory technologists or technicians in Korea is a short course given by the Korean Armed Forces to their own people. The Hospital has always hired untrained personnel who are informally taught

by the Medical Pathologists and the experienced technicians in the Laboratory. Each technician is trained to do only a few laboratory techniques in one of the subsections of the Laboratory. The recognized need for formal college level training has resulted in a formal request by the Dean to establish a school for medical technicians at Seoul National University. The request has been approved by the University and the Ministry of Education. Legislative action is required and is expected by July 1, 1959.

The Laboratory physical plant facilities will be doubled upon completion of the room reallocation discussed in Chapter VI. The laboratory is now equipped to do all of the normal laboratory tests needed for University Hospital diagnostic work. Insufficient budget to purchase laboratory supplies and the unavailability of many necessary reagents are acute problems. The Blood Bank, Electro-encephalogram, Electro-cardiogram, and Basal Metabolism laboratories are not presently part of the Central Laboratory. The Blood Bank is supervised by the Chief of Obstetrics-Gynecology (because he received special training in this area at the University of Minnesota). Electrcardiography and basal metabolism examinations are the responsibility of the Department of Medicine. The Department of Psychiatry is assigned the responsibility for providing electroencephalogram service. It is planned that Electro-encephalogram, Electro-cardiogram and Basal Metabolic Rate Units will be centralized as one administrative unit. The Blood Bank will be transferred to the Central Laboratory organization as soon as the Department of Clinical Pathology begins to function and the laboratory area is expanded.

Little medical student experience is now provided in the Central Laboratory, primarily because of the present area limitations. A student

Laboratory in the Central Laboratory facilities is planned for the future.

The shortage of needed supplies, the limitations of untrained technicians, the absence of full time medical staff, and the weaknesses of present systems and administrative ability, result in a service which does not meet the current needs of the Hospital. The future capabilities of the Laboratory depend on the success of programs to train technicians, development of the Department of Clinical Pathology, and increased financial support.

Radiology

The Radiology staff is composed of three radiologists, four X-Ray technicians and two office employees. One of the radiologists passed the American Board of Diagnostic Radiology Examination and received American Board Certification while a staff exchange participant. One of the other Radiologists is currently taking a one year's postgraduate training course in Chicago under his own sponsorship.

The X-Ray suite has been allocated areas formerly occupied by the Cashier's office, the Nursing office and the Housekeeping Service. This expansion, plus a small physical plant addition with two diagnostic rooms, planned in the 1957 Rehabilitation Program, will more than double the area occupied by the Radiology Department, giving them adequate space for the next several years.

A 250 KV machine and a 300 MA diagnostic unit have arrived and are in use. A craniography unit has been ordered as has a 200 MA portable to be used jointly in the X-Ray Department, Cystoscopy, Operating Rooms and on the stations. The Operating Rooms are adjacent to X-Ray, and Cystoscopy will be relocated in a nearby area to enable the new portable

and a U.S. Military type 100 MA portable (already owned by the Hospital) to serve these areas. Sufficient dark room equipment has been ordered to meet the needs of the Department.

As is the case in most other hospital specialty fields in Korea, no trained X-Ray technicians are available. The lack of formally trained technicians presents no critical problem at Seoul National University because of the good on-the-job training provided by the Radiology staff.

A Central X-Ray filing system for exposed film is in use. It is intended that the patient identification numbers used in this filing system will be made to correspond with the unit patient chart numbers when the Central Medical Record Library is begun.

Special hospital accounting procedures provide the Radiology service with a fairly adequate budget for operation.

The hazard of radiation to patients, visitors and especially to X-Ray employees is presently a problem. Protection methods (leading of walls, training of employees, and radiation detection devices) are needed. Lead sheeting has been ordered with 1957 funds.

Operating Rooms and Anesthesia

The Central Operating Rooms are administered by the Surgery Department. One professor is assigned this responsibility. It is anticipated that this area will become a responsibility of the Nursing Department in the future.

Four of five large major operating rooms are currently in use. The removal of partitions, rehabilitation and improvement of service utilities, repair of tiling, installation of conductive flooring, and

accession of new emergency electrical generators are planned. A small physical plant addition for equipment storage and preparation, and a nursing office has been designed. An overhead observation dome will be constructed over the largest operating room. All of the above work is part of the 1957 Rehabilitation Program, and will be completed in 1959.

Major equipment additions have been a new operating table, two surgical lamps, cauterys, suctions, and anesthesia machines. Two additional surgical lamps have been ordered.

An average of about three cases are performed daily in this suite. A new Post Anesthesia Recovery Room is in use (see Chapter VI).

The rather high infection rate (10% for the last month) is currently being studied by a special committee composed of three nurses, two Korean surgeons and Dr. George Schimert (recently arrived thoracic surgeon from the University of Minnesota). Actions already taken include the reduction in number of observers, renewed efforts in cleaning the entire area, sterilization of instruments in the Central Supply, and scheduling of only one major operation at a time (to avoid sharing of the still inadequate number of surgical instruments). Continued study by this committee is planned.

Open-heart surgery, using the recently arrived aritificial heart-lung machine, is planned within the next few months.

General Affairs Sub-section

This Sub-section is supervised by a Class III government official. In the sub-section office are three assistants.

The General Affairs Sub-section is responsible for all those

administrative details not assigned to other sections. Within this category are such tasks as official correspondence with the medical staff, personnel records and problems, mimeographing of hospital reports, bulletin etc., public relations, and collection of rent from leased properties (dwellings, ice plant, shoe repair shop, barber shop, grocery store, and coffee shop).

The section has assigned areas of responsibility in addition to the tasks mentioned above. They are the Hospital Kitchen, Housekeeping, Laundry, and Area Security.

Kitchen

The Hospital Kitchen is well located in an adequate-sized facility connected by corridor to the main Hospital building. The facilities, especially the utility services, are in extremely poor condition. Rehabilitation (1955), performed in the area, included construction of a new cement floor, painting, electrical wiring, and window screening. The 1958 Rehabilitation Program contains provisions for procurement of two oil-fired kitchen ranges, ten hot food carts, insulated food containers for cafeteria service, steam cookers, and two large refrigerators.

Necessary institutional kitchen equipment such as fry pans, pots, vegetable peeler, food slicer, and food serving trays have been ordered with 1958 equipment funds.

A total of fourteen people are employed for the Hospital food service. All of the personnel are men and none have had any training in dietetics or food service.

In addition to supplying meals for Hospital patients, the Hospital kitchen provides food for all Hospital Interns and the "on call"

Medical Assistants. It is planned that the Hospital Kitchen will serve both graduate and student nurses after the new nursing dormitory is completed.

No special diets are prepared by the Kitchen. Patients needing special diets depend upon members of their family to provide them.

By custom, patients have been allowed to decide whether or not they would eat Hospital food. A policy has recently been established which prohibits cooking in the Hospital but does permit patients and relative to supplement the Hospital diet by bringing food from the outside; however, some cooking in violation of the Hospital policy still occurs. The number of patients eating Hospital food has increased from fifty to approximately two hundred per day within the past year. The Hospital continues to charge separately for room and board.

The patients do not like Seoul National University Hospital food. The food is not good because:

1. The total number of employees in the Kitchen (14) is woefully inadequate. They cannot carefully prepare the food and are unable to serve it hot.
2. No modern, or even adequate, equipment is presently available to meet the mass feeding requirements of the service.
3. Kitchen sanitation is unsatisfactory due to the incomplete status of rehabilitation, inadequate control measures for insects and rodents, and lack of public health type training of the food service employees.
4. The budget for the Kitchen is inadequate.
5. There is no qualified person on the Hospital staff to assume the technical aspects of food purchasing, diet and food preparation, or serving.

The Hospital plans to secure the services of a home economics graduate from the Seul National University College of Education to

supervise diet and food preparation. The arrival and use of equipment ordered, and the completion of the kitchen rehabilitation are important aspects in the solution of the Hospital's food service problems. If approved, the proposed Hospital financial system discussed in Chapter VII should provide a more adequate budget for the Dietary Department.

Housekeeping

Housekeeping is another of the important responsibilities of the General Affairs Sub-section. It is not a recognized department of the Hospital. The 23 janitors work under the direct supervision of the Chief of the General Affairs Sub-section, although recently one of the janitors has been selected to pass on instructions and do some supervision of the other Housekeeping employees. Janitors also receive directions from the doctors and nurses on the stations to which they are assigned.

In practice the janitors generally work on their own without direction but expect to take orders from anyone in the Hospital organization higher than they are. Janitors are on the lowest level.

With the terrazzo replacement of the wooden floor in the out-patient Clinic facility and main building over 90% of all floors are either concrete or terrazzo. The only exceptions are the wooden floors on the second floor of the out-patient building and a small section of the second floor of the main Hospital building. The inside walls of the entire plant will be painted before 1960. An oil-burning incinerator is scheduled for completion in 1959. All of these projects will ease the tasks of the janitors.

Garbage cans, mop buckets, janitors' sinks, utility carts, and four industrial floor machines will provide the janitors with the equip-

ment they need for adequate Hospital housekeeping. Supplies such as soap, wax, mops, and brooms will not be available in sufficient supply until additional local financing is procured.

The Housekeeping Service has no major responsibilities other than cleaning. It is, however, used to perform many special duties such as repair of the road, raking the yards, unloading heavy equipment, etc. The control of linens, beds, and furniture, often the responsibility of Housekeeping in Western hospitals, is at Seoul National University the responsibility of the Nursing Department.

Housekeeping rounds were conducted weekly for a period of about six months. They were attended by Chiefs of the General Affairs, Maintenance, Finance and Nursing sections plus the Hospital Superintendent and the Nursing and Hospital Administration Advisers. The main purpose was inspection of cleanliness and general housekeeping. They were discontinued by the Hospital in favor of daily supervision and inspection by Administration and General Affairs department heads.

The quality of housekeeping is still poor but has improved considerably in the last year and a half. It is a difficult problem because of the extreme shortage of staff, inadequacy of supplies and equipment, the general run-down condition of large parts of the plant, the lack of training, and the advanced age of some of the janitors.

Laundry

The laundry is housed in a small facility separated from the main building by about 100 yards. Eight personnel are employed in this area and are under the direct supervision of the General Affairs Sub-section Chief. Here, too, one of the laundry personnel has recently been given the

authority to pass on instructions and to do limited supervision of the other employees.

