

UNIVERSITY OF MINNESOTA HOSPITALS

PLANNING REPORT - PART I

DEPARTMENTAL REPORTS

APRIL 1967

INTRODUCTION

Background

In October, 1964, President O. Meredith Wilson appointed a committee for the study of physical facilities for the health sciences under the chairmanship of Dr. Elmer Learn, Assistant to the President and Planning Coordinator. The Learn Committee decided to organize itself into six subcommittees, each under the chairmanship of a member of the Learn Committee with cross representation from each of the other five subcommittees. Clinical Medicine and Hospital, under the chairmanship of Dr. N.L. Gault, was one of the six subcommittees. Dr. Lyle French was chairman of the Clinical Medicine Task Force and Mr. James Stephan was chairman of the Hospital Task Force. The first report of the Learn Committee was entitled "Future Planning for the Health Sciences: Part I - Preliminary Report on Roles, Objectives and Programs." This report was published on January 1, 1966, and the Hospital Task Force report is contained on pages 70-75.

This report, under the direction and chairmanship of Mr. Peter Sammond, Associate Director, represents an extension of the original January, 1966, report. Even so, people participating in the planning effort recognize the limitations of this report as a complete programmatic statement for physical planning.

What the Reports Are

There are over twenty individual reports in this book. These reports represent an extension of the January, 1966, report and provide a basis on which to judge personnel projections, space requirements, and the issue of what departments will move to the new University Hospital in toto or in part. There is no such word as finality in planning, and thus as you read over your colleagues' reports, it is hoped that you will view this as an approximation by the individual departments of where they are at this time and where they would like to go in the future. Each hospital department has a different style of expressing himself or herself, but certain common threads seem to run through all the reports.

Summary of Common Themes

The common themes suggest that there will be major changes in the future in all of the departments and underline the interdependence of the departments to provide a quality coordinated hospital program for patient care, education and research.

THEME 1. Data processing will play a vital role in replacing most of the existing data entry and storage systems among hospital departments.

One of the important functions of the hospital is the responsibility for the recording of data about patients, procedures, personnel, equipment and money. The recording of data is so much a part of the daily routine of every department that the full significance of a total hospital data processing information system becomes particularly apparent upon the review of the collective departmental reports. The suggestions of data processing applications are thoughtful and the summary of the individual reports suggests the item should be of high priority for hospital administration to implement.

THEME 2. The hospital will be able to expand services and programs with data processing.

Along with the need to find a more efficient way of the existing data processing recording system, it becomes apparent that each department has major plans to improve its services and programs when a total information system is operative.

THEME 3. The hospital is prepared to put major emphasis on a comprehensive ambulatory care program.

This theme runs through the reports of the professional diagnostic service departments. It reflects the fact that the hospital departmental group is aware of the advantages to be gained by a comprehensive ambulatory service. These advantages would be reflected in better care to the patient and a more effective means of financing health care for society.

THEME 4. Hospital departments would like to apply cost effectiveness principles to existing and proposed programs.

Each department has a number of programs. These programs touch all areas of the health sciences and are not looked upon as primarily departmental in nature. Each department feels the pressure to expand and improve its service programs, to become a more active participant in the educational program, to participate in new research programs, and to the patterns of health care. To work out the departmental priorities on a rational basis, the departmental reports conclude that such a system as cost effectiveness has applicability in a hospital setting. The reports also recognize demands for new programs far outstrip the resources of the hospital and the need for an objective setting of priorities becomes more important than ever.

THEME 5. Programs of the hospital will serve all of the health sciences.

Each of the departmental reports have suggested a bonding program to include not only the medical school (undergraduate and graduate) but also the School of Dentistry, School of Nursing, School of Public Health, and School of Pharmacy.

This means that the University Hospitals serves as a clinical laboratory not only for the College of Medical Sciences, but also for the Schools of Dentistry and Pharmacy. These reports reinforce the suggestion of the Learn Committee that a new organization pattern in the health sciences is important to reflect how the health sciences actually interact and function today.

THEME 6. Departments will make every effort to automate their procedures.

Each department is keenly aware of the fact that hospitals are a labor intensive industry. This was expressed in the fact that departments noted it will be increasingly important to search for new ways of performing a variety of tasks within the daily routine of the departments.

THEME 7. Hospital departments suggest functional grouping.

The program reports suggest a number of ways in which the functions of departments can be looked at. One conclusion is that the hospital cannot be looked upon as the collection of twenty-some individual departments coordinated by department heads and an administrative staff. Rather the department and program reports suggest a clustering of hospital activities around the notion of external relations and internal relations. External relations note the impact of University Hospitals upon the community and its relation to other hospitals, referring physicians, patients throughout the state, planning agencies, state associations and governmental agencies. The internal set concerns the program within the health sciences complex. One clustering of programs is around the ambulatory patient. Another set is around the diagnostic and therapeutic services. A third set is around the inpatient care services. A fourth set is around the supportive supply, equipment and remodeling services. A fifth set revolves around the collection, storage and analysis of data about patients and procedures at University Hospitals. Another set revolves around the orderly extension of responsibilities and skills of associated health professionals concerned with a team approach to the practice and teaching of medicine and dentistry.

Outlook:

It was noted that this report is an extension of the hospital report published as part of the first Learn Committee report in January, 1966. Because of the January effort, the hospital was able to come up with an amended report within three months. It will not be necessary to address ourselves to the third Learn Committee report, "Future Planning for the Health Sciences: Part III - Subcommittee Program and Space Reports," dated February, 1967, in which the hospitals and clinics have thirty pages of space, personnel and program projections. Each department should consider its programs in both the inpatient and outpatient areas. Your particular attention is invited to staff projections on page 6 of the hospital section of the planning report. On page 7 of the summary are projected space needs.

Our next assignment will be to make a tentative allocation of the departments that will stay in the existing complex and those that will move in toto or in part to the new University Hospitals and outpatient clinics. Then it will be necessary for each department to project the number of staff needed by category to accomplish the objectives and programs outlined in this report. We will finally need to determine what kind of space we will need to accommodate the personnel objectives and programs aforementioned. The consultants will be available to assist us with our space projections.

This should be completed by June 15, 1967. After this is completed, it will be necessary to determine the best relationships between hospital departments, and then with hospital departments and other units of the health sciences. This should be completed by mid-August.

In the current session of the Legislature, the University of Minnesota has requested \$500,000 for planning (which approximates one per cent of the total \$54 million health sciences building request) and \$650,000 for land purchase. The land purchase would include the acquisition of the Gould apartments and the Kensington apartment units. If this money is appropriated, the University would like to name an architect by mid-August. Therefore we

think it is important that we devote as much time and attention as is possible to this matter in pre-architectural planning. Experience with other health science centers strongly suggests that hospital departments are only apt to get the excitement that comes in terms of new space, new programs and new procedures to the extent that they have laid out a blueprint for these procedures and are willing to remind the architect over and over again of the principles of design and construction the department has in mind for new construction.

John H. Westerman
Director

TABLE OF CONTENTS

1. Admitting Department
2. Business Office
3. Central Sterile Supply
Central Stores
Central Transportation
4. Engineering Department
5. Housekeeping Department
6. Information and Mail Room
7. Laboratory Medicine Department
8. Maintenance Department
9. Medical Art and Photography
10. Medical Record Department
11. Nursing Services Department
12. Nutrition Department
13. Outpatient Department Clerical
14. Personnel Department
15. Pharmacy Department
16. Purchasing Department
17. Radiology Department ; Division of Radiation Therapy
18. Rehabilitation Department
19. Social Service Department
20. Volunteer Service Department

ADMITTING DEPARTMENT

Roles

1. The introduction of patients, within predetermined admitting policies, to the University Hospitals' facilities and services.
2. To present the most positive image possible in relations with referring physicians, patients, and other third parties to whom we represent the University Hospitals.
3. The gathering and dissemination of statistical information relating to patients.

Objectives

1. Develop registration and admitting systems and procedures which will obtain necessary information in the most efficient manner consistent with minimum inconvenience to patients.
2. Encourage maintenance of the highest possible rate of hospital occupancy consistent with admission policies.
3. Provide prompt response to emergency admitting needs.
4. Develop referral acceptance procedures which are most convenient for referring physicians.
5. Obtain appointments for new patients as near as possible to dates desired by the referring physician and/or the patient.
6. Provide maximum assistance to outpatients and patients' relatives in obtaining desired living accommodations.
7. Provide maximum consideration for patient welfare in conducting admitting functions.
8. Develop a physical environment designed to provide an efficient workflow and the gracious reception of patients.
9. Accurately record, manipulate, and disseminate legitimately requested statistical information regarding patients.

Programs

1. Full use of automation in the processing and dissemination of admitting information.
2. Centralization of patient appointment systems.
3. Provide adequate departmental supervision and staffing of the admitting department 24 hours per day, 7 days a week.
4. Develop mechanized systems for the flow of hospital records and admission forms.
5. Expedite the admitting and registration process by obtaining necessary information, when practical, prior to the patient's arrival at the hospital.
6. Provide easily readable signs and directions for the routing of patients.
7. Provision for adequate and comfortable patient waiting space and interview areas.
8. Provision of check room and storage space for patients' belongings.
9. Upgrading of staff through initial screening and the establishment of continuing in-service educational programs with emphasis on public relations.
10. Improve communications with hospital staff, faculty, patients, and outside agencies with whom we work.
11. Encourage hospital volunteer and other staff duties in admission areas to accommodate the needs of patients.
12. Obtain admitting information from inpatients in their hospital room in order to minimize inconvenience to patients being admitted to the hospital.
13. Designate and train a staff person to be responsible for assisting outpatients and their relatives in locating living accommodations.
14. Designate and train a staff person for the compiling and dissemination of patient statistical information.