No modern laundry equipment is used. One old Japanese-built washer with a capacity of about 50 pounds of laundry is the only mechanized piece of equipment. Most linens are washed by hand in a large, oil-heated tub. Drying is done by hanging the clothes on lines in the yard or in the building during the winter months. All linens are ironed with two regular household electric irons. Ordered under the 1957 Rehabilitation Program are two washers (300 lb. and 50 lb.) a large extractor, a tumbler and a four roll steam mangle, plus the necessary uniform presses and laundry trucks.

A physical plant addition to the present hospital service wing is planned if the Contract is extended. It is needed to replace the present totally inadequate laundry facility.

No special precautions are taken for linen which comes from dirty Surgery, Tuberculosis, or Isolation units.

A critical shortage of all Hospital linen exists. The Hospital has a total of 1516 bed sheets, whereas a normal supply should not be less than 8-12 sheets per bed.

The Hospital has practically no towels, blankets, wash cloths, pajamas or robes. All these items are brought by the patient when he comes to the Hospital. While in the Hospital the responsibility for laundering is the patient's; usually done by the relatives. Hospital Administration is adversely affected since it seriously restricts their efforts to control visiting hours and cleanliness; moreover, the large linen bundles are used to "smuggle" medicines, food, hot plates, etc., into the Hospital. An allocation of 1958 counterpart funds will be made to the Hospital

in December of 1958 for local procurement of needed linen items. It will partially solve one of the most critical needs that the Hospital now has.

The addition of the new steam-operated laundry equipment and the washing and repair of the augmented linen supply will greatly increase the operating costs of this service. Without increased budget the Hospital will be unable to best utilize the new equipment and linen. (See discussion of Hospital Finances in Chapter VII).

Area Security

Thirteen guards are employed by the Hospital; they staff the guard house at the entrance to the Hospital grounds, and the Main Hospital, Outpatient and Hospital Service entrances. Other guards conduct regular rounds throughout the entire Hospital and grounds. The guards are not organized into a regular section or department. They receive orders from any of the General Affairs administrative staff.

Uniforms for the guards are furnished by the Hospital.

All guards are on duty twenty-four hours and then are off duty twenty-four hours.

Rehabilitation projects to construct a security fence around the entire Seoul National University Medical Compound, and the installation of security bars on windows in areas containing expensive equipment and supplies, should help in reducing the danger of theft. These projects are both to be started in about one month.

Departments also assume responsibility for prevention of theft. Areas are always locked when not occupied. For further protection the Laboratory, Pharmacy, and medical departments have "night duty" people who sleep in their areas. While the danger of theft is a real one, actual

theft from the Hospital during the past year and one-half has been minimal.

The Finance Sub-section

This section is supervised by a Class III government official. It is responsible primarily for all of the Hospital operations involving the income or expenditure of funds. In the Finance office there are five employees who are responsible for purchasing, accounts payable, financial and statistical reporting to the Hospital Superintendent and the Central Government, and the Hospital inventory (including ICA-financed equipment and supplies).

The following Hospital organization units are the responsibility of the Finance Sub-section:

Cashier's Office

The Cashier's office has three employees, under the supervision of the Chief Cashier. This office is responsible for the collection of a deposit from all patients admitted - 40,000 Hw. (\$40.00) from surgical service patients and 30,000 Hw. (\$30.00) from all other patients. Patients are billed every five days. When the amount of the deposit is used and the Cashier's Office fails to collect additional money, the Hospital Superintendent is notified. He either changes the patient's status to "free" or, with the concurrence of the medical service, signs a compulsory discharge order.

The Hospital still enforces a policy that after a patient's bill exceeds the initial deposit the Hospital stops the supply of food and "high quality" drugs. Patients with unpaid bills are kept at the Hospital until they can pay their bill.

These extremely harsh policies are felt necessary because of the poor financial situation of the Hospital and the difficulty in locating patients after they have been discharged. Hospital bills have a low priority on patients' "personal accounts payable budget". The policies described above are the only ones which the Administrative Staff at Seoul National University Hospital feel will cause the patient to pay for the services he receives. Unfortunately there are no easy answers to this problem. With the present inadequate Hospital financing system, continued efforts to improve the screening of patients on the basis of financial ability (extremely difficult in Korea) and continued attempts to shorten the length of hospital stay are the best methods to minimize the use of compulsory discharge, stoppage of food and expensive drugs, and prolonged hospitalization policies. Use of the above methods result in a bad debt loss of less than 5% of total billings.

The Chief Cashier is responsible for management of the Out-patient cashier's office; two employees are assigned to this office. A recent survey revealed that approximately one-half of the new outpatients were avoiding the payment of the 300 Hw. (30¢) registration fee. A new system, an initial step toward a Central Medical Records system, was put into effect immediately and the problem has been solved.

A problem affecting Hospital income exists in that the physicians use their offices to see outpatients during the hours when the clinics are not open. No hospital bill is collected from these patients. Lack of cooperation from the Medical Staff has prevented the Hospital from enforcing the policy against such practices.

Charge slips are completed on the station or in the area where

the service was performed. The charge for the service is included. In the past, the charges often did not follow the standard charges as listed in the Hospital rate book.

The cashier's office has no business machines except the ingenious Korean "chupan", a fast hand-manipulated calculator. All postings of bills, accounts, and ledgers are done by hand. If an inexpensive accounting machine, adaptable to Seoul National University Hospital's needs can be found, it will be secured with 1958 funds.

General Admissions Office

This service was started in April, 1958. In the organization it is attached to the Cashier's office but in reality operates as a separate unit. The Admissions Office will be discussed in Chapter VI "Major Activities of The Hospital During the Period May 6, 1957 - November 6, 1958".

Maintenance

The organization of the Maintenance service under the Finance Sub-section is unusual. One justification of this is perhaps the fact that the Maintenance Department's areas of responsibility receive more than one-third of the total Hospital operating budget. The Maintenance Department is responsible for the boiler plant, electrical system, water supply system, Hospital telephone service and general building and equipment repair and maintenance.

To perform its functions the Maintenance Department has 26 employees. Five are in the maintenance office responsible for departmental records, preparation of plans, bills of materials, contracts for physical plant rehabilitation, inventory of ICA-financed rehabilitation materials

and supervision of all maintenance and rehabilitation projects. Nine people are employed to operate the Hospital's seven-boiler heating plant. Three electricians, two carpenters, and seven telephone operators complete the staff of the service. The telephone service has probably been included in the maintenance service since the obsolete switchboard requires constant repair. The arrival and use of a new 200-line switchboard in 1959 should permit the Hospital to find a more logical organization for this service, which has such important public relations functions.

Since the advent of the Contract the Maintenance Department has spent considerable time on programs for the rehabilitation and improvement of the Hospital plant. Within the past year architects with training in the special aspects of the projects (electrical, heating and plumbing, general construction) have been hired by the Hospital to work under the supervision of the Hospital Maintenance Department.

Three separate Maintenance Shops are operated: one is located in a temporary structure constructed by the 5th U.S. Air Force and does the physical plant maintenance tasks; another, located in the basement of the outpatient clinic building, is for the repair and maintenance of hospital and medical care equipment; the carpenter shop is located in another small building.

Within the next year the three maintenance shops will be combined and moved into the recently assigned hospital service area. The Maintenance Office will also be moved to this area from its present location in the Hospital Administration area. This will be done to provide more active supervision of the maintenance personnel in their duties.

Carpentry, electrical, plumbing and general maintenance equipment was ordered in 1957 and will arrive shortly.

The Hospital Maintenance personnel now expend most of their efforts in operation and maintenance of the boiler plant and the electricity shop, and for emergency repair of building utilities. The repair of hospital equipment receives much less attention. Greater effort is needed in the preventative aspects of maintenance.

Repair of most major items of medical equipment (X-Ray machines, flame photometer, respirators, electrocardiograph equipment, etc.) cannot be done by the present maintenance staff. Apparatus is sent either to local Korean service shops or to the 6th U.S. Medical Depot where trained Korean medical maintenance personnel are employed.

Lack of the necessary spare parts is a problem which will continue to become more acute.

Plans are to be implemented within the next month to send one of the present equipment maintenance employees to Ascom City to spend a few weeks at the U.S. Army's 121st Evacuation Hospital, to observe and work in their Maintenance department. Several Korean armed forces personnel, who have attended U. S. Army medical maintenance courses in the United States, are being contacted by the Hospital Administration in an effort to employ one of them as soon as his military service is completed. The present salary for maintenance men is very low (40,000 Hw., \$40.00 per month) and could defeat this attempt, unless a change in the civil service position can be secured.

CHAPTER V

Seoul National University Hospital Previous to May 6, 1957:

After reoccupation of the Hospital in 1954, a transition toward better hospital operation began. The opportunities provided by the Seoul National University Cooperative Project for staff exchange, equipment and supplies importation, and rehabilitation of the physical plant had considerable influence upon these changes.

The major changes are:

1. Administration based upon patterns observed in the United States had been instigated in various areas. This change was by no means universal in the Hospital, even within Departments. The Hospital consequently had a "mixed system" with some parts operating on the traditional Korean system, and other parts operating in conformance with varying degrees of the "U.S. observed system".

The main difference between the two systems is that, under the traditional Korean system, the various Medical College Departments assume almost complete authority for both physician and hospital care. The pattern which has developed in the United States has been the responsibility for hospital care assumed by a centralized hospital administration. The physicians limit their activities to the medical care of hospital patients, research, and teaching.

As stated, aspects of both systems were present at Seoul National University Hospital in May 1957. Areas had progressed toward the American system in vastly different degrees. The general surgery ward, in its layout and operation, resembled that of the U.S. pattern quite closely. Complete transition, even though desired, would have been impossible because of the inability of the Hospital administrative organization to assume new responsibilities immediately. Another factor which deterred the development of more centralized Hospital operation was that some of the staff - both medical and non-medical - were reluctant to and apprehensive of, change.

2. Certain responsibilities had been centralized by May 1957. The major achievements had been in the creation of areas and organizations for Radiology film storage, central laboratory service, and the centralization of operating rooms for the Department of Surgery.
3. Several of the staff indicated shortly after these observations began that there was need for new Hospital Administration responsibilities involving such services and functions as centralized medical records, central supply, admission procedures, definition of doctor-

nurse relationship and improved emergency patient procedures. The recognition of these needs by some of the staff was a necessary step.