BUSINESS OFFICE

Under the department commonly referred to as the Business Office, there are various divisions which might well be defined as subdepartments; namely, Patient Accounting, Hospital Accounting, Data Processing, Budgeting, Credit and Collections, and the Payroll Department. For each of these the role, goals and objectives will be dealt with independently.

I. Patient Accounting

- A. Role - The role of patient accounting is to present a bill which is representative of the charges made to a patient for care rendered in our hospital. It is necessary that this bill be presented promptly, accurately, and done in an efficient manner.
- B. Goals - The goal of patient accounting should be to post charges to a patient's account almost instantaneously, when the charge is made out, so that the patient's bills would be constantly updated. Patients receiving care from the Outpatient Department could receive a bill at the end of their treatment each day and this would be presented to them for payment or insurance processing.
- C. Objectives - The objectives of this department should be to utilize more data processing and to process charges in such a manner as to be an aid in establishing cost care centers. At the present time we are engaged in a change whereby we have combined the outpatient and inpatient accounting systems, so that we will produce one bill for the patient which will include both his inpatient and outpatient care. We are moving into an era where we find that the government or government agencies are tending to be a more prime provider of care for patients with new programs such as Title 19 and Medicare. It is anticipated that Medicare coverage will be extended and with this extension it will be necessary for us to expand our clerical personnel to meet the ever increasing needs in this department. The need for additional employees in the patient accounting area should increase about 20 per cent to provide for the proposed increase in the number of beds added. As we start into data processing, it seems quite feasible that an area in the new facilities could be serviced from our present central accounting office by the use of remote control--input and output facilities. In the outpatient facilities as proposed which would be some distance from our business office, this could be easily handled on a data processing remote system.

II. Hospital Accounting

- A. Role - The role of hospital accounting is to develop cost care centers in the hospital, as an administrative aid to establish proper charges for services given, to prepare reimbursable cost formulas, and to aid departments in fiscal operations.
- B. Goals - The goal of our hospital accounting area should be to produce records for administrative staff which are meaningful, accurate, and reflect the efficiencies of our financial policies.
- C. Objectives - Historically, the accounting section of the University of Minnesota Hospitals has been extremely understaffed and incapable of producing indicative reports necessary for operating an institution of this size. Presently, we have one senior accountant in the Business Office who functions as an accountant for both patient accounting and hospital accounting. We should have a supervisor in charge of hospital

accounting who in turn would have at least two graduate accountants under his supervision to initiate and maintain effective procedures, make cost reports, rate studies, and be able to accurately forecast financial positions. In this division we would also need inventory control clerk positions for maintenance of valid and updated records of equipment at the University Hospitals and provide depreciation schedules. We should fund this depreciation for replacement of out-dated equipment.

III. Data Processing

- A. Role - The role of data processing in the future is enormous; not only should it be used to produce patient billings, control accounts receivable and accounting functions, but statistical by-products for aids in administration.
- B. Goals - The goal of our data processing division, after the transfer of all manual bookkeeping operations to computerized input and output, should be to work with the individual departments to see what services we could offer. We should attempt to make continuing use of our principal systems analyst and assistants in this department to simplify procedures and possibly eliminate the bulk of the paper handling necessary for the processing of charges. All of our departments keep certain statistical information, most of which is hand recorded; and as the majority of these clerical tasks are handled by the professional core of people, it should be our endeavor to capture this information on automatic data processing.
- C. Objectives - The objectives of the data processing are numerous. This department is certainly in the embryonic stage and will undoubtedly be one of the fastest expanding departments in the Hospitals. The first phase has been that of patient accounting but as we go through each area of the Hospitals, we find all departments are interested in computer applications and many of them are doing some work along these lines now. We will have to do many studies to see which is the most logical, efficient and economic way to capture this information. Currently we are in the process of using a computer several miles away hooked up by telephone lines. The Biomedical Data Processing Center is within the complex of our buildings. It is a machine with ample capacity and perhaps much of our desired information could be processed on this machine. The University of Minnesota Data Processing Center has recently purchased an IBM 360, a very large machine which will have the desirable random access features. I foresee a small computer to be installed in the Business Office which perhaps could be compatible to either the Biomedical Computer or the University general computer so that some data could be stored here and then large volume storage could be transferred to larger computers for off-line processing. With the planning for the new outpatient clinic facility, plans should be made to provide an input-output terminal or terminals in the outpatient clinic area to provide statistics, accounting, and other types of service for the outpatient clinics. Many studies will need to be made jointly with professional representatives for each of the departments both in the Hospital and in the Medical School to apply automatic data processing to medical records and other desired statistical information.

IV. Credit and Collections

- A. Role - The role of credit and collections is to effectively collect monies for the cost of hospital care given and to assist the people in obtaining necessary help in obtaining authorizations to cover their hospital care.
- B. Goals - The goals of this section should strive to reduce the number of uncollectable accounts and improve public relations with patients and agencies authorizing for care.
- C. Objectives - The Business Office suggests the formation of a patient Financial Counselling Service as a means to improve public relations, solve patient financial problems, and increase hospital income. The Business Office has been practicing the basic concepts of financial counselling for some time in cooperation with the Social Service Department; however, there is an increasing need for a formal Financial Counselling Service wherein other hospital departments, stations, etc. would be notified of the services available and would act as a referral source. We should provide financial counsel for all inpatients and outpatients, to have a branch office in the outpatient facility, to employ additional personnel for continued telephone contact collections, and to employ field representatives to handle garnishments, present cases to conciliation courts, and make personal contact on difficult accounts within our five state area. Presently we are employing three collection agencies and it is hoped that we would only use these for pressing legal matters.

V. Budgeting

- A. Role - The role is to provide Hospital Administration with a line item budget for salaries and expense budgets as an aid in financial policies and managerial decisions.
- B. Goals - This department should strive to revise all budgeting procedures, to evaluate budgeted positions, and supplies and expense requests.
- C. Objectives - The University Hospitals is rapidly increasing not only in dollar volumes for annual salaries but also in the ratio of the number of employees to patients. For a long period of time it has been thought that the employee ratio should be 2:1, more recently the ratio has been 2.5:1, and currently because of increasing medical skills and techniques and the ability to provide patient care for more serious diseases this ratio is presently about 3 employees to each patient. Also the "rule of thumb" was that expenditures were one-third and salaries two-thirds. We are now moving in the era where expenditures are approximately one-fourth and salaries three-fourths. If any attempt is going to be made to control costs of patient care, it is imperative that these budgetary positions are the ones which will require the most scrutiny. This department will hopefully take advantage of all data processing developed in the University Hospitals and keep a constantly updated budget on the relative positions as of given dates based on yearly allotments. This department will work very closely with department heads in developing and planning both for new positions and anticipated major equipment planned expenditures on a yearly basis. January 1, 1967 saw the establishment of the position of a Hospital Budgets Officer. The hospital budget will increase approximately 20 to 25 per cent in the next year, and I would anticipate a natural increase of 7 or 8 per cent each year. It is understandable that additional personnel will be needed to staff this important department.

VI. Payroll Department

- A. Role - The Payroll Department is responsible to pay employees for services rendered on an accurate and prompt basis.
- B. Goals - the Payroll Department should simplify payroll procedures and methods of payment to eliminate excessive times necessary to prepare payrolls and maintain accurate records of payment as well as sick leave and vacation accumulations and balances.
- C. Objectives - Currently the University of Minnesota Hospitals is a part of the regular payroll procedure for all of the University of Minnesota. The University of Minnesota Hospitals is the largest department of the University and has the largest self-contained payroll department. University Hospitals' Payroll Department serves as a master station for all of the departments of the Hospital and all payrolls are channeled through this department for processing to the University of Minnesota. The University Hospitals carries on a function which requires 24 hour a day operation and employs a vast number of people. There are no other departments of the University comparable to the operation which we perform. We operate on a bimonthly payroll and the person is paid on regular payroll on the 15th and last day of the month and is paid up through that date. All payrolls are figured on an anticipated payroll and any adjustments necessary have to be made on the following payroll. From this standpoint our payroll does not reflect accurate expenditures paid for time worked. Any additional overtime or call time must be paid for on an additional payroll called the miscellaneous payroll. As we move into shift differential, it will be necessary to do many additional calculations to prepare and adjust our payrolls. I think the main objective that the Payroll Department must take is to adopt a completely new payroll system to pay employees every two weeks and pay for actual time worked plus overtime and call back time on the same check. This could be set up independently from the University with use of our own data processing or provided for by the Data Processing Division of the University. We are now experiencing new developments, whereby outside bargaining agents are representing groups of our employees at the conference table for establishment of salary plans. We will see that the stipulations of these plans call for certain measures to which our present system cannot readily adjust. Undoubtedly there will be certain changes in fringe benefits requested and perhaps a transfer of a large number of employees from our present payroll and fringe benefits system to conform with other salaried packaged plans offered to the health professionals in other hospitals. The Payroll Department should take every opportunity offered by data processing to accurately report to each employee on a monthly basis the sick leave balance, the accumulation this month, the accumulation to date, sick leave taken during the month, and the ending balance. We should provide a similar record to employees on their vacation balances and supply department heads with statistical information relative to sick leave and vacation for their respective departments. It is anticipated that by 1973 this department would increase its personnel approximately 25 per cent and should attain a department level status and be managed by a professional type person.

Summary

The University Hospitals Business Office is a service department not only to hospital patients but also in other departments. We have experienced much growth in the last ten years without major program changes made by other departments which might affect the Business Office. I would anticipate that

BUSINESS OFFICE - page 5

the Business Office will continue to grow in personnel needs and space requirements, and would estimate that the needs for personnel within the next five years would be an increase of 25 per cent, and likewise the space requirements would demand consideration of approximately a 25 per cent increase. However, if new programs are developed within the Hospital or the Medical School complex which would require additional services to be provided by the Business Office, such as centralization of billings for professionals, extra consideration would be necessary for both personnel and space.

CENTRAL STERILE SUPPLY

Role: To provide necessary supplies and equipment for the care of patients through the effective utilization of personnel, controls and systems.

Goals and Objectives:

1. To achieve effective communication with the medical and nursing staff in order that their needs for equipment and supplies can be interpreted and met. C.S.S. should provide the technical skills and facilities for fulfilling staff needs.
2. To provide modern, functional equipment and supplies of the highest quality at all times. Obsolete items must be continually replaced as new products become available. Consequently, an on-going program of product research and evaluation should be carried out. Particular attention should be given to the potential replacement of reusable items with disposables as this becomes practical.
3. To provide a central source of all supplies and equipment for patient use in all areas of the hospital. All areas are currently doing some processing and some areas do a major amount. Centralization of specialized processing and cleaning equipment and of trained personnel would result in uniform processing procedures, better control and more efficient utilization of processed items as well as space and personnel.
4. To establish and maintain routine stock items and to determine the scope of services available to all areas of the hospitals, outpatient department, research labs and basic science departments. Areas maintaining stock items should be serviced at regular intervals by C.S.S. personnel in order to remove the supply function from nursing personnel. Inventory control and cost awareness are important by-products of this program.
5. To evaluate the personnel requirements for C.S.S. workers and to translate these requirements into training programs.
6. To develop an efficient system of processing and distributing C.S.S. items. Utilization of mechanical equipment in both of these activities is an essential ingredient in fulfillment of the central supply function. The shortage and cost of manpower make this mandatory.
7. To provide other service functions as demands and needs arise. Examples of such activities are inhalation therapy service, setting up orthopedic equipment, and fitting of appliances.

Program: In order to meet our objectives we must be provided with the necessary tools. C.S.S. does not have the facilities to accomplish its goal presently. These goals can be accomplished by the following programs:

1. Increase the space of the department.
 - A. Workflow patterns must be first established.
 - B. Then work areas can be determined.
2. Provide necessary processing machines.
 - A. Commercial washers for cleaning all reusable items.
 1. Glassware and nonelware units.
 2. Ultrasonic washer for instruments.
 3. Glove washer and dryer.

3. Install high vacuum and gas, steam and dry heat sterilizers.
4. Provide a mode of transportation to all area services.
 - A. Pneumatic tubes.
 - B. Vertical and horizontal conveyors.
 - C. Dumbwaiter system.
5. Consolidate patient use materials into a central storage area for distribution.
6. A formal training program should be developed for all levels of personnel in C.S.S. C.S.S. is called upon as a reference service for what to use and how to use materials and equipment. The turnover of hospital personnel and the passing on of orders from doctor to nurse to aide place great demands on C.S.S. personnel. There is a need to recruit personnel with technical and managerial ability to meet the challenge of C.S.S. work and to train them properly.
7. The function of supply should be removed from the nursing service. Inventory level of supplies and equipment can be established jointly. Stocking of these items would be by C.S.S. personnel who would assure rotation of sterile and non-sterile stock. Inventory levels would be reviewed periodically and adjusted to current demands. Equipment issued would be inspected regularly. A valuable aspect of this program would be to instill an attitude of cost awareness and responsibility for efficient use of supplies and proper maintenance of equipment.
8. A quality control program should be instituted for both disposable and reusable items. This will involve routine sampling of products and constant surveillance of techniques used in handling sterile supplies.

CENTRAL STORES

Role: To provide central warehousing of routine supply items for general hospital utilization.

Goals and Objectives:

1. To maintain adequate inventory of all hospital expendible materials.
2. To establish a standardization program for all materials ordered and a catalog of available materials.
3. Develop consumption records by using department for budgetary and stock utilization purposes.
4. To develop a uniform system of ordering and verifying receipt of goods.
5. To develop an efficient distribution system for stock.
6. To institute a coordinated program for repair of equipment.
7. Coordinate purchasing function with the purchasing director.

Programs:

1. Purchasing functions should be closely coordinated through all purchasing activities, the purchasing director, his office, receiving and stores. Centralization should be developed as there is duplication of efforts and

facilities. All orders for supplies can be directed to a central point where a city desk person could edit, revise and direct all orders.

2. Materials ordered on a recurring basis could be evaluated for possible stocking in central stores.
3. Department heads should be responsible for stocked items so they do not become obsolete. Stock will be rotated so that older items will be issued first.
4. Records of consumption for inventory and reporting must be developed and maintained. Electronic data processing equipment should be considered for this program.
5. Adequate warehousing must be made available. Modern warehousing equipment is needed to transport stock.
6. Qualified personnel must be available to administer and perform the function of the stores.
7. A mode of transportation will be needed to bring material to the using area.

CENTRAL TRANSPORTATION

Role: To distribute materials and escort patients.

Goals and Objectives:

1. To distribute supplies and materials to all areas of the hospitals in a prompt and efficient manner.
2. To transport hospital patients to various hospital departments for appointments, examinations, tests, etc.

Program:

1. Determine delivery needs of hospital departments and develop a delivery schedule which will meet these needs effectively.
2. Evaluate present modes of transporting supplies, materials, mail, etc. and devise a uniform and efficient system. Duplication of efforts should be avoided.
3. Utilize mechanical means of transportation when possible.
4. Study needs for patient movement from nursing areas to various hospital departments.
5. Develop a system of patient scheduling which will provide good patient care and efficient utilization of departmental services. Data processing equipment will be an integral part of this system.
6. Devise a system of communication with C.T.S. personnel which will utilize their time efficiently. Electronic pagers could be valuable with this program.

HOSPITAL INDUSTRIAL ENGINEERING¹

Roles, Objectives and Programs

The Industrial Engineer seeks to maximize the productivity of the system used by the hospital to obtain its objectives. It follows that the hospital industrial engineer must be concerned with both the attainment of the hospital objectives and the conservation of human and material resources.

Just as the hospital as an institution has service, education and research objectives, hospital industrial engineering as a staff function has its service, education and research objectives.

In the realm of service, the activities of the industrial engineer cover the full gamut of modern industrial engineering practice, including work simplification, methods engineering, operations research, systems analysis and design, and the generation of information for management decision making. He uses these approaches to identify problems, gather data, convert these data into meaningful information, pose alternative courses of action, and predict and evaluate consequences of each alternative.

By means of education programs, including conferences, workshops, short courses, indoctrination sessions, and the distribution of training materials, the industrial engineer attempts to establish a climate of receptive attitude among hospital employees. Through such programs and by personal contact, attempts are made to allay resistance to change, to facilitate communications, and to develop the capabilities in personnel as a resource for promoting the objectives of the hospital.

Through the design and execution of research projects, the industrial engineer attempts to contribute to the body of knowledge relevant to hospital management systems and to develop new and better ways to apply existing knowledge to the interests of his hospital. A legitimate facet of the research objective is the reporting in professional literature of methodologies, techniques, findings and achievements.

¹Quoted and paraphrased from Smalley, Harold E., and John R. Freeman, Hospital Industrial Engineering, Meinhold Publishing Corporation, New York, 1966.

HOUSEKEEPING DEPARTMENT

ROLES

Control of environment to provide a safe, efficient and attractive hospital for patients, students and staff.

GOALS

1. Continually increasing academic requirements for Housekeeping Department supervisors.
2. Establishment of research programs with architects and professional engineers:
 - a. To eliminate inadequate building facilities;
 - b. To provide more rapid development of mechanized equipment.
 - c. To control environmental contamination.
3. Establishment of an Administrative Department of Environmental Control with whom the Director of the Housekeeping Department would work very closely.
4. Extension of areas of responsibility of the Housekeeping Department.
 - a. Absorption of physical building features and non-medical equipment in all Hospital Departments.
 1. Rolling stock
 2. Occupied patient units

PROGRAM

1. Expand the use of the services of Civil Service Training Division to improve the quality of Housekeeping Department supervisors.
2. Establish an in-service training program for departmental workers with a competent instructor and adequate teaching facilities.
3. Increase the supervisory staff to meet the needs of increased rotation over an increasing area of coverage.
4. Cooperate with the employment division of the Civil Service Department to seek new sources of personnel.
5. Work with agencies in the various National Education programs to establish a source of recruitment.
6. Improve the image of the Housekeeping Department by furnishing uniforms and identification pins for the personnel.
7. Assist in the development of a Medical Center approach to common problems wherever possible.
8. Assume leadership for continuing education of leaders in the Housekeeping field to contribute to the improvement of Health care in the community and the state.
9. Improve communications and attain fulfillment of many of the objectives by more frequent meetings and inspections, tours, particularly on patient areas.

INFORMATION AND MAIL ROOM

ROLE

- I. The Information Desk exists to provide service to people within the Medical Center in terms of their needs for information and personal requests.
- II. The Mailroom is a central repository of all incoming mail to the Medical Center as well as a collection point for outgoing mail.

OBJECTIVES

- I. Information Desk
 - a. To give courteous and efficient service to all who request it.
 - b. To have available information or know sources of information.
 - c. To provide various personal services to patients and visitors as deemed appropriate.
 - d. To handle paperwork and communication relative to the expiration of patients.
 - e. To assist the hospital in other areas that are deemed appropriate to this function.
- II. Mailroom
 - a. To adequately receive all incoming mail, properly recording all packages and insured items.
 - b. To efficiently sort and prepare for delivery all incoming mail.
 - c. To prepare for mailing in the most efficient manner all out-going mail.