4. By May of 1957 some of the equipment ordered under the 1955 and 1956 programs had arrived and was in use, and some of the rehabilitation projects for these years had been completed. The major rehabilitation efforts for the year 1955 had been expended on three separate areas - the obstetrics-gynecology and ophthalmology ward building, the Hospital kitchen, and the psychiatric facility. Rehabilitation of these areas was not complete since the projects involved partial refurbishment instead of extensive repair or replacement of the service facilities.

Since the return of Seoul National University faculty from abroad, and as experience has been gained in rehabilitation planning, the quality of these programs has improved.

Equipment procurement in 1955 and 1956 was based on individual departmental requests rather than upon overall Hospital needs. The equipment was predominantly for individual specialized departmental needs. Because of this, and the conscientious efforts of Dr. Gaylord Anderson, Mr. Tomic Ronson and other staff members at the University of Minnesota, who reviewed the original departmental requests, and supplies ordered were appropriate for the Hospital.

The considerable time involved in obtaining both equipment and rehabilitation materials has been disappointing. The timing of rehabilitation materials arrival with Hwan counterpart releases has been a source of constant problems to the Korean staff.

5. In May 1956, the administration at Seoul National University Hospital, together with the other national university hospitals, made a formal request of the Ministry of Education to be permitted to use a special hospital accounting system. The purpose of their proposal was to relieve some of the chronic financial problems which they have faced since liberation in 1945. The plan recommended by the hospitals appears to be logical, presenting sound concepts of hospital financing. It has never been accepted by the Government.
6. Certain other areas were in the process of being studied by Hospital Administration officials and committees appointed by the Hospital Superintendent. The discussions included the establishment and enforcement of visiting hour regulations, improvement of the food service, and utilization of nurses aides in the nursing service organization.

CHAPTER VI

Major Activities of the Hospital during the Period May 6, 1957, - November 6, 1958:

1. Room Reallocation:

Throughout its long history, sections of the Hospital were regarded as the responsibility of the medical service which occupied that area. Assignment and use of rooms was at their discretion. The stations contained many doctors' offices, conference rooms, night duty rooms, specialized laboratories, treatment rooms, departmental libraries and storage rooms. The patients, often numbering as few as three or four per service, were scattered throughout this area.

The lack of good nursing station organization and the operation of fourteen separate inpatient areas resulted in grossly inefficient use of the limited number of professional and non-professional employees, and an under-utilization of the subminimal amount of medical equipment and supplies.

An average of only 230 patients per day were hospitalized, although the maximum capacity of the facility, with efficient room utilization, is twice that number. Even though only approximately fifty percent occupied, there was actually no place to locate new Hospital services or to allow for expansion of existing ones.

As the Seoul National University physicians, Hospital Administration officials, and Minnesota advisers continued to study the Hospital facility and its operation, the need for modernization of lay-out and service facilities became evident. It was agreed that an intensive analysis of the Hospital plant would be made to develop a new long-range room reallocation plan.

To accomplish this, a committee composed of five Professors, the Hospital Superintendent, and the Chief of General Affairs met weekly for several months. The committee approached the problem with the assumption that the building was completely unoccupied. All of the Minnesota Advisers attended these meetings and worked with the committee in the development of the plan. Upon completion of this step, the plan was re-examined to see that it was economically feasible and practical, considering the present utility services and the already planned 1955 and 1956 rehabilitation programs. This review indicated only minor changes to be necessary.

The drawings included with this report show the original situation and the new allocations.

Considerable progress has already been made in carrying out the room reallocation program. Continued diligent efforts must be exerted to insure that this most important plan is accomplished. Its implementation depends on the development of policies, systems, functions and duties for new or expanded departments; the training of individuals for their new tasks; the physical alterations of areas for their new functions; the ordering, delivery, and proper use of rehabilitation materials and equipment; and in some cases, a simultaneous relocation of several departments. All of these facts are complicated by the fact that the Hospital must continue to operate twenty-four hours a day, seven days a week.

2. Hospital Rehabilitation:

Rehabilitation of the buildings and their utility services to equal those that existed in any previous year would be unsatisfactory

because of the increased mechanization involved in modern medical care. For example, the original electrical system is woefully inadequate to meet modern hospital needs. As discussed in the previous section of this report, the desirable adaptations to give the Hospital a more modern and efficient layout have now been agreed upon so that all future rehabilitation and improvement projects will be planned and performed to accomplish this objective.

The Hospital has recently procured the services of a full-time architect to expedite the planning of future rehabilitation and improvement programs, and also to see that contractors perform their projects satisfactorily. His efforts in programming and coordinating the complex rehabilitation projects, and his contract supervision efforts should be very rewarding to the Hospital.

Currently efforts are being made to combine all rehabilitation and improvement projects into one set of plans. This will not only aid in the successful coordination and completion of the many projects, but should also be valuable as a timetable for administrative planning, so that new areas can be used for their intended purpose as soon as facilities will support those functions.

Attached as Appendix III to this report is a summary of the status of all ICA-financed rehabilitation and improvement programs. As indicated, all 1955 projects, with the exception of window screening, have been completed. Screening is to be done in 1959 since counterpart funds - local currency made available through the Aid Program - for this project were not included in the 1955 counterpart program.

All 1956 projects are either completed or will be finished by January 1, 1959.

The 1957 rehabilitation and improvement program, by far the most extensive and expensive, has all been planned. These much needed projects will probably not be completed until the summer of 1959, since the materials have been ordered only recently and will not be received until then.

The 1958 rehabilitation program planning is completed and the request for purchase of imported materials has been submitted to the OEC Rehabilitation Engineers office. Final estimates for 1959 rehabilitation are currently being prepared.

3. Equipment and Supply Procurement

A complete change in the concept of equipment ownership and usage is evolving. This change is occurring because of the exposure of staff members to systems used in United States hospitals, through a strengthening and centralization of the Nursing Department, and with the realization that it is economically impossible to meet all departmental needs unless items can be shared between departments.

In July, 1957 Dean Myung Choo Wan, College of Medicine, made the decision that he would assume all responsibility for the procurement and allocation of all teaching and research equipment, and delegate to the Hospital Superintendent the responsibility for ordering, allocation and control of all patient care equipment. This was the legal arrangement in the past, but in reality medical departments had assumed the entire responsibility. Under this policy much of the 1955 and 1956 ICA equipment which had been ordered by individual departments has been re-programmed. In the Hospital the Nursing Department's newly created Central Supply Service has been assigned much of the new equipment and

supplies. The service has already demonstrated the advantages of equipment and supply centralization.

Dean Myung's decision was used as the basis for 1957 and 1958 Hospital equipment project programs, Dr. Kim Dong Ik, with advice from the Medical and Hospital department heads, assumed complete responsibility for requesting all hospital equipment and supplies.

This policy does not apply only to ICA financed equipment. The Hospital is using the same system for the procurement of some local supplies and equipment as well. All nursing station patient care supply requests now originate through the Nursing Department: from head nurse, to nursing supervisors, to director of nursing, to hospital purchasing agent. The prevention of duplication in procuring items and the sharing of equipment and supplies procured, plus the advantages of quantity buying, have already produced financial savings as well as better equipment and supply utilization.

4. Admission

No central admissions section or department existed prior to this year. No Hospital department assumed any responsibilities for, or performed, any admitting function except for the collection of a deposit. The selection of patients and their room assignment were performed by the individual medical departments operating the stations. Statistics reported from the Nursing Department and the Cashier's Office seldom agreed, since patients were often admitted without the knowledge of the Cashier, and were often discharged before either a deposit could be collected or a bill prepared.

As mentioned previously, another major problem was that some areas seldom had more than four or five patients yet they required a

twenty-four hour complement of nurses and other staff.

The Hospital Superintendent, early in July of 1957, appointed a committee to develop a program for the creation of an Admissions Office and a Central Medical Record Room. This active committee was composed of three physicians and a nursing supervisor. Under the ambitious and able leadership of Dr. Shin, Han Soo, the committee recommended a detailed plan for the creation and operation of both areas. The recommendations were approved by representatives of the medical staff and adopted by Hospital Administration. The Admissions Office began functioning on April 28, 1958. The efforts of the Admissions Officer and the continued guidance of Hospital Administration have already resulted in a well-functioning Department. The success of this program is another illustration of the willingness of the Medical Staff to accept major changes in the Hospital's operation, the desire of Hospital Administration to centralize and enlarge its responsibilities, and the ability of the Administration to plan and perform additional functions.

Final details are now being developed for the creation of the Central Medical Record Library. It will start functioning on January 1, 1959. It will function as recommended by the committee and approved by the Medical Staff and Hospital Administration.

5. Children's Ward

Children of all ages had traditionally been hospitalized on various services on the basis of diagnosis. A Pediatrics Department existed, but had always assumed the responsibility for seeing only those children with internal medicine series diseases. Children requiring surgical treatment were hospitalized on the various surgical specialty wards

together with the adult patients of those services. Children with communicable diseases, including tuberculosis, were housed and treated by the staff on the stations treating those diseases.

Pediatricians asked that the Administration set aside one area to accommodate all children regardless of diagnosis or treatment needed. They also proposed that primary responsibility for the medical care of those patients should be rested in Pediatricians. The proposal was discussed at various committee meetings. The policy which evolved provides that all children under fifteen years of age will be housed on a single pediatric station, that the service recommending Hospital admission will have the medical care responsibility, and that increased consultation between services will be encouraged. Because of inadequate isolation facilities on the children's ward, children with communicable diseases will continue to be hospitalized temporarily in the TB ward and in the isolation area.

Since the first of May, with the genesis of the Admission Office, the above policy has been followed. Nursing service is provided entirely by the nurses assigned to the children's station. Equipment and supplies provided to that station are used for the treatment of all its patients. There are two main problems still to be solved: some physicians have apparently neglected their patients hospitalized there; also, the Pediatricians are seldom asked by the Surgeons to serve as consultants

6. Centralization of Nursing Department:

The nursing service has been in the process of developing into a more centralized operation. Although a nursing service organization existed, it had virtually no authority. Its functions were mostly that

of an advisory organization to the medical departments, to keep personnel records for nurses, and to coordinate with the School of Nursing regarding nursing education. The evolution into a centralized Nursing Department has been fairly rapid and the process has involved considerable "growing pains". In spite of conflicts between the nursing service and other departments, and considerable friction within its own organization, good progress toward the achievement of a truly line department has been made. The assignment of additional responsibilities has been difficult because of the immaturity and inexperience of Nursing in performing these functions. The Chief Nurse and her Department are to be complimented for their ability to overcome these difficult obstacles. The contributions of Miss Margery Low, Minnesota Adviser in Nursing, have been invaluable in assisting to effect these changes.