PROGRAMS

- I. Information Desk
 - a. On the job training and adequate supervision of all employees.
 - b. Development of effective filing systems for informational retrieval.
 - c. Continual assessment of the needs of Medical Center staff and visitors in relation to this service function.
 - d. Dispensing of information about the Medical Center
 - e. Assist visitors or patients by:
 1. calling cabs
 2. notifying of status of surgical patients
 3. notifying chaplains
 4. funeral arrangements
 - f. Receive flowers
 - g. Receive and notify recipient of telegrams and special delivery letters.
 - h. Prepare daily census sheets.
 - i. Prepare OR and Cysto schedule on weekends and holidays.
 - j. Secure information and fill in death certificates; assure completion.
 - k. Coordinate autopsy and release of body.
 - l. Report deaths to Public Health Department.
- II. Mailroom
 - a. Receive all mail (U.S., Campus, Hospital)
 - b. Sort mail for delivery
 - c. Make one mail delivery in evening.
 - d. Stamp, sort and tie outgoing mail
 - e. Account for, notify recipient and hand out packages, telegrams and special delivery items.

DEPARTMENT OF LABORATORY MEDICINE

Role: The Department's task is determined in large measure by the tasks of the hospitals as a whole which are:

- A. To provide ideal, versatile and advanced health care to patients in its geographical area (Service);
- B. To provide demonstrations and new approaches to health care; to innovate intelligently and imaginatively in health services (Research);
- C. To provide a rich and resourceful environment for the education of physicians and other members of the health care team (Teaching).

The Department of Laboratory Medicine has important roles to play in each of these areas of overall endeavor.

1. Service. The clinical laboratories must be able:

- a. To deliver the wide variety of laboratory analyses required for handling problems of diagnosis and management of patients in an ideal, advanced manner.
- b. The work must be of high quality (the analytical work must be accurate and precise, up to the best standards in this regard);
- c. The work must be done efficiently and time requirements must be met. If the results are required within a few minutes (emergency situations) the laboratory service must readily respond to this need ;
- d. Results must be available to physicians in a form in which they are maximally useful. In other words, they should be reported in a way in which they are as meaningful as possible. This requires the use of proper standards of comparison and clear and effective reporting and recording in the patients' records. Channels of communication between wards (and clinics) and the laboratories must be effective and efficiently organized;
- e. The clinical laboratories must be able to respond to unusual requirements effectively and speedily. They must have versatility and resourcefulness in meeting unusual demands and providing unusual services and advice;
- f. All these requirements must be met with due respect for economy of effort, space and materials.

2. Research. The clinical laboratories will play very important roles in the efforts of the hospitals to provide demonstrations and new approaches to health care. A technological revolution is in train and its influences on medicine undoubtedly will be great. Because of the changes this revolution is bringing, the role of the clinical laboratories in the next several years undoubtedly will be a constantly expanding one. The innovations in the laboratory area which will expand this role include:

- a. Automation, which will continue to make laboratory analyses more efficient and speedy;
- b. Improved data processing. The use of computers will prove great efficiency and speed and will enhance the meaning and thus the usefulness of laboratory data;

- c. The use of laboratory analyses for screening for disease processes will increase;
 - d. The fruits of advances in knowledge in the sciences basic to medicine will continue to be applied to the diagnostic study of individual patients and to the management of clinical problems in strategic ways. The laboratories will play a role of prime importance in this effort.
3. Teaching. The clinical laboratories are and will increasingly be an important element in the milieu that the teaching hospitals provide for the clinical education of physicians, medical technologists, and other health professionals. For medical students, they provide supervised opportunities for learning to make and use the laboratory observations that are an essential part of the modern physician's experience. For medical students, interns and residents, they provide a rich and varied experience in the critical and discriminating use of laboratory analyses in:
- a. The diagnosis and management of a wide variety of disease states;
 - b. The search for preventable and amenable disease; and
 - c. The ceaseless search into the basic mechanisms of disease.

For students in medical technology, they provide a setting for experience in actual clinical laboratory situations so important for the technical and professional development of these health workers.

For physician specialists in clinical pathology, the clinical laboratories provide sites and tools for development of clinical and laboratory skills and judgments.

GOAL of the Department is to greatly increase its capability and its potential in all three areas in which its role is defined.

1. Service

- a. The department must greatly broaden its analytical repertoire. In order to make its appropriate contributions to the specialized model health care facility that a University Hospitals must be, the clinical laboratories must provide a large variety of analytical procedures and have the capability of constantly enlarging this repertoire.
- b. The quality of work must be improved in areas where gains in quality will enhance the clinical value of the analyses. Constant internal surveillance of quality is required (through improved quality control). Constantly improving skill is a major objective.
- c. Efficiency must be improved and the ability to complete large volumes of work in reasonable periods of time. Other time requirements must be met--rapid, skillful results when needed (in emergencies) on an around-the-clock basis, seven days a week.
- d. Improved reporting and recording of laboratory data will make them maximally useful to the patient's physician. Data must be reported in a form which will make its meaning as clear as possible; it must be readily available and easily retrieved from past records. Channels of communication between laboratories and wards (and clinics) must be improved.

- e. The ability of the clinical laboratories to provide "custom" services to suit individual unique clinical needs must be improved and enlarged.
 - f. Avenues of economy, especially in effort and the use and deployment of skilled personnel, must be constantly explored.
2. Research. The clinical laboratories will have as objectives the development of strong, intelligent and creative programs in all areas of technical innovation described in Section one under its role in research. These include:
- a. Automation of laboratory analyses.
 - b. Electronic data processing.
 - c. Diagnostic screening, and
 - d. Development and application of methods for inquiry into the basic mechanisms of health and disease.
3. Teaching. In this area, programs will be designed more fully and skillfully to utilize the resources of the clinical laboratories in achieving the overall educational objectives of the hospital and medical center. In short, the objectives of the clinical laboratories are to bring its total efforts into better coincidence with the role we envision for it in the task of the University Hospitals as a whole.

PROGRAM

1. Development of a Computer and Data Processing System.

The most immediate need is for development and efficient use of modern computer techniques in the processing, reporting, storage and retrieval of laboratory data. Computer use will also be made in the planning of laboratory work, the acquisition of laboratory samples and other tasks. Currently much efficiency and time is lost in simple computational work. At the same time, laboratory data is reported inefficiently and in forms not easily utilized. Our computer plans call for direct interfacing between the computer monitors and the analytical instruments; means of storage and quick retrieval of results, permitting use of cumulative reports which will go into the patient's records, and other efficiencies. We intend to be able to make more extensive and ingenious use of quality control methods, helping us continually improve the quality of work. We intend also to derive new and improved normal values to use as standards of reference, thus making laboratory data itself more useful and meaningful in actual clinical circumstances.

Development of a strong and effective computer program is of fundamental importance to the success of many other programs which we envision as needed. For this reason, we give it the top priority of all our plans.

Space requirements for our computer program will not be great. We probably will need some additional office space. Personnel needed will include:

1. A full time director (preferably a physician);
2. A systems analyst, and
3. An electronics engineer.

We presently have one medical technologist (Miss Joan Aldrich) and one senior clerk-typist assigned to the program.

Equipment needs cannot be estimated precisely at present. We intend to utilize the CDC 3200 computer of the Biomedical Computer Center of the Medical Center. A detailed account of our plans and requirements will be provided in the very near future.

2. Extended Service in Time; Extended Emergency Services.

To meet requirements for comprehensive laboratory service at University Hospitals, we see that it is now necessary to provide more extensive coverage in each laboratory division. It is obvious to us that present and future needs for high quality, rapid laboratory services on an around-the-clock basis, seven days a week, exceed our present staffing abilities. We therefore plan to extend, as soon as possible, coverage by staff technologists in each of the laboratory divisions (chemistry, hematology, blood bank and microbiology) to include the hours between 7:30 a.m. and 11:30 p.m., seven days a week. This coverage will require staggered shifts and also will dictate an increase in the technologist staff. Estimates of additional staff needed will be provided in the very near future.

Under the new system, only the hours between 11:30 p.m. and 7:30 a.m. will be covered by general medical technologists recruited for this purpose and by medical technologist students. It is quite likely that ultimately each division will have to provide coverage of its area on an around-the-clock basis. Advances in the complexity of methodology and sophistication of each laboratory division, together with the requirements of the clinical services, make this altogether likely.

In this sense of extended service, it is necessary that each laboratory division have the capability of providing rapid emergency service throughout the day as well as night. In some divisions, notably chemistry, an emergency unit has been established which can give this type of response at all hours (except between 11:30 p.m. and 7:30 a.m.). This type of service will have to be strengthened and extended in the future.

3. Screening. The use of laboratory analyses in screening for cryptic disease is expected to become a prominent feature of medicine. Batteries of screening tests will be available. These may be either:

- a. A general battery of screening tests useful in detecting a variety of cryptic diseases. This type would be part of a general medical examination.
- b. Special profiles tailored for special purposes, such as screening for liver disease, for renal disease, for metabolic defects, etc. We should be able to screen infants and children with suspected physical or mental retardation for specific metabolic defects.

The specific requirements for such screening batteries include the following:

- a. Economy. The cost must be sufficiently low to justify their use.
- b. Reliability. The quality of the work must be high enough to provide consistently dependable results. Precision and accuracy must be sufficient to the needs.
- c. Flexibility. The batteries must be susceptible to change in methods and analyses as needed.
- d. Productivity. The yield of significant results must be high enough on any given analytical test to justify its continued use.
- e. They must have study value. There should be opportunity for scrutiny of their effectiveness in the search for disease and in the efforts to improve health and medical care.

It is not possible for us to state, at present, the precise requirements in space, personnel and equipment for these screening efforts. Such plans are under construction and some initial estimates will be presented in the next few months. They, of course, will depend on the type of approaches to screening which are proposed.