A. Additional responsibilities of the Nursing Department which evolved from other Hospital programs: An increased amount of responsibility for administration of the nursing stations has been given to nurses. Much of this has arisen as the result of other programs instigated during the year. The room reallocation plan removed medical department offices from the stations, combined areas that had operated as separate units, and allocated rooms on the basis of efficient nursing care. Although the cause and effect aspect is lost in this complex situation, the result was increased nursing responsibility for station administration. Likewise, the "winter" and "summer" plans forced services to share nursing stations, resulting in more nursing administrative responsibilities for the operation of those areas. The creation of a Central Supply Service within the nursing organization made it logical for the nurses to order, receive, and dispense patient care supplies.

B. Responsibilities assigned directly to nursing service: in addition to accumulating responsibility because of, or as a part of, the above activities, the Hospital Administration has assigned increased administrative responsibilities directly to the Nursing Department:

- 1) The Chief Nurse has been given the responsibility of ordering

all locally obtained nursing supplies and equipment - a duty previously performed by either head nurses or the medical departments requesting these supplies directly from Administration. To implement this the Hospital's accounting system has been changed so that income and costs are now kept on a nursing station basis, rather than on a medical department basis. The Chief Nurse has also been given the responsibility to control Nursing Department costs. For the first time the Nursing service has been given the responsibility and funds to procure equipment and supplies for Hospital care of patients. Nearly \$20,000 worth of equipment for the Nursing Department was purchased with 1957 ICA aid funds.

- 2) Central Supply establishment: The Central Supply Service, started in the fall of 1957, is the responsibility of the Nursing Department. Created primarily to enable the sharing of supplies and equipment, it also serves to make the procurement, cleaning, sterilization, and control of supplies more efficient.

Three new large sterilizers have been located in the Central Supply. They were originally ordered by the Surgery Department for use in the operating rooms, but have been reassigned to this service where they serve all of the stations and clinics as well as the operating rooms. A glove washer, glove conditioner, needle cleaner and syringe washer have been ordered and will also be located in this area.

This new service is fortunate in having one of the most outstanding head nurses in Korea, Kiss Kim In Sook. Although the duties of this position were of course unfamiliar to her, she has made significant continuing progress in its development. Before the service was started, arrangements were made for Miss Kim to spend three days at the U. S. Army 121st Evacuation Hospital Central Supply. That she used this experience to good advantage is obvious from the progress made here after her return.

This experience indicates important concepts insofar as the Korean nursing profession is concerned. An ambitious, talented nurse can pioneer new developments in Korea and gain the full support of Hospital Administration and the medical staff. Furthermore it proves that the medical staff will yield their administrative duties to some one who can perform those tasks satisfactorily. Much credit must be given to the Administration, the Chief Nurse and her assistants, and to the Medical Staff for making this experience possible; Miss Kim must be given the credit for making it successful.

- 3) Establishment of the Emergency Room: Emergency patients had traditionally been seen on the separate inpatient services. The new Central Emergency Room began operation on November 15, 1957. Although the area is theoretically the responsibility of the Department of Internal Medicine its actual administration is performed by the Nursing Department. The head nurse assigned to the Emergency Room has proven quite capable of assuming this responsibility. Interdepartmental cooperation in the operation of the Emergency Room is materializing. Consultations are requested and given with more regularity. The one most disturbing factor in the treatment of emergency patients is that some of the staff violate the new Hospital policy by seeing their "special patients" on the wards. Because of this the special equipment and supplies of the Emergency Room are not fully utilized, the station nurses cannot devote full time to the inpatients, and the teaching value of the Emergency Room is decreased.
- 4) Establishment of the Post-Anesthesia Recovery Room: On March 1, 1958 the Post-Anesthesia Recovery Room was opened. It is located near the Central Operating Room suite. The Anesthesiology Department is responsible for medical care in this area and nursing is responsible for its administration. As yet it is attached to the operating room nursing organization, although there is no local reason why it should be a part of that area. The nursing talents required in this area are most similar to those used on the surgical stations.

The advantages obtained by the establishment of the area include the centralization of specialized post-operative facilities, equipment and supplies, the most efficient utilization of the Anesthesiologist and specialized nursing care. It is also beneficial in that the nurses on the surgical wards are relieved of the intensive nursing care required for immediate post-operative cases, and can therefore devote more attention to their other patients.
- 5) Procurement, training and use of nurses aides: In July of 1957 a concentrated effort was begun to enforce visiting hours. Relatives had traditionally been allowed to stay in the Hospital with the patients. They had assumed many nursing responsibilities; they washed the patient, gave him his medicine, cooked his meals, etc. As a part of the Hospital program to establish and enforce visiting hours, the Chief Nurse recommended that the Hospital hire forty-five nurses aides to perform the functions that the relatives had assumed. Since it was impossible under the Government regulations to hire the aides directly, it was decided that the patients would be charged 100 hwan per day for their service. The Hospital subsequently hired and gave one week's training to thirty-five aides.

Several problems have been encountered. Patients are reluctant to pay the 100 hwan charge. Some actually refuse to pay because they say they never see "their" aides. Good hospital care makes this true, since the nurses aides should be involved in cleaning, supply preparation and other non-professional tasks which are not done in the patient rooms. In doing so, they relieve the professional nurse of these duties so that she can spend more of her time in giving professional nursing care to the patients. Thus, the Hospital faces the problem of establishing the position of the aide so that she can perform non-professional duties and, at the same time convincing the patient that the aide is working "for him". Often in the past the nurses aide account has not contained enough money to pay the aides their wages, with the result that the aides have had to wait for their pay and/or accept less than they were told they would receive. Many times, too, patients dislike paying for the services of the nurses aide since their relatives have continued to stay. The nursing organization and the Hospital have so far been unable to enforce the very desirable visiting hours policy.

When serving under good head nurses, the aides have performed well. In other areas the nurses do little to direct the aide's efforts and they have become servants to the more demanding patients.

As shown above, there has been a considerable change in the role of the nursing service organization. Generally the role has been assumed in a satisfactory manner. However, several factors presently prevent the evolution of Nursing as a strong, completely centralized department.

- a. There are many personal conflicts between members of the nursing organization. There appear to be factions which are hostile, sometimes openly, to each other. Consequently morale is poor and cooperation unsatisfactory.
- b. With the exception of the Chief Nurse, Miss New Soon Han, and two others, all of the nursing staff are graduates of the same school - the Seoul National University School of Nursing. The Hospital Administrators and Miss New have indicated a desire to introduce "some new blood" into the organization. This proposal meets with violent opposition from the present nursing staff. The rivalry between schools of nursing has been mentioned in the Minnesota Nursing Adviser's report.

c. The head nurse group is still poorly trained to perform their duties, but they are improving with experience. Special classes in ward administration are being given by Miss Low. The Korean Nurses' Association is interested in this, too, and has given short, institute type training programs emphasizing ward administration.

d. Nursing policies are not complete, are sometimes impracticable, and are seldom enforced. Nursing claims that they are unable to enforce their policies because of the nurses "fear" of the Medical Staff, and because nurses are inadequately backed by Hospital Administration.

The Chief Nurse and Hospital Administration/are currently endeavoring to develop a book of nursing policies which will be complete and enforceable. The task is far from accomplished however.

e. Unfortunately, nurses generally are not respected by either the doctors or the patients. Nurses are currently attempting to improve this situation. A few of the Seoul National University nurses have demonstrated that it is possible to gain respect at the present time, if the nurse has ambition, intelligence, ability, and imagination.

6) Winter and Summer plans: The Hospital has been financially unable to provide adequate mechanical services - heat, light, power, and water - to operate the entire physical plant. Also, because of the fixed limited budget the Hospital can provide care for less than 250 patients even though the facilities have a capacity of about 500.

The situation has been especially critical in winter because of the heating expenses. The coal budget has been only a small fraction of the amount which would be needed to heat all of the buildings. Therefore, the Hospital was forced to close down almost three-fourths of the plant during the winter months of 1957-58. Even then heat could be provided to the patient area only seven hours each day. One hundred and eighty patients were crowded into the heated area.

As winter ended, the Hospital agreed that all of the area should not be repented since it was impractical to operate the entire facility when only fifty percent occupancy could be supported. Various plans were discussed, the adopted one being to use only the bottom floor of each building.

Considering the inadequate financial positions of the institution, the above plans were necessary. It is extremely distressing that this is true since the University Hospital has the facilities and staff to improve the health of Korea's people, since many individuals needing hospitalization are able to pay for hospital services, and since a critical need exists for more teaching patients.

Certain progress in internal hospital administration and operation has resulted from this disheartening situation, however. Centralization of facilities and duties, more efficient use of nurses, creation of the admissions office, medical service patient area integration, better housekeeping and maintenance of the reduced areas, and permanent room allocation of some service departments have all, to some extent, been implemented by the "winter" and "summer" plans.

CHAPTER VII

Major Programs in the Immediate Future

This chapter lists the major activities which need the concentrated efforts of Hospital Administration during the next year. Specific suggestions about these programs have already been discussed with the administration at Seoul National University Hospital. Many are in various stages of execution.

1. Financing Hospital care Considerable time and effort has already been expended by Seoul National University Hospital officials to devise a reasonable, valid financial structure for the Hospital.

Many of the previous sections of this report refer to the continuing financial difficulties of the Hospital. For the year January 1, 1958 - December 31, 1958 the Hospital received a total budget of 240,000,000 Hw. (\$240,000). Of this amount about 35% was allocated for salaries. At the most realistic Hwan-dollar exchange rate (1000 Hw. - \$1) the Hospital received only the equivalent of \$53,000 for kitchen, pharmacy, X-Ray, nursing, laboratory and all other equipment and expendable supplies needed for patient care. A comparably sized United States Hospital would probably spend nearly a million dollars for such items. This comparison, although far from a valid one, is not valueless since while the cost of locally made supplies is lower in Korea, many of the supplies in this category must be imported and the cost is then much higher than in the United States.

The administrators at Seoul National University Hospital estimate that to operate the entire Hospital at full occupancy, with adequate heat and the necessary supplies for good patient care, would require at least

one billion Hwan per year. (An amount approximately equivalent to the budget during the Japanese occupation).