4. Extensions in Types of Service. To keep in step with the requirements of modern medicine, the variety of services offered must be constantly broadened and improved. New specialized services, which are unique, must be added, ones which enhance the status of these hospitals as a model care facility. Some examples of extended services foreseen are given in the following:

- a. In chemistry, new and expanded services are required in the following areas:
 1. Toxicology. We here are interested in clinical toxicology and specifically not in criminal toxicology; we are interested in the toxicology of the living. Modern life places people at increased risk of acute or chronic intoxication from drugs (for example, barbiturates and a whole host of tranquilizers) and from toxic factors in the environment (heavy metals, organic solvents, insecticides and herbicides, gases). We expect to provide a screening battery of analyses to be used on the comatose patient. A well designed and operated toxicology section will provide a unique service to this geographic region.
 2. An expanded hormone division. In order that patients with metabolic defects and endocrinopathies may be examined with more discrimination, we must expand this division. Specifically, an expanded battery of analyses of steroid hormones (adrenocortical hormones, estrogens) is feasible now and will be of value. Use of gas and thin layer chromatography will make this possible. Furthermore, assays of renin, angiotensin and aldosterone should be available for screening the hypertensive patient for possible adrenocortical tumors.
 3. Enzyme analyses will be expanded. The present effort which Dr. Strandjord has mounted in the area of serum enzymes is a successful one. Expanded use of serum enzyme analyses in the diagnosis and management of a large number of clinical disturbances is foreseen, including myocardial infarction, pulmonary embolism liver disease, myopathies, neoplastic diseases, etc.
 4. Proteins. More discriminating use of serum protein analyses makes the need for a larger armamentarium of methods in this area a necessity.
 5. Lipids. The enlarged array of assays for serum lipids will be useful in the study of arteriosclerotic disease, in hyperlipemic states and in diseases of lipid metabolism.
 6. Isotope division. This division in clinical chemistry must be expanded. A large number of analyses can be performed with more facility and speed using radioisotopes. Analyses will be provided on an around-the-clock basis (including, for example, estimations of blood volume.)
 7. Function tests. An expanded and improved ability to provide analyses of the functional status of a number of body systems. Renal function tests may be provided with more facility, accuracy and

speed using isotope analyses. Organ transplantation activities, which are likely to expand at these hospitals, make this effort crucial.

2. Miscellaneous. Assays of a large number of metabolites may be required for diagnostic and clinical management purposes. Examples in this area include lactic and pyruvic acid, alpha ketoglutarate, triosephosphates, adenylic acid derivatives, etc.
- b. In Hematology there are needs for providing new and expanded services in:
1. Blood coagulation. Under the new direction of Dr. Richard Davis, the services of the blood coagulation laboratory are being expanded to provide a more complete and discriminating set of analytic techniques for the study of disorders of blood coagulation. What is needed in this area is:
 - (a) a basic screening battery of tests. This is quite well provided at present;
 - (b) a variety of more sophisticated analyses to be used, not as basic screening tests, but in follow-up study in a carefully planned manner so as to arrive at precise diagnosis.
 2. Red cell chemistry and metabolism. An expansion of the laboratory capability will be required.
 3. White blood cell chemistry and metabolism. Little has been done in this area but it is altogether likely that an expanded activity in the future will take place.
- c. In the Immunology Division, a number of developments are needed.
1. Histoincompatibility testing will have to be improved, in line with the needs of the surgical transplantation enterprises. In this regard, increased efforts will take place in the characterization of white blood cell antigens in both prospective donors and recipients.
 2. In the area of immunohematology, use of fluorescent antibody techniques will be made in diagnostic study.
 3. Immunoassay of proteins and hormones will be undertaken in the years ahead. The assay of serum insulin activity, growth hormone, gonadotropins, ACTH, angiotensin, renin all will be made more feasible using immunologic and radioisotope techniques. Immunoelectrophoresis of serum proteins will see expanded use for clinical diagnostic purposes.
- The chief immediate need in regard to these activities is the acquisition of small animal quarters for hospital laboratories. All these techniques require the use of animals for preparation of specific antisera.
- d. In the Blood Bank division, we expect to see continued expansion of specialized requirements for blood and blood fractions. More fresh blood will be required; more separated red blood cell, white blood cell, and platelet concentrates for special transfusion needs.

Plasmaphoresis will continue to be used.

In other words, it is likely that our donor facilities will be used extensively. We will need to improve and enlarge our facilities for separating specific blood fractions.

- e. In the Microbiology division, expanded services will be needed in a number of areas, notably in virology and mycology. An area which is likely to see greater use in the future is that of biochemical screening methods for the rapid detection and identification of microorganisms in blood, urine and other body fluids.
- f. In the Genetics division, expansion of the biochemical section is most likely. This section now offers quite a large variety of assays useful in screening for and the characterization of genetic defects. The capability of this section will be gradually expanded as needed by the clinical services.

In summary, expanded requirements for types of services not now offered and other innovations will place new demands on the clinical laboratories. In many areas, these will make expansions of space necessary and will require additions in personnel. An immediate specific need is for small animal facilities for the immunology division.

5. Efforts in the area of Automation and simplification of analysis will be continued. Large volume analyses (such as serum electrolyte, blood glucose, urea, cell counts, etc.) will be automated wherever possible. Multichannel analysis will be used where its use offers advantages in speed, economy, and convenience.

6. In line with this effort towards simplification and improvement of methods and in line also with needs for establishing new services, the research and development of methods sections of each laboratory division will receive renewed emphasis and their staff and space requirements will be expanded and strengthened.

7. Continued emphasis will be placed on the use of quality control methods in the continuous analysis of laboratory performance. The introduction and use of computer techniques will be accompanied by an expansion of quality control programs in the laboratory, continuous study of them will be made. In the same manner, normal value studies will take place in all divisions with the aim of increasing the clinical usefulness of laboratory data.

8. The clinical laboratories must be better able to provide unique services in unique clinical situations. They must be capable of quickly setting up and carrying out unusual analytical procedures when a given clinical situation requires this. This type of "customized" service should be a property of the clinical laboratory department of a first-rate teaching hospital and a model health care facility. This kind of capability requires skilled and resourceful personnel, first-rate equipment and adequate space.

9. Current inadequacies in staffing and spacing of any of the laboratory divisions with respect to its present level of programming must be ameliorated as soon as possible. With development and occupancy of the Southwest Court, the immediate pressing needs for space of most laboratory divisions have been at least temporarily alleviated. This is not so, however, with respect to the Blood Bank division. The present space needs of this divi-

sion are acute. A plan has been proposed for correcting this situation by expanding the Blood Bank facilities on the second floor of Mayo in the D corridor. Since it is likely that requirements for fresh blood, blood derivatives and other special services will continue, it is unlikely that the Blood Bank at University Hospitals can be discontinued as a donor facility. Plans to expand and improve its physical facilities should therefore receive high priority.

10. More adequate and better organized office facilities unquestionably would permit improved and more efficient overall management. Most pressing need is for better office facilities for Miss Ederer and her associates, Mrs. Vikmanis and Miss Klessig. These individuals form a skillful management team, and an experienced and resourceful one, which would be better utilized if it could be brought together in one office area.

SUMMARY

The requirements and objectives of a high quality clinical laboratory department at University Hospitals have been briefly described. A program has been outlined by which it is thought the clinical laboratory services can make larger and more significant contributions to model health care at these hospitals.

HOSPITAL MAINTENANCE DEPARTMENT

A. ROLE

1. Primary function is to maintain the total physical plant.
2. To service the mechanical and departmental equipment in a manner that maximum operational use can be attained.
3. To provide an environment of courteous service and safety with minimum of inconvenience so that the welfare and comfort of the patient can be improved and goals of the hospital staff be successfully accomplished.
4. To be aware of the objectives of management in order to be in a position to protect the present investment and to prepare for the responsibilities of the future.

B. OBJECTIVES

To develop, plan, organize, implement a positive, efficient, effective scheduled service of maintenance as the activities of the building and its occupants may demand; yet being flexible in plan to adjust to the ever changing accelerated progress of medical science and patient care.

C. PROGRAM

To fulfill the requirements of plant maintenance with its many complex, complicated types of electric, electronic, mechanical equipment, there is great need for qualified, skilled, specialized personnel. A vocational training program should be inaugurated and sponsored by the hospital to always keep improving the skills of the present staff.

The countless problems of controlled ventilation, communication or monitoring equipment, emergency power plants, waste disposal, radiation hazards, fire and safety programs, and ever changing medical, lab, and patient equipment, means that a continuous orientation and in service training program must be developed. The staff must be kept aware of the activities of the hospital in order to comprehend the scope of our responsibilities; therefore, a steady flow of communication within the department and with all departments is vital--without it total chaos results and expensive errors are made.

We should actively participate in all planning activities and offer our department services to be a "clearance house" regarding requisitions for the purchase of mechanical or electrical equipment to be sure hospital and university standards of safety and quality can be screened. Also to plan or advise what changes might be necessary to the physical plant after the location of this equipment is determined.

We can see the need for more accurate record keeping so that operational or equipment costs can be evaluated. With the advent of the computer age into our hospital, maintenance scheduling, record keeping, parts inventory, monitors for scanning, sequencing, logging, or alarming vital equipment will be necessary for central control. Our great need is for personnel and space with continuous communication from management so that our direction and responsibility can be always clearly defined.

MEDICAL ART AND PHOTOGRAPHY

Role

Throughout the entire central states there are almost no accredited schools of Medical Illustration. The one school at Chicago has such stiff residency requirements that it virtually excludes all prospective students except immediately local applicants. The school at Dallas, Texas, has been closed (at least temporarily and possibly permanently) due to problems involved in financing. Even on the east coast, the school at Boston has been permanently closed because of a lack of administration and the reluctance of Massachusetts General to continue sponsoring it. There are a few excellent schools still functioning on the east coast, and on the extreme west coast, but there is no center for such specialized training anywhere in the middle of our nation, to serve applicants from all but the coastal states. It is important for the University to see itself here, not functioning within the limited area of Minnesota or even the upper midwest, but assuming the leadership in this situation by providing educational facilities to the entire nation, realizing that graduates from this program will be carrying the name of the University of Minnesota to all parts of the country. Thus, the role of this department is two-fold:

1. To provide complete art and photographic services to the College of Medical Sciences and occasionally to other related branches of the University (Biology, Zoology, Veterinary Medicine, etc.);
2. To establish a fully accredited teaching program in the broad field of Biological and Medical Communications, including illustration, moulage, displays, prosthetics, television, photography and editorial assistance.