The Hospital is required by the National Financial Law to yield to the National Treasury all income which the Hospital receives from patients. The Government instructed that the Hospital should earn 150 million Hwan in 1958; the actual income will probably be about 100 million. The income turned over to the National Government goes into the General Fund and cannot be used by the Hospital. The Hospital's main incentive to earn more money is that the previous year's income is used as one of the determinants for the succeeding year's budget. The amount of income has no effect on each fiscal year's operation.

The fixed budget determines the total amount of patient care that the Hospital can provide; therefore, the quality of care for each patient is reduced as additional patients are accepted. One of the most difficult tasks of the Administration is to balance the Hospital's obligation to Korean health needs and medical education with an acceptable quality of patient care. During the last year it was decided that a daily average of only 230 inpatients could be given care. The "winter" and "summer" plans (closing areas of the Hospital) described in Chapter VI were the result of this decision.

In seeking a solution to the financial problems, the Dean of the College of Medicine and the Hospital Officials have had many conferences with officials of Seoul National University, other National Universities, the Ministry of Education, the Ministry of Finance and with members of the National Assembly. The officials of the National University Hospitals have decided that the best solution is to create a new National Hospital

financial system. The Hospital Administration officials at Seoul National University, with the assistance of one of the professors from the Seoul National University College of Law, are currently drafting a proposal for the revision of the National Financial Law. University Hospital financing plans of various countries have been studied.

It is recommended that the proposal embody the following principles:

1. The Hospital should continue to be a part of Seoul National University and the College of Medicine.
2. The Hospital Medical Staff should continue to be appointed by College and University authorities.
3. The Superintendent of the Hospital should be appointed by the President of the University upon recommendation of the Dean of the College of Medicine. He should serve until he resigns or is discharged. He should be relieved of teaching obligations and serve as a full-time Superintendent.
4. The Hospital Superintendent should be given responsibilities and authority:
 - a) To operate a Hospital giving high quality care and available for clinical study to Seoul National University students in the health professions.
 - b) To establish or alter the Hospital organization.
 - c) To select, promote, discipline or discharge all Hospital personnel (excluding the Hospital Medical staff).
 - d) To authorize the expenditure of all Hospital funds.
 - e) To establish and alter Hospital charges for services.
 - f) To admit and discharge patients.
 - g) To enforce all governmental and University laws and regulations.
 - h) To provide free care to indigents that is equal in quality to that given the paying patients. The amount of free care to be given should be based directly on the Hospital's costs for those services and the amount of money received for that purpose from the Government.

i) To compile, present, and justify requests for funds needed from the National Government, and to use funds allocated by the National Government for the purposes intended.

5. The National Government should be responsible for:

a) Financing

1. The care of free patients.
2. The mechanical services - water, heat and electricity, of the entire Hospital plant.
3. Major physical plant remodeling and new construction.
4. Medical research activities.
5. Other purposes as requested by the Hospital and University and agreed to by the Ministry of Education and the National Assembly.

b) Providing, where applicable, the same services and privileges provided to all national institutions. (Fire and safety inspections, importation privileges, financial audits, tax considerations, etc.)

6. All income received by the Hospital for the services rendered to its patients should be retained by the Hospital for use in providing additional patient care. The Hospital Superintendent should be responsible to expend these funds to procure all personnel services, equipment and supplies, needed for acceptable medical and Hospital care.

a) The Hospital Superintendent should be required to use accepted governmental practices for the purchase of supplies and equipment.

b) Salaries paid to Hospital employees should be determined by the Hospital Superintendent. They should be based on job classifications designed for use in a hospital.

7. A written set of Hospital Medical Staff practice policies for medical care of patients should be made by the Dean of the College of Medicine and approved by the Hospital Medical Staff.

Violation of these policies should be grounds for disciplinary action, up to and including discharge of the staff member, by the Dean. The disciplined staff member should be allowed to appeal the decision to the University President. This should not apply to the teaching and research activities of the faculty.

The proposal is offered as the best solution to the critical financial situation of the University Hospitals. With competent administrators its major advantages would be: (1) it allows the Hospital to operate with the minimum amount of expense to the National Government; (2) the Hospital secures an amount of money for operation which is directly related to the amount of service it provides; (3) the control of organization and personnel enables Hospital Administration authorities to manage more efficiently; (4) Hospital Administration officials are encouraged to operate efficiently since the Hospital's and their personal success depends upon principles of sound business and hospital management; (5) flexibility of the budget will allow the Hospital to admit an increased number of patients; (6) the quality of care can be varied according to patient's needs, desires and ability to pay; (7) the increased number of patients and the higher standard of patient care will permit improved clinical teaching of the students in the health professions; (8) the Hospital will be more able to utilize and maintain its facilities, equipment and supplies; and (9) the Medical Staff will have the necessary authority to prevent poor medical care by its members.

The proposed law revision draft will be completed by Seoul National University Hospital officials by January 1, 1959. It will then be discussed with the three other National University and University Hospital officials. The proposal will then be submitted to, and discussed with the Ministries of Education and Finance. The final proposal will then be submitted to the National Assembly.

The only alternative capable of success, other than a plan encompassing most of the above principles, is a many-fold increase of the Hospital budget from the National Government.

2. Constant efforts must be made by the staff at Seoul National University to strengthen and expand programs recently established:

- A) Systems for the use and control of the increasing amount of Central Supply Service nursing equipment and supplies should be further developed. Within the next two months almost \$20,000 worth of nursing items will arrive.
- B) Admissions through the Emergency Room must be implemented to minimize the present conflicts between the medical services, and to develop cooperation between the Emergency Room medical staff and the Admissions Office. Absence of doctors when assigned to the Emergency Room should not be tolerated. The use by doctors of their offices to see outpatients should be stopped. The re-modeling of the Emergency Room, to be completed in January, 1959, will provide four new separate examination and treatment rooms so that members of the medical staff may see their emergency patients there.
- C) Adaptations of the physical plant for room reallocation will be completed in January, 1959. Administration should assume the responsibility to see that reallocation is successfully implemented, as soon as the alterations are completed. It is suggested that specific room allocation, within the areas designated as medical department offices, be decided by the medical departments assigned to those areas. Likewise the actual construction work of those areas should be done only after full consultation with the medical departments.
- D) The central Medical Record Room service will begin on January 1, 1959. A unit number system (one number for each patient for all his Hospital visits) is to be employed. The department will be located in the outpatient clinic building. All records of all Hospital outpatient and inpatients will be kept in this department.

This service will need much direct guidance and support before stability is achieved. Expansion of its responsibilities and functions, after its wisely simplified first phase, will necessitate continuing Hospital Administrative efforts.

It is recommended that the report of the Medical Record Committee, approved by the Medical Staff and by Hospital Administration, continue to be used as the guide in the creation and management of this service. It is also recommended that the person to be responsible for the operation of this area be appointed immediately and sent by the Hospital for observation to institutions now using a central medical record library. A permanent Medical Record Committee should be appointed now to work with Administration in the establishment and operation of this service.

- E) Actions must be taken so that all patients on the pediatric station receive high quality medical care regardless of the service

to which their doctors belong. The abilities of the nurses on this station, especially in the techniques of post-surgical pediatric care, can be improved by four methods:

1. Explanation and demonstration by the surgeons.
 2. Rotation of nurses through Seoul National University surgical and post-anesthesia recovery units.
 3. Sending Seoul National University nurses to other hospitals giving good quality post-surgical pediatric care..
 4. Securing nurses with various trainings and experiences from other institutions. These are the primary approaches that can be applied now to improve the quality of all nursing service at Seoul National University Hospital.
- F) Revision and clarification of nursing service policies has been started. This necessary program should be expedited. Written policy books, containing only policies capable of being enforced, should be compiled and placed in all nursing service areas. Absolute enforcement of the policies by the Nursing Department and Hospital Administration is essential.
- G) The rodent control program should be continually emphasized. The program should be geared to "rodent proof" the Hospital by permanent measures rather than to temporarily rid it of rats and mice. Permanent measures which should be done now are: find and block all rodent passageways into the buildings; deprive rodents of access to food, water, and places to live within the buildings; and insure that all doors are closed, especially during the night. Regular periodic poisoning in the kitchen and storage areas will probably continue to be necessary. It is recommended that the responsibility for direction of the program be given to one person in the General Affairs subsection.
- H) The master rehabilitation plan should be completed as soon as possible. The plan shows the function of all Hospital rooms; also the necessary remodeling and utility services which are needed for the best utilization of each room. The parts of this project not requiring the skill of the Hospital's architect should be done by the Hospital departments who will use the area. This will enable departments to plan their own services, and also permit full use of the Hospital's architect for the tasks which only he is qualified to perform.

3. The Hospital food service, although improving, still has many problems. Reactivation of the dietary committee to study problems in kitchen sanitation, food procurement, charge rates, and other food service areas, should aid administration in further improving this service.

It is recommended that as soon as possible a person with knowledge of dietetics be hired; also that some women be hired to replace the men currently working in this service.

4. Improved supervision of employees is needed in most Hospital administrative departments. The right to visit patient rooms should be clearly established for the Dietary, Housekeeping, and Maintenance Chiefs and Hospital Administrators, and they should be encouraged to visit them regularly.

It is suggested that someone with authority to supervise be placed in areas where departmental people are working. Closer supervision is especially needed in the Maintenance and Housekeeping sections. Nursing supervisors should be moved from the Nursing Office to their areas of supervision as soon as the room reallocation rehabilitation is done, or before.

5. The recent efforts in collecting and storing all unused or broken furniture, fixtures, and equipment into one storage area will be continued. It is logical that the responsibility for operation of this program be transferred to the Housekeeping service from the Nursing service as soon as the newly assigned storage area is ready. Housekeeping will need Administration's help in starting an inventory for such items both in the storeroom and in the Hospital areas.

6. By the spring of 1959 completion of plumbing and sewerage system rehabilitation, the room reallocation physical plant alterations, window screening, and the release of counterpart funds for linens, gowns, and masks will make possible the transfer of patients from the isolation building to the isolation station in the main Hospital building. It is strongly recommended that visiting hour regulations in the isolation stations (including the TB service) be strictly controlled. It may be necessary to keep the entrances to these areas locked in order to accomplish this.

Free chest X-Rays for nurses employed on these areas are now provided. The Hospital should insist that all members of the Hospital staff on areas with communicable disease patients be X-Rayed on a regular basis.

Although there are currently no plans for use of the isolation building, it may be needed for housing junior members of the Medical Staff in the future. To limit further depreciation of the building minor physical plant repair will be done in 1959.

7. Many Hospital employees need more and better training for their duties. This is becoming more apparent as the responsibilities and duties of a more centralized Hospital Administration are increased. Several possibilities for providing special training exist:

- A) Personnel should be sent to other hospitals to observe and learn their methods of operation.
- B) Formal and informal inservice training can be given to employees by the Seoul National University Hospital and College of Medicine staff. For example, members of the Preventive Medicine, General Affairs, Biochemistry, and Nursing Departments could aid in training Kitchen personnel.

- C) The service of other Seoul National University staff members should be sought for training various groups of Hospital personnel. The College of Education's Director of the School of Home Economics has served as a consultant to the supervisor of the Hospital Kitchen on food preparation and serving. Various faculty members of the College of Engineering could give valuable advice about the Hospital utility services. The Pharmacy could benefit from advice given by the staff of the Seoul National University College of Pharmacy. Many other examples can be found of well qualified personnel at Seoul National University who could contribute significantly to training of Hospital personnel.
- D) College level courses in Nursing, Public Health, and Laboratory Technology are in various stages of planning at Seoul National University. The undergraduates and graduates of these three schools should be able to make most significant contributions to the Hospital.
- E) Increased efforts are needed to secure employees with special training or experience. Graduates of professional schools other than Seoul National University should be hired. This applies especially to doctors and nurses, since at Seoul National University they are almost exclusively Seoul National University graduates. As reported in Chapter IV of this report, efforts are being made to hire a trained maintenance repairman and a person trained in food service. Individuals with training and/or experience in laboratory technology, X-Ray technology, social service, physical therapy and other hospital specialties should be sought by the Hospital. Limited training in some hospital specialties is given by the Republic of Korea Armed Forces.
- F) Improvement of morale and attempts to raise the prestige of certain positions (e.g.: - nurses, janitors, guards, laboratory technicians) are tasks requiring special long range attention. Constructive suggestions should be expected from these groups and they should be encouraged to present them to their supervisors. An increase of salaries is needed for personnel in the lower classifications. It is suggested that this be given one of the highest priorities when more adequate financing is obtained.
- G) The proposed contract extension provides for three and one-half man-years personnel exchange for Koreans to study Hospital Administration. It is planned that two of those years be used to enable one person to complete the master's degree program in Hospital Administration. Another year would be used to send a participant for experience in special areas of hospital management such as medical records, admissions, business office, maintenance, housekeeping, etc. The other one-half year would be used to send the Hospital Superintendent for a period of observation.

It is important that the Hospital start seeking candidates for the first two positions. The men should have an interest in hospital administration as a profession and have qualifications equal to other applicants for the Course in Hospital Administration.

Before they are sent the Hospital should make plans, and receive official assurance, that these two people will have a regular position on the Hospital Administration staff upon their return.

- H) Some English language text books, journals, pamphlets, reports, and papers about general Hospital and departmental administration are available to the Seoul National University Hospital personnel. There is no Korean Hospital Management literature available. Other than the Hospital Superintendent and a few nurses, no one on the Hospital staff reads English.

It is recommended that the Hospital secure the full time services of an English to Korean translator to translate articles on selected Hospital subjects. A person with such qualifications is also needed to assist with Cooperative Project correspondence, reports, purchase orders, bills of materials, packing slips, equipment instructions, etc.

8. Professor Edmund B. Flink, Minnesota Adviser in Medicine, during his service in Korea and in his final report recommended that the outpatient clinics reorganize to include a new-patient clinic. This clinic, which would make a thorough general clinical examination of all new patients, was agreed to by Hospital Administration and encouraged by all Minnesota Advisers. It is planned that reorganization enabling this will be effected shortly after the start of the Medical Record Library (January 1, 1959). The general principles of Dr. Flink's recommendations are to be followed.

In order to facilitate the development of this program it is recommended that the Committee on Hospital Operation be requested to recommend reallocation of areas in the outpatient department so as to provide adequate space for this new clinic. A comfortable patient waiting room should be planned.

The Department of Internal Medicine, the Dean, and Hospital Administration should then develop the details for operation of the clinic.

It is suggested that in the future one of the top level administrative staff be assigned the responsibility for management of the outpatient department, with his office in that building.

With the addition of the new patient clinic, and as the number of outpatient visits increases it will probably become necessary to further extend clinic hours and to schedule some clinics less often than they now meet. (All clinics now meet 9-12 A.M. six days every week).

9. As described in Chapter VI, the purchasing system of the Hospital has been changed during the last several months, especially as it applies to the procurement of all ICA-financed and locally obtained patient care supplies.

It would appear advisable that the pattern devised for the Nursing Department be extended to all other Hospital departments. To do this a special section of the Hospital should be started that would order, receive, store and distribute all except dietary and pharmacy supplies. Upon completion of the new Hospital Storeroom in the service wing, the person responsible for these activities should be located in this area.

10. In order to obtain the maximum educational benefit from the limited number of beds the Hospital currently can afford to operate, revision of the bed allowance for each medical service is needed. The revision should be made by the College of Medicine and enforced as a hospital admissions policy.

11. A small four-room area has been set aside by the Hospital for a physical therapy treatment unit. Work has started that will provide minor physical plant rehabilitation and improvement in the area. It has been agreed that individual pieces of therapy equipment now possessed

by several medical services will be transferred to this service; in addition, \$3,000.00 and 400,000 Hwan are to be used to procure physical therapy equipment. A physiatrist, now in West Germany, will return to Seoul National University in April, 1959. He, together with the Chief Nurse who has had physical therapy training in the United States, will initially share the responsibility of training technicians for this service.

It is intended at least initially that this service's activities will be limited to patients referred from other hospital medical services. (No bed allowance will be made to this service.) Patient physical rehabilitation will be included in the medical teaching program.

It is recommended that this service be a separate organizational unit, administered in its initial phases by the physiatrist. The possibilities of obtaining a trained physical therapist from the Tongnae National Rehabilitation Center, or of sending a person there for training, should be investigated. Definite policies should be agreed upon to keep this service limited since a large number of long term patients for physical therapy treatment would be disadvantageous to the Hospital's financial operation and would decrease the limited number of Hospital beds for other more valuable teaching cases.

12. Only 45 autopsies were performed in the last two years, out of a total of 535 Hospital deaths. The difficulty in obtaining permission for autopsies is deeply rooted in superstition and social customs. A low autopsy rate is therefore liable to be a continuing problem to all Korean hospitals. Deliberately planned efforts for its solution are necessary because of the importance of autopsies to the care of patients,

teaching, and research activities of the institution. It is recommended that the Hospital and Medical College give instructions to its staff on approaches to use in securing permission for autopsies. The staff of this College should be urged to increase their efforts to obtain autopsies and to give encouragement to Korean health and education officials in developing programs which would help solve this critical problem.

13. A committee has been formed to study the problem of inadequate obstetrical experience for both medical and nursing students. The best solution to this problem, which is also deeply ingrained in Korean custom, appears to be to send students into the homes to do deliveries. Plans are currently being discussed about such a service. It has been delayed by the absence of funds.

It is suggested that the Hospital, School of Nursing, and the Medical College attempt to receive official permission to try a financially self-sustaining program, needing no governmental or foreign aid assistance. This would involve the creation of a fund to which patients would pay for obstetrical care and from which supplies, drugs, and transportation could be procured.

It is recommended that no attempt should initially be made to include any services other than "home delivery". To add other programs could cause the entire program to fail.

14. The Seoul National University Hospital Administration officials have indicated a desire to become leaders in the creation of a Korean Hospital Association. An association enabling Hospitals to collectively study and solve their problems, to promote inter-hospital cooperation, to represent all hospitals in group actions, and to establish

minimum standards of hospital care for patients, could make remarkable contributions in Korea. The administrators at Seoul National University would be performing a most valuable service if they succeed in organizing an effective body in this field.

CHAPTER VIII

A Look at the Future

Any attempt to forecast for Seoul National University Hospital is complicated by many unknowns. Factors affecting the total health picture of Korea are probably even more important than those within Seoul National University Hospital. A few of the important uncertainties are indicated below.

What will happen to the general Korean economy and the economic situation of its people? At present, most of the citizenry are unable to pay for good health care and the government is not able to provide care for them. Will a workable health insurance program be developed? Will the Korean Government be able to maintain and operate its vastly expanded hospital facilities and services? Will the Government's poorly utilized health facilities be reduced in number and the health activities of the various segments of the government combined?

How many of Korea's citizens will accept "western medicine" for their health needs? It is now estimated that more than 50% of the people rely on practitioners of "oriental medicine". Will citizens of the rural areas be willing to travel to the city for their medical care? Will more professional health personnel from the cities move into the large "doctorless areas" of the country?

Will enough well qualified people be attracted to the health professions? Will the health professions police themselves to develop and maintain standards of high quality?

Especially important to university hospitals is the future attitude of patients toward students. Can their reluctance to be seen

by students be overcome?

Will the health care given to members of the Korean armed forces create a demand for better care? To what extend will health education programs in the schools influence the knowledge of, and demand for, better health? What will be the extent and the effect of the foreign aid health programs? Will the chronic, and expensive, communicable diseases be controlled?

Will the general hospitals become the center of western medicine or will most patients receive care in their home or in small private hospitals? Will Korean physicians be willing to give up their private hospitals and take their patients to the larger general hospitals? In 1957 there were eighty-eight general hospitals with a total of 7,647 beds. There were more than 20,000 beds in the 2470 private hospitals.

Are governmental hospitals going to continue to operate at a financial disadvantage to private and missionary operated institutions?

Are too many beds being added to Korea's total hospital bed capacity for country-wide efficient hospital operation? Even though the number of general hospital beds per 1000 population is considerably less than in other countries, the percentage of occupancy of those beds is very low (57% for 1957 according to Mr. Byun Hung Soo, Hospital Administrator at the Taegu Presbyterian Hospital). In Seoul City the percentage of occupancy was only 45% in 1957. Yet new construction at the major Seoul City hospitals will have added over 700 beds by 1960.