Although the figures vary from year to year, there are probably an average of 45 to 50 acceptable graduate candidates per year who would demand this type of special training. The present schools cannot meet this need--there is room for, and indeed a demand for, additional institutions to include this ancillary program in their catalogues.

With the rapidly growing emphasis on the Health Sciences (new medical schools, greatly expanding research centers, more hospitals, etc.) there will be ample future opportunities for professional careers in all parts of the nation for the graduates from this proposed school.

Objectives

1. To maintain our present service facilities, with the best in personnel, equipment, supplies and space utilization.
2. To develop types of medical communications not now employed due to lack of space and/or personnel: moulage, prosthetics, plastic fabrication, model making and editorial assistance.
3. To develop closed- and/or open-circuit television as a means of communication in medical education, including the use of videotaped libraries with small compartmented viewing booths.
4. To develop an accredited teaching program for students in the field of medical illustration and medical photography.

Program

In keeping with the concept of this educational facility serving on a national level, it is important that its scope and emphasis must attract applicants to want to come to Minnesota, and it must also prepare them for their careers

in Medical Communications as well as, or even better than, other (east and west coast) available schools, and it must award them on a level comparable to already existing policies. For these reasons, it is imperative that this program be geared to serve the graduate level student i.e., the Masters degree candidate. In all likelihood this department would accept no more than one or two or possibly three candidates per year. The program of study would very likely be a two year or a three year course.

1. Teaching

- a. (1) Establish a program in Medical Illustration and Medical Photography to prepare graduate students for professional careers in this field. Requirements of all students would include: Gross Anatomy, Histology, and Embryology (if not already taken as an undergraduate); the usual language requirement; a basic course in principles of photography; a basic study of the elements of business management; studies in the processes of television broadcasting, videotaping and closed circuit education television; the option of elective courses in areas of the student's particular interest; and a research program in one of the biological or health sciences along with a thesis and adequate examination.
 - (2) Specifically for the Medical Illustration student certain art courses would be required such as: medical drawing using color, black and white pen and ink, the black and white continuous tone (using charcoal-dust technique, wash technique, and air brush technique); ophthalmological drawing, operating room drawing, displays and exhibits; moulage and prostheses.
 - (3) For the student primarily interested in a career in Medical and Biological Photography, and one who is not talented in art, a selection of advanced photographic courses such as: darkroom techniques; preparation of lantern slides for lectures; lighting techniques and equipment; the use of all black and white films and all color films; studio photography; operating room and patient photography. Photomicrography, cinephotography including editing, sound tracks, and the preparation of the completed motion picture should be required.
- b. Provide elective courses for the medical school students, interns and residents in the proper use of medical school visuals and in the most recent and up to date methods available for the production of such material.
 - c. Establish courses in close cooperation with the Biological Sciences for major programs in biological illustration.

2. Research

A graduate program such as visualized above, would (as we have indicated) necessitate graduate research in one of the biological or health sciences, along with a thesis and adequate examination. Although the research will (hopefully) be under the supervision of the particular discipline concerned, it is likely that the department concerned will be reluctant to also provide space for one or more graduate students from some other department. Consequently, research space will be necessary within the Medical Art and Photography Department for at least three or four persons. Each person's space should include a small lavatory as well as a study cubicle and area for storage of books, supplies and equipment.

3. Location and Interrelationships:

Because this department is both a service department and a proposed training department, it must continue to be as near the operating rooms as it now is. For the convenience of the clinical and research staff who would use these facilities, the department must be near the main flow of traffic. It should definitely have a north exposure for all artist's activities.

The teaching program outlined above would necessitate close affiliation with the departments of Anatomy, Surgery, Pathology and the basic biologic sciences. Other interrelationships would include the departments of Medicine, Pediatrics, Art (Applied Art, Studio Arts, etc.), Languages, the Graduate School, Audio-Visual Services, Station KUOM, possibly Minneapolis School of Art, or Minneapolis Institute of Art.

Faculty and Staff

1. Faculty-Student ratio

Obviously, with such a probable small number of students per year (one, two or at the most three), each for a two year or three year program, the faculty-student ratio will be either one-to-one, or even the reverse of the usual trend with more faculty than student body. It must be remembered, however, that this department is at the same time a service function for the College of Medical Sciences, and the same personnel who would have teaching responsibilities to the students of this department, would also be carrying out their regular service responsibilities between teaching assignments. Furthermore, some of the specialized teaching activities may be performed by already functioning teaching in other departments (Anatomy, Histology, Embryology, Biological Sciences, Research supervision, Television, Audio-Visual Techniques, Applied Arts, Studio Arts, etc.) and although these teachers serve a function for this department, their principal time is spent within their own department at their own department's assignment.

2. Academic and Non-Academic Staff

Within the present department of Medical Art and Photography, there is only one academic appointment, that of the director of the department. However, several of his present civil service employees are eminently capable of performing the teaching responsibilities associated with their particular field and should be considered for academic appointment in order that they might render both "teaching" and "service" function. It is quite probable that some additional teaching/service personnel will need to be hired to carry out the entire program as outlined, but not many new persons will be needed.

Space

The present quarters of the department are in need of considerable change if any of the proposed growth possibilities are to be realized. The future expansion of the service phase of the department should include room for a plastics fabrication shop (about 18x24 feet with a laboratory hood and exhaust); a room for prostheses and moulages (about 18x24 feet also with a laboratory hood and exhaust); and space for a manuscript editor, to lend editorial assistance to anyone in the College of Medical Sciences who is preparing material for eventual publication.

For the development of the teaching phase of this department, some space can be utilized within our present quarters to accommodate a very few students. Additional space will be needed for a studio for all students, as well as the separate space already mentioned for their research and theses projects. Many of the other teaching activities can be carried out in our present photography studios and darkrooms, in the proposed plastics fabrication shop and in the proposed mouldage room. Their anatomy and other biological courses will be taught in the respective departments concerned.

MEDICAL RECORD DEPARTMENT

Introduction: There are two directions in which planning for the Medical Record Department can go. First, one can plan for a Department which is to continue along traditional lines with the necessary increase in space and personnel, and with some ideas for making changes in procedures to better the service offered to the patient, the hospital, and the medical staff. On the other hand, there is the planning that can be done for radical changes in procedures, services, and functions of the department and, indeed, in the physical form of the record itself. Data processing systems can contribute to new sophisticated methods of record management.

We believe our planning effort should be directed toward automation in as many areas as is economically feasible. This report, therefore, will suggest programs and functions which will be a departure from our present operation.

ROLE

I. The service role of the Medical Record Department covers three major areas:

- A. To maintain an adequate record system as dictated by principles of good record management.
- B. To make medical records readily available to anyone who has a legitimate need of them. These needs are in the areas of patient care, education, research and legal matters.
- C. To dispense information to authorized agencies or individuals.

II. The educational role of the Medical Record Department is:

- A. To establish on-the-job training programs for departmental personnel.
- B. To establish formal educational programs particularly in Medical Record Library Science and in Medical Secretarial Practice.
- C. To establish continuation programs for medical and paramedical students and staff.
- D. To cooperate with other educational institutions by providing a laboratory situation for the practice of medical record techniques by their students. To serve as guest faculty in these institutions as well as in programs of our own profession and in those of other paramedical groups.
- E. To serve as an example of good medical record system and practice.

III. The research roles are:

- A. Investigate new developments in record management.
- B. Investigate possible applications of automation to medical record procedures.
- C. To assist members of the medical staff with their research projects.

OBJECTIVES

I. Service objectives are:

- A. To develop methods of quality control for all services rendered in the department.
- B. To improve methods of processing the medical record. This will include analysis, assembly, classifying, and abstracting information for the computer system.
- C. To develop functioning relations for access, search, etc. in cooperation with the computer center.
- D. To develop a more simplified and unified record system.

- E. To establish good lines of communication for records, reports, and correspondence.
- F. To develop methods for rapid communication including intercom systems, teletype, telegraph, centralized distribution, etc.
- G. To establish a good control system so that records are more easily obtained when they are needed.

II. Education objectives

- A. To teach department personnel procedures and specialized knowledge needed to do the job.
- B. To create educational program for much needed medical record personnel.
- C. To acquaint medical and paramedical personnel with hospital policies and procedures relative to the medical record.
- D. To maintain affiliations with other institutions in their training programs.

III. Research objectives

- A. To be alert to new innovations in the field of medical records
- B. To experiment with new ideas as a way of accomplishing the objectives of the department.

PROGRAMS

- I. To implement the following programs of the department, it will be necessary to add more trained medical record personnel, particularly accredited record technicians.
 - A. Institute a discharge analysis making use of data processing methods.
 - B. Establish a quantitative analysis of all inpatient records.
 - C. Establish a tumor registry and any other registries deemed desirable by the medical staff. This can be incorporated in the data processing system.
 - D. Subject the medical record to a thorough study of its content, organization, and format.
 - E. Encourage standardization in the distribution of referral letters and case summaries. Use computer say help in this area.
 - F. Establish an abstracting service to review correspondence which is now given to physician for reply.
 - G. Establish an income reconciliation section independent of the stenographic department and checking the accounts procedures now performed in the Business Office.

II. Education

- A. Develop new procedure manual and establish instruction program for (1) new employees, and (2) training for personnel within the department.
- B. Establish a 4 year degree granting course in Health Record Library Science.
- C. Establish a certificate course for medical stenographers, possibly in cooperation with the General College.
- D. Develop a program of education for interns, residents, medical students, other professional groups, and hospital employees where applicable. These programs would include seminars regarding the ethical use of medical records, the medical-legal policies of the hospital, and proper methods of recording information in the chart.

DEPARTMENT OF NURSING SERVICES

Roles: The roles of the Department of Nursing Services are threefold: service, teaching and research.

- A. The Service role is the major role and involves giving quality nursing care to acutely ill, chronically ill, convalescent and well patients within the Hospitals and in the patient's home.
- B. The Teaching roles are:
 1. Offering continuing education and refresher courses for nurses.
 2. Cooperating with the University School of Nursing and other nursing schools in their educational endeavors.
 3. Providing educational experiences for health disciplines.
 4. Providing consultation service to nurses in the community.
- C. The Research roles are:
 1. Conducting research for improvement of care and service.
 2. Cooperating with educational institutions as theories of nursing are tested.
 3. Cooperating and participating in medical research and selected research in allied fields.
 4. Consulting with medical and nursing staffs as well as other groups who are planning research which involves nursing service participation.

Objectives

A. Service

1. To ensure that all personnel assigned to care for patients are well prepared through formal education and pre-service training.
2. To maximize the opportunity for nurses to give direct patient care.
3. To evaluate nursing care and implement improvements.
4. To employ nurses prepared in various educational programs and assign them where they will be best able to contribute to patient care.
5. To allocate nursing personnel on the basis of patient care needs.
6. To reduce turnover of personnel.

B. Teaching

1. To provide opportunities for sharing developments in nursing care and nursing service with nurses and others interested in health care.
2. To offer continuing education programs for practicing nurses and refresher courses for nurses who wish to return to nursing.
3. To participate with the School of Nursing in continuing education and refresher courses.
4. To cooperate with educational institutions by:
 - a. Providing clinical laboratory for students.
 - b. Consulting with faculty members about programs.
 - c. Teaching selected classes.

C. Research

1. To initiate research projects that will assist the department in:
 - a. Determining the level of nurse preparation needed to give the kind of care required.
 - b. Improving nursing techniques and practices.
2. To participate in projects with the School of Nursing.
3. To facilitate the work of qualified investigators in health research.
4. To prepare nurses to function in research programs.
5. To establish criteria that can be used for allocation of nursing personnel when medical research is being planned.

Programs

A. Service Programs - Objectives

1. To ensure that all personnel assigned to care for patients are well prepared through formal education and pre-service training.
 - a. Assess professional background of new employees and provide programs to meet their needs.
 - b. Provide follow-up of new employees as they assume responsibility for patient care by:
 - (1) extension of the role of the Inservice Department and/or
 - (2) expansion of nursing service staff on clinical areas.
 - c. Provide inservice programs for employees working permanent evenings and night hours.
2. To maximize the opportunity for nurses to give direct patient care.
 - a. To accomplish this objective the following functions need to be re-allocated:
 - (1) Management of the stations.
 - (2) Cleaning of bedside units, station service areas and equipment.
 - (3) Patient transportation service when nursing care is not required by the patient. The transportation service should control, store and maintain all litters and wheelchairs.
 - (4) Food preparation and tray service.*
 - (5) Drug services to patients.** This involves the dispensing of drugs when needed by patients, the system for obtaining, storing and preparing drugs, and the availability of drug information.
 - (6) Laboratory services to patients. An automatic replacement service for bottles and containers stored on the stations and in clinics.
 - (7) Central control, cleaning and replacement of all equipment (including electronic equipment)
 - (8) Replacement of regularly used equipment and supplies to a standard on the shelves of each station and clinic. Charge slips should be attached to chargeable items before they are replaced.
 - (9) Cleaning and replacing of bedside utensils. If disposable utensils are used, they should be automatically replaced to each cleaned unit. (Eleven stations have no sinks for washing utensils.)
 - (10) Central service for equipment repairs with replacements available when equipment is not usable, i.e., ophthalmoscope, sphygmometers, etc.
 - (11) Delivery of equipment needed by one patient to a clinical area

*In giving direct care to patients, nurses are responsible for feeding or assisting patients who need help eating. Nurses are also responsible for obtaining and recording intake and output records.

**Nurses should be responsible for administering, charting, and observing the effects of drugs ordered by physicians.

- (12) Standardized emergency equipment and supplies with special equipment stored at satellite locations on certain stations.
 - (13) Preventive maintenance checks of all permanent and semi-permanent equipment on stations and in clinical areas.
- b. Institute a system for locating patients and personnel in clinical areas. This could be done by:
 - (1) using locator boards to keep track of patients.
 - (2) installing a communication system, like a patient-nurse intercom.
 - c. Written reports of x-ray and laboratory results should be available earlier to eliminate non-emergency verbal reporting.
 - d. An information center (Holly Bell type) where members of the nursing staff can find out how to order a particular test, where to send a certain specimen, how to procure a particular supply, where a department or laboratory is located, etc.
3. To evaluate nursing care and implement improvements.
- a. Periodically distribute patient satisfaction questionnaires to assess the effectiveness of patient care.
 - b. Establish standards for charting and a permanent Nursing Audit Committee to evaluate and improve the quality of charting.
 - c. Study the design of nursing forms and revise them as necessary.
 - d. Improve the accuracy and efficiency with which nursing information is communicated.
 - (1) Study ways to increase efficiency in verbal reporting, especially at change of shift (tape recording).
 - (2) Study the feasibility of leaving charts at the foot of the bed or outside the door.
 - (3) Study use of computerized records and charts.
 - (4) Develop a system for procuring and communicating information about nursing care between different nursing staffs responsible for patients' care.
4. To employ nurses prepared in various educational programs and assign them where they will be best able to contribute to patient care.
- a. Reorganize the Nursing Department to facilitate the selection, placement, and orientation of nurses prepared in different programs, i.e., Master's degree, baccalaureate degree, diploma, associate degree and licensed practical nurse programs.
 - b. Study the present method of work assignment (team) to see if it is the best arrangement for use of nursing personnel.
 - c. Utilize nurses who specialize in clinical areas as consultants to staff nurses.
5. To allocate nursing personnel on the basis of patient care needs.
- a. Use categorization of patients according to nursing needs for allocation of nursing personnel. Placement and scheduling of nursing personnel could be computerized in the future.

- b. Increase flexibility of personnel placement by:
 - (1) Using a larger float staff.
 - (2) Using more part-time nurses.
6. To reduce turnover of personnel.
 - a. Improve facilities that affect job satisfaction.
 - (1) Adequate parking.
 - (2) Protection for personnel walking to cars and bus stops at night.
 - (3) Adequate and attractive eating and lounge facilities.
 - b. Provide differential salary for those who work evening and night hours.

B. Teaching Programs.

1. Develop a Nursing Service Department community liaison role within the Inservice Department to coordinate demonstrations and classes for nurses in the community.
2. Institute refresher courses with supervised experience in clinical areas for nurses who wish to return to nursing.
3. Establish regular meetings to facilitate cooperation with the School of Nursing and education programs in allied health fields.
4. Coordinate clinical experiences of students in all kinds of health programs.
5. Establish criteria for the level of care to be given at the University Hospitals. Evaluate graduates of various types of programs on the basis of these criteria.

C. Research Programs.

1. Institute a nursing research and study division staffed with qualified nurse investigators within the Department of Nursing Services. Some of the ways this division could be used are:
 - a. To develop a nursing research station where studies can be conducted to solve problems of nursing service.
 - b. To advise staff nurses who conduct small studies on stations.
 - c. To develop an information center for research material in nursing.
 - d. To coordinate studies in nursing and allied fields conducted at University Hospitals.
2. Review medical research plans that involve nursing personnel and make recommendations regarding the allocation of personnel in research situations.

DIETITIAN DEPARTMENT

ROLE The role of the Nutrition Department is thus told:

- A. Education
- B. Service
- C. Research

A. The Educational role provided:

1. A twelve month internship for dietitians
2. Instruction of students by therapeutic dietitians
3. Instruction of students by a clinical dietitian
4. Classes for groups of patients with heart disease, diabetes, pregnant mothers, and new parents.
5. Classes for dietary and practical nursing students
6. Classes for medical nursing students
7. Instruction for medical students in the hospital-based Clinical Program.
8. Cooperation with medical and nursing schools regarding nutritional problems.
9. A continuing education program in the department for staff dietitians, supervisors and personnel.

B. The Service role provided: the food and nutrition service for all hospital patients, staff, employees and students.

1. To provide quality food, nutritionally adequate within the framework of physicians' requests for all patients.
2. To provide quality food to the hospital staff, students and visitors to the hospital.
3. To maintain high standards of performance by all members of the department.
4. To use accepted rules of sanitation in all handling of food and equipment.
5. To fulfill all the requirements as economically as possible.

C. The Research role provided: the dietitians and personnel to carry on studies in:

1. The medical nutrition problems that
2. The medical nutrition that
3. Special studies that is directed toward work on with the therapeutic dietitian or his service.
4. Research on various phases of dietetics.

GOALS AND OBJECTIVES

1. To provide the best possible food service to patients, staff, students and visitors.
2. To provide an efficient and effective food preparation area.
3. To provide a cafeteria and dining service to meet the demands of the needs of the Medical Center.
4. To make use of current business practices.
5. To promote better inter-departmental relationships.
6. To enlist the aid of non-professional personnel in a supervisory category.
7. To develop the diabetic internship to meet the needs of the future dietitian.
8. To establish a specific area for patient education in all therapeutic diets.
9. To establish a dietetic office in this a clinical supervisory group of the department.
10. To develop research and development projects in cooperation with other departments.