Will an association of Hospitals be formed? If so, will the leadership be found that can promote Hospital progress? What will be the achievements of the Korean Medical Association, medical specialty

organizations, the Korean Nurses Association, the Korean Association of Voluntary Agencies, and other groups directly concerned with the health of the Korean people?

The future of Seoul National University Hospital will be influenced to some extent by all of the above factors. To face this uncertain future the Hospital has four important assets:

1. The present top administration, particularly the Dean, the Hospital Superintendent, and the Chief of General Affairs are talented Administrators. With these three people in charge the Hospital has good leadership.
2. The Medical Staff is scientifically well qualified to give good care. At present, the prestige of being a Seoul National University College of Medicine faculty member is important; thus, many good physicians are attracted to and remain on the Medical Staff.
3. The Hospital plant and major equipment will be completely satisfactory for adequate care of the patient.
4. There are many citizens of Korea who seek their medical care at Seoul National University Hospital.

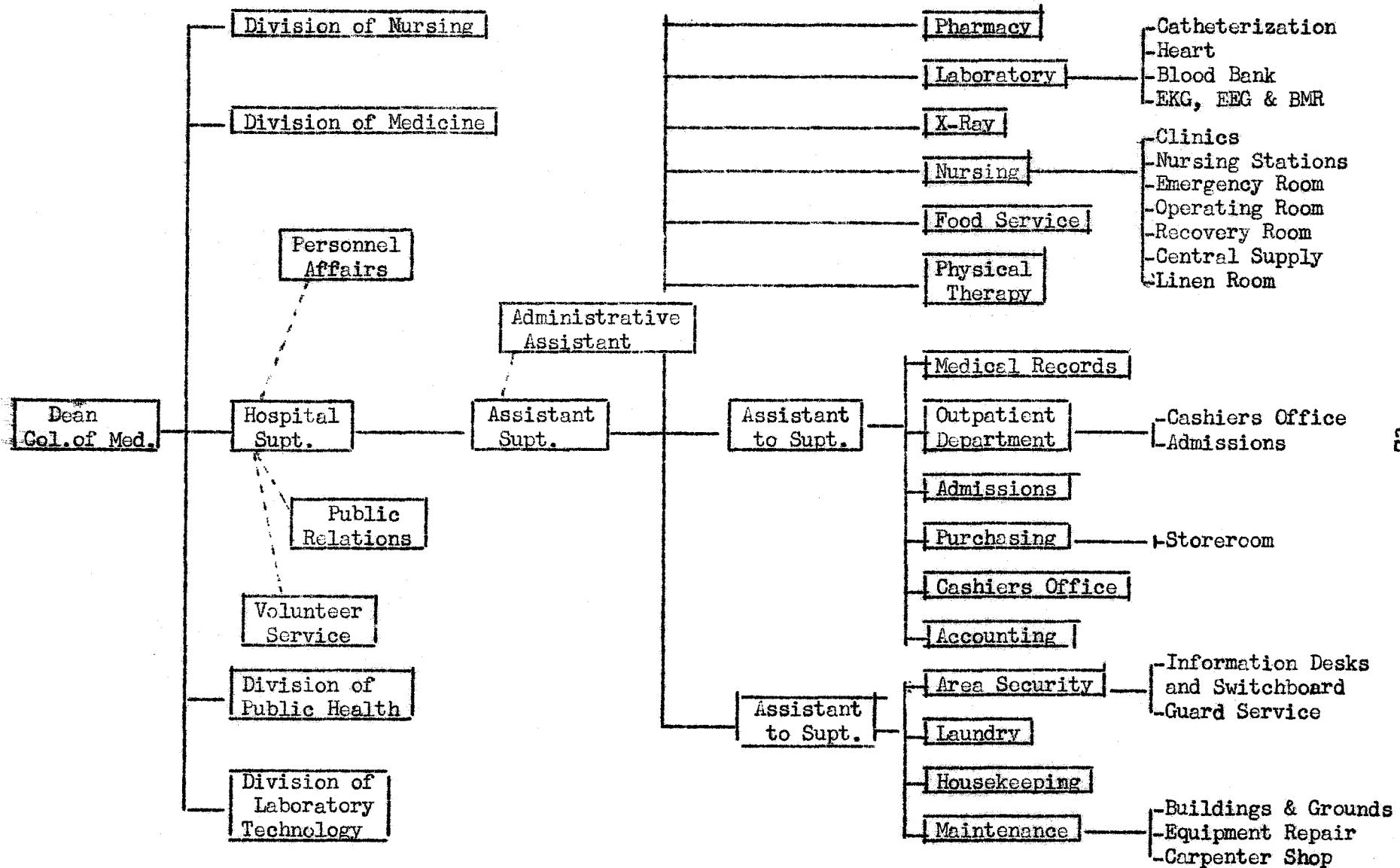
The above elements are, with one exception, the major ones to successful operation of the Hospital. Insufficient operating budget is the critical missing factor. If a solution cannot be found to this problem many of the assets now possessed by the Hospital are likely to be lost. Although hospital people are reticent to talk about competition between hospitals, it does exist and the sub-marginal operators are eliminated.

CHAPTER IX

Future Organization and Management of Seoul National University Hospital

This Chapter contains general suggestions as to what this author feels should be the future internal organization and method of operation of Seoul National University Hospital.

The increasing centralization of Hospital Administration's management responsibilities will necessitate a need for the change of the Hospital organizational structure. The chart on the next page indicates one which this author feels would be workable for the institution.



The following short explanation of the preceding table of organization shows some of the differences between it and the Hospital's present organization; it also suggests the table's use in operating the Hospital.

The Hospital Superintendent would have the complete responsibility for the management of the Hospital. He would also be responsible for coordinating with the clinical departments and other parts of the college on equal levels in the organization. Four people would report directly to him.

The Personnel Affairs Director would be responsible for keeping personnel records and advising the Superintendent in all aspects of personnel management. The Director of Volunteer Service would coordinate activities of the Hospital volunteer workers (members of the community who donate their services to the Hospital). These two people and the Director of Public Relations would serve in a staff position to the Superintendent and the rest of the Hospital Staff. The duties performed by Directors of public relations and volunteer services are now performed by the Hospital Superintendent. The fourth person reporting to the Hospital Superintendent would be the Assistant Superintendent.

In the suggested organization the Assistant Superintendent is responsible to the Superintendent for the management of all Hospital departments. Reporting to him would be the heads of six Hospital departments, two Assistants to the Superintendent, and one Administrative Assistant. The Administrative Assistant, having no permanently assigned responsibilities in the organization, could be used for special studies and projects, given temporary administrative responsibilities in specific areas, and/or assist the rest of the Hospital Administration staff in

their assigned responsibilities.

A total of seventeen departments would exist for the operation of the Hospital. They would be under three of the Superintendent's Administrative Staff grouped generally into three broad categories: (1) Direct Care of Patients, (2) Business Functions, and (3) Hospital Services.

The six departments which report directly to the Assistant Superintendent give treatment to patients. Five of these sections exist at the present time, four of which are responsible directly to the Hospital Superintendent. A fifth, food service, is located far down in the organization. It is recommended that Food Service and the physical therapy unit, to be started in 1959, be given departmental status alongside Pharmacy, Nursing, X-Ray and Laboratory. As soon as administratively competent technicians are developed in the laboratory, X-Ray, and physical therapy services, the responsibility for operation of those areas should be transferred to them, in order to relieve the Medical Staff of their non-medical duties.

Six other departments would report to one of the Assistants to the Superintendent. These departments perform what can be regarded as the business and records functions of the institution. Purchasing, Admissions, Cachier's Office, and Accounting now exist as units but on different organizational levels. No Medical Records Library or Outpatient Department units exist in the present organization. It is recommended that all of these areas be recognized as separate departments.

The four remaining Hospital departments would be the responsibility of another Assistant to the Superintendent. Maintenance is the only one which is now a separate unit of the organization. It is recom-

commended that autonomous Area Security, Laundry, and Housekeeping units be established with one person responsible for the management of each.

Under the departments there would be further subdivisions, on the basis of functions. Heart Catheterization, Blood Bank, and a combined section for Electrocardiography, Electroencephalography, and Basal Metabolism would be sections of the Central Hospital Laboratory. The Nursing Department would be assigned responsibility for three areas in addition to the ones they now have - operating rooms, emergency room, and linen room. The first two are now responsibilities of the Medical Services. The central linen room is not yet in existence.

The information desks at the Main Hospital and Outpatient Department entrances, the switchboard, and the Hospital guards service would be divisions of the Area Security Department. All of these services now exist.

The Maintenance Department would have three sections. All three are sections of the Maintenance section at the present time.

Of course many other organizations for successful operation of Seoul National University Hospital are possible. The one described above is presented as an example to illustrate the principles which the author feels should be used. The present Hospital authorities at Seoul National University should develop the one which they feel best for Korea and the Hospital. They are eminently capable of doing this.

APPENDIX NO. I

TOTAL OUTPATIENT AND INPATIENT CENSUS BY HOSPITAL SERVICES
(January 1, 1957 - December 31, 1957)

Medical Service	Pay Patients		Free Patients		Employees and their families		Total No. of Patients		
	Inpatient Days	Outpatient Visits	Inpatient Days	Outpatient Visits	Inpatient Days	Outpatient Visits	Inpatient Days	Outpatient Visits	
Medicine									
Respiratory	15,947	7,656	1,854	0		182	17,801	7,838	
Gastro-intestinal	6,270	8,920	882			275	7,152	9,195	
Cardiology	3,832	5,879	688			137	4,520	6,016	
Infectious diseases	1,133	51	46				1,179	51	
Surgery									
General	7,013	8,255	1,146				8,159	8,255	
Thoracic	3,239	1,226	745	2		2	3,984	1,230	
Neuro	2,212	906	361	1			2,573	907	
Orthopedic	6,082	2,889	901	3		3	6,983	2,895	
Obstetrics-gynecology									
	3,739	7,054	437	2			4,176	7,056	
Dermatology	521	9,502	70	2		639	591	10,143	
Urology	1,922	3,872	241			1	2,163	3,873	
Ophthalmology	691	5,780	19	19		1,993	710	7,792	
Oto-Rhino-Laryngology	2,227	9,501	165	4		2	2,392	9,507	
Pediatrics	2,589	4,469	588	4		332	3,177	4,805	
Psychiatry	9,801	5,196	1,081			44	10,882	5,240	
<u>Dentistry</u>	78	3,542	3				81	3,542	
Total for Hospital	67,296	84,698	9,227	37		3,610	76,523	88,345	

APPENDIX II

Average Length of Stay for Hospital
Inpatients in 1957 (by Medical Service)

Medical Service	Average Length of Stay (in days)
Medicine	
Respiratory	60
Castro-Intestinal	20
Cardiology	19
Infectious Disease	15
Surgery	
General	10
Thoracic	25
Neuro	22
Orthopedic	30
Obstetrics & Gynecology	15
Dermatology	27
Urology	8
Ophthalmology	10
Oto-Rhino-Laryngology	10
Pediatrics	10
Psychiatry	65
Dentistry	0
Hospital Average	30

APPENDIX III

REHABILITATION PROGRAMS OF UNIVERSITY HOSPITAL

In 1955, 1956, 1957, 1958, and 1959. As of November 6, 1958

FY 1955

<u>Project</u>	<u>Dollars</u>	<u>Hwan</u>	<u>Date of completion (or anticipated completion)</u>
1. Rehabilitation of Ophthalmology and Obstetrics-Gynecology wards - plastering, painting, making windows, etc.	17,148.70	11,200,000	Mar. 18, '57
2. Repair of hospital kitchen - painting, door installation, screening, new concrete floor, and roof repair.	4,703.10	3,100,000	Mar. 11, '57
3. Repair of interior of Psychiatry building - painting, window and security bar installation	2,500.05	3,300,000	Jan. 30, '57
4. Rehabilitation of plumbing, sewerage, heating and toilet facilities in the hospital kitchen.	1,289.08	368,000	Jan. 14, '57
5. Toilet, plumbing, and heating systems of Psychiatry building repair.	1,682.32	2,070,000	Feb. 1, '57
6. Rehabilitation of electrical system of Psychiatry building.	1,799.80	768,000	Jan. 15, '57
7. Electrical system repair of Obstetrics-Gynecology ward	2,510.00	1,190,000	Feb. 1, '57
8. Rehabilitation of kitchen's electrical system	1,382.00	485,000	Jan. 14, '57
TOTAL	33,015.05	23,953,200	

Appendix III - continued

<u>Project</u>	<u>Dollars</u>	<u>Hwan</u>	Date of completion (or anticipate completion)
<u>FY 1955 Additional</u>			
1. Construction of Concrete floor to replace wooden floor of main building and outpatient department.	23,760.00	161,230,000	Oct. 30, '58
2. Screening of entire patient area.	2,729.00	*	July, '59
3. Construction of inter-ward corridors.	13,244.00	8,000,000	Oct. 30, '58
TOTAL	<u>39,733.00</u>	<u>24,230,000</u>	
<u>FY 1956</u>			
1. Making bricks for boiler room expansion.	3,040.80	976,000	Nov. 18, '57
2. Repair of plumbing system in the main building.	4,290.96	4,830,000	Dec. 17, '57
3. Repair of the four existing boilers	583.20	3,936,000	Dec. 17, '57
4. Construction of 50,000 gallon water tank.	10,783.40	8,650,000	Sept. 30, '58
5. Rehabilitation of plumbing and heating facilities of Obstetrics-Gynecology and Ophthalmology area.	3,949.00	2,900,000	Jan. 18, '58
6. Repair of toilets in Ward No. 1	663.80	380,000	Jan. 14, '58
Planning and contract supervision expenses.		<u>244,000</u>	
TOTAL	23,311.16	21,916,000	
<u>FY 1956 Additional</u>			
1. Rehabilitation of heating facilities - installation boilers, radiators, pipe returns, fans, high pressure steam pipes; also the insulation of steam and water pipes.	55,733.84	44,746,000	Approx. Nov. 30, '58

*Hwan allocated in FY 1957

Appendix III - continued

<u>Project</u>	<u>Dollars</u>	<u>Hwan</u>	<u>Date of Completion (or anticipated completion)</u>
FY 1956 Additional			
2. Rehabilitation of plumbing facilities in all areas not previously planned - including installation of hot water tanks, replacing pipes, installation of new water pump and toilet traps and repair toilets	28,000.00	8,000,000	Approx. Nov. 30, '58
TOTAL	83,733.84	52,746,000	
FY 1957			
1. Construction of asphalt road with cement curbs and sidewalks for entire medical compound area	56,800.00	17,244,400	Approx. Sept. '59
2. Construction of elevated water pressure tank.	3,154.00	2,309,000	"
3. Procurement and installation of 2 new elevators.	15,287.00	1,760,000	"
4. Rehabilitation and improvement of the entire electrical system and procurement and installation of Nursing call system.	29,900.00	22,817,600	"
5. Completion of terazzo flooring for first floor outpatient building and main building and installation of linoleum on upper floors.	31,079.00	13,332,000	"
6. Repair of roof of Obstetrics-Gynecology ward building	9,049.00	13,104,000	"
7. Installation of page system and telephone switchboard	27,005.00	1,210,000	"
8. Procurement and installation of emergency electrical generators	33,500.00	1,770,000	"
9. Rehabilitation of clinical research laboratory building.	5,310.00	16,475,000	"
10. Construction of observation operating room (dome)	3,482.00	3,999,000	"

Appendix III - continued

<u>Project</u>	<u>Dollars</u>	<u>Hwan</u>	<u>Date of completion (or anticipated completion)</u>
<u>FY 1957</u>			
11. Rehabilitation of the research animal quarters.	470.00	3,025,000	Approx. Sept., 1959
12. Procurement and installation of laundry equipment.	21,560.00	4,000,000	"
13. Painting of the hospital interior	9,561.00	*	"
14. Rehabilitation of lecture halls, expansion of Radiology dept., and installation of exhaust fans in Radiology.	6,692.00	*	"
15. Construction of incinerator, and procurement of garbage collection and disposal equipment	758.00	*	"
16. Construction of terrazo floor in all hospital corridors.	30,730.00	*	May, 1959
17. Installation of fire fighting system.	18,135.00	*	Sept. 1959
18. Expansion of operating rooms suite	646.00	*	"
19. Procurement and installation of gas producing machine	3,820.00	*	"
20. Procurement of maintenance shop equipment	502.00	-	"
21. Repair of the roof of isolation building	890.00	*	"
22. Making shelves, cabinets, tables, counters, etc.	2,111.00	*	"
23. Procurement and installation of lead on walls in the radiology department.	2,670.00	*	"
24. Procurement of four industrial floor scrubbing machines.	2,200.00	*	"

*Counterpart for these projects is scheduled to be allocated in FY 1958.

<u>Project</u>	<u>Dollars</u>	<u>Hwan</u>	Date of completion (or anticipated completion)
25. Installation of weather stripping and insulation, and repair of windows in front building and No. 1 ward.	1,540.00	*	Sept. 1959
26. Procurement of central supply equipment	500.00	-	"
27. Installation of window screens.	Allocated in 1955 additional	3,900,000	Approx. July, 1959
TOTAL	317,351.00	104,946,000	

*Counterpart for these projects is scheduled to be allocated in FY 1958.

<u>FY 1958</u>	<u>Dollars</u> (Estimated)	<u>Hwan</u> (Estimated)	
1. Room reallocation of hospital	-	18,112,900	Approx. March, 1959
2. Procurement and installation of a large vegetable refrigerator for kitchen.	1,500.00	-	Dec., 1959
3. Procurement of kitchen hot food carts and kitchen ranges.	4,000.00	100,000	"
4. Construction of terrazo floor in all patient rooms.	*	34,721,100	Approx. May, 1959
5. Rehabilitation of dining room serving area.	1,000.00	-	Dec., 1959
6. Procurement and installation of acoustic tiling in noisy areas of the patient wards.	500.00	60,000	"
7. Procurement and installation of dark room equipment for Radiology.	4,000.00	40,000	"
8. Repair of all windows and the installation of security bars in areas containing valuable equipment and supplies.	-	12,275,000	May, 1959

*Dollar fund for these projects was allocated in FY 1957 project.

Appendix III - continued

<u>Project</u>	<u>Dollars</u> (Estimated)	<u>Hwan</u> (Estimated)	<u>Date of completion (or anticipated completion)</u>
9. Construction of two conductive operating room floors.	250.00		Dec., 1959
10. Building new and repairing existing furniture for lobbies, offices, administrative and medical departments.	-	5,040,000	"
11. Procurement of physical therapy equipment.	3,300.00	400,000	"
12. Air conditioning of two operating rooms and the nursery.	2,500.00	500,000	"
13. Construction of fence around the entire College of Medicine compound.	-	9,781,000	May, 1959
14. Rehabilitation and improvement of sewerage system	-	15,000,000	Dec., 1959
15. Procurement of accounting machine (for patient billing and hospital accounting).	1,000.00	-	"
16. Construction of morgue refrigerator	1,500.00	500,000	"
17. Weather stripping and insulation of all areas not included in FY 1957.	6,000.00	600,000	"
18. Installation of a walk-in incubator.	1,500.00	500,000	"
19. Installation of hot water tanks and hot water piping.	3,000.00	1,000,000	"
20. Procurement of mattresses, and hospital linens.	-	14,000,000	"
21. Painting of entire hospital	-	10,000,000	
22. Rehabilitation of lecture halls, expansion of radiology dept., and installation of exhaust fans in Radiology	*	4,000,000	"

*Dollar fund for these projects was allocated in FY 1957 projects.

Appendix III - continued

<u>Project</u>	<u>Dollars</u>	<u>Hwan</u>	Date of completion (or anticipated completion)
23. Construction of incinerator	*	900,000	Approx. Dec., 1959
24. Construction of fire fighting system.	*	150,000	"
25. Expansion of operating rooms area	*	1,079,000	"
26. Installation of gas producing machine and gas piping.	*	900,000	"
27. Completion of the electrical system for the entire hospital.	15,000.00	37,176,000	"
Projects yet unplanned.	6,650.00		"
TOTAL	52,700.00	166,835,000	

*Dollar fund for these projects was allocated in FY 1957 project.

FY 1959

1. Construction of leper clinic.
2. Repair of all hospital roofs not previously programmed.
3. Construction of area for oil storage.
4. Procurement and installation of heavy duty outside scales and construction of coal storage area.
5. Procurement and installation of screens on areas not previously programmed.
6. Expansion of cafeteria and kitchen to accommodate the feeding of both graduate and student nurses.
7. Expansion of hospital service wing.

Estimates for these projects are now being prepared.