- E. To establish in each section, that is Medicine, Surgery, etc., an office for the dietitian so that she will be readily available for teaching and counseling during patient contact, conferences, and rounds.
- F. To allocate more routine duties to supervisors thus releasing the staff for professional contacts. To continue training this group to function as effectively as possible.
- G. To incorporate the dietetic internship leading to a master's degree program by:
 - 1. Giving academic credit for classes attended during the internship and for projects completed.
 - 2. Extending class attendance on campus to complete academic requirements.
 - 3. Working with one of the schools on campus towards this realization.
 - 4. To employ the use of modern teaching devices and machines.
- H. To provide an office adequate in size for the Outpatient Clinic Dietitian, and a classroom where classes would be given to groups of patients as well as individuals; the classroom to house audio-visual and other teaching aids.
- I. Recognizing an increase in administrative functions and work outlay:
 - 1. Provide adequate office space for administration of the department.
 - 2. Provide a conference room for staff meetings, etc.
 - 3. Provide sufficient space for clerical workers and equipment.
- J. To continue to work with the two research units as they develop as well as with current research in all areas.

OUTPATIENT DEPARTMENT CLERICAL

SERVICE

Role: Coordinating clinic activities so that the clinics are conducive to quality patient care.

Objectives

1. To facilitate the patient's visit administratively.

Programs

- a. Process patients documents as quickly as possible.
 - b. Establish a Central Information Desk by the Outpatient Entrance.
 - c. Design the clinic areas to enable clerical to separate the registration of a rescheduling of patient visits.
2. To improve communications within the clinic, with other clinics, with hospital departments.
 - a. Discussions with the medical and nursing staffs weekly.
 - b. Install a communications system for locating personnel and patients in area.
 - c. Provide for exchange of ideas and promote cooperation with other departments.
 3. Centralize the appointments.
 - a. Study the feasibility of accomplishing room assignments.
 4. Provide economic usage and upgrade clerical staff.
 - a. Insure that all clerical personnel are well prepared through pre-service training programs.
 - b. Standardize all clerical routines as much as is desirable and possible.
 - c. Assure clerical coverage on the basis of fluctuating needs.

Role: Relieving nursing and medical staff of clerical routines as is appropriate and possible.

Objective: To evaluate division of labor and make recommendations as to new divisions.

Program: Set up meetings between disciplines involved.

Role: Informing and explaining to patients and hospital staff the University of Minnesota Hospitals' policies and procedures.

Objectives:

1. To know policies and procedures and be able to interpret.

Program: Institute an intensive training program in hospital and departmental policies and procedures during initial orientation.

2. Provide for exchange of ideas and explanations of policies to other departments.

Program: Monthly departmental meetings.

Role: Creating an image of the University of Minnesota Hospitals to the patients and the public.

Objectives:

1. To employ personnel who can effectively deal with the public.

Program: Effectively assess background and work experience.

2. To provide in-service training in how to meet the public.

Program: Prepare clerical personnel regarding proper receptionist techniques.

RESEARCH

Role: Cooperating and participating in medical and nursing research.

Objectives:

1. To participate in projects of the nursing and medical schools.

Program: Review with medical and nursing staffs research plans which involve clerical personnel and make recommendations regarding routines and the personnel necessary to carry out plans.

2. To prepare clerical personnel to function in research programs.

Program: Provide reading material to clerical personnel regarding ways of gathering information.

Role: Conducting research programs for improvement of systems and procedures.

Objective: To establish a committee to study systems and procedures.

Programs:

- a. Develop a file of systems and procedures used in other hospitals.
- b. Make use of systems analysis where possible.

TEACHING

Role: Cooperating with the nursing, medical and other health professional students in their teaching programs.

Objective: To provide the opportunities for sharing developments in health care with the medical and nursing staffs.

Program: Encourage clerical personnel to attend presentations, lectures or symposiums, if appropriate.

Role: Offering continuing in-service education for clerical personnel.

Objective: To offer continuing education for clerical personnel through in-service training sessions and courses on campus.

Program: Develop a list of courses which clerical personnel could participate in through the Regent's Scholarship.

PERSONNEL ADMINISTRATION

I. ROLES

The roles of the personnel department are found in three areas: service, teaching and research. This is mainly a semantic division, however, for they are truly interrelated.

- A. The service role of the personnel department is that of providing personnel administration services of the highest standards to fulfill the needs of the medical center.
- B. The teaching role is twofold. The first is that of providing a clinical environment for the training and development of personnel administration directors to serve the needs of the nation's medical centers. The second role is that of serving as a model. By the establishment and maintenance of exemplary service, teaching and research programs, and the communication of the programs' accomplishments to the medical center, state and the nation, teaching by example may be accomplished. For the students in the medical center, a first hand clinical experience can be provided.
- C. The research role is that of the establishment and maintenance of an exemplary basic and applied research program in personnel administration practice.

II. OBJECTIVE

A. Service Objectives

1. To establish and maintain a personnel service organization making best use of staff and services available on a university-wide basis, as well as of a medical center organization.
2. To continuously identify areas of need, and establish in-service training programs for all levels of medical center personnel.
3. To maintain exemplary recruitment, selection, and placement services making best use of existing organization, and developing supportive organization and staff where needed.
4. To maintain a sound wage and salary administration program to enable the medical center to recruit and retain personnel of the highest caliber.
5. To establish and maintain a well organized employee relations program to serve the needs and desires of the personnel of the medical center.
6. To establish and maintain a personnel records and report system making optimal use of modern computer techniques and business methods.
7. To maintain an effective labor relations organization, recognizing that this is becoming an area of increasing importance to the hospital field.
8. To establish and maintain liaison with all university departments and local and state organizations so that the highest standards of medical center personnel practices can be communicated both to and from the center.

B. Teaching Objectives

1. Realizing that high standard hospital personnel practices are still in their infancy on a nation-wide basis, an exemplary service and research organization at the medical center should be an ideal training ground for potential medical center personnel elsewhere. The objective would be to set up in the administrative organization a place for young people in personnel training to work and observe at the center.

2. An exemplary service and research organization would set as a model for all the centers working at the medical center to observe and take part in as their needs and desires dictate. The objective here would be to provide the organizational framework so that close observation of this model could be accomplished.
3. A further teaching objective would be accomplished by communicating through personal contact and the written word, the achievements of the organization and its parturiance to the nation on a continuing basis.

G. Research Objectives

The establishment of an effective research organization to explore completely all facets of hospital personnel administration practices. This organization would encompass applied and fundamental research in the fields of sociology, psychology, psychological testing, and industrial engineering and operations research.

III. PROGRAMS

A. Service

The development of an effective organization to guide and direct the personnel administration program. This organization would be the primary responsibility of a director, assistant or associate, of University Hospitals. The daily operation of the department would be accomplished by the full-time attention of four or five University Civil Service Personnel Representatives operating as a team under the general administrative guidance of a Senior Personnel Representative from University Civil Service. They would be based in the medical center. The department would be organized on a functional basis with representatives responsible for areas such as recruitment, wage and salaries, education and placement, training, and employee and labor relations. A hospital personnel department supervisor would have responsibility for records, reports and other clerical needs. With the establishment of such an organization, the following programs could be developed. These are placed under the functional areas suggested above.

i. Recruitment:

- a. A constant reporting and communication system should be established with each medical center department so that needs can be determined before they occur and can be filled from a manpower pool.
- b. The establishment and maintenance of a manpower pool so that needs being continually known can be filled as quickly as possible.
- c. Maintenance of a constant liaison with all schools or agencies serving as a source of employees for the medical center so that the recruitment of the highest quality personnel can be accomplished on a continuous basis.
- d. Maintenance of constant communication with the wage and salary section and with the people responsible for advertising media so that the recruitment activities can be most efficiently expedited.
- e. Establishment of an advertising section to support the recruitment function.
- f. Establishment of a special or liaison relationship with the research organization of the department so that constant evaluation of recruitment techniques and programs can be made and suggestions for and development of new techniques can be accomplished.

- g. Establishment and maintenance of means for this section's participation at meetings and conventions of the local, state and national professional organizations of the employees of the medical center to promote employment at the center.
- h. Serve as advisor to all department heads and encourage them and help them to use themselves and their employees as constant recruiters for their departments.
- i. Work with employee relations section head in development of programs for use of the employees as recruiters for the center.
- j. Use of all available University Civil Service and campus recruitment facilities and organizations to fill the medical center's needs.

2. Selection and Placement

- a. Optimal use and support of the present University Civil Service screening and testing program will be accomplished.
- b. Close work with the research organizations of the personnel department will aid in developing new or more effective selection and placement techniques.
- c. Work with both the recruitment and training sections will facilitate the most effective use of personnel.
- d. A system of continued review and updating of job descriptions will be established and maintained. Job reviews will be systemized and periodically done.
- e. Establishment of a computerized system of job descriptions, vacancies, and qualifications of available personnel both within the organization and from the manpower pool established by the recruitment section will be done so that the best selection and placement can be accomplished.
- f. Formal interviews and records established thereof will be done, maintained and applied.
- g. Early finding of potential promotable personnel and, in connection with the training section, development for supervisory levels should be established and maintained.

3. Training

- a. An effective central training section must be established for the center which will offer general orientation programs and training aids to the hospital departments.
- b. An immediate need of this section would be in connection with the recruitment and selection and placement sections to ascertain the training needs of new employees. The development of departmental or medical center wide training programs would result from this analysis. Clerical training programs, training for physically handicapped, etc. might be possible additional programs.
- c. It is expected that a need for development of potential supervisors and the up-grading of those now in such positions would be an important part of the training sections program.
- d. Use of University wide and local or state facilities for training should be an important part of this section. This section would coordinate their use.
- e. A training aid program would be developed by this section to fill the needs of the center.
- f. The establishment of local department level training programs might be a development from the section. The program could be a course of well trained personnel to be used up departments in the various hospitals.

- g. The use of civil service employee evaluation procedures must be taught through training programs of medical center supervisors. The results of such evaluations should be compiled and used as an analysis of training needs.

4. Employee Relations

- a. An immediate program would be the analysis and study of means for more effective employee involvement in medical center policy and employee relation programs. This might include the establishment of a center-wide employee organization with elected representatives from each department. The responsibility of such an organization would be the planning of activities such as center-wide picnics or dinners, sports programs, employee recognition nights, etc. The organization would serve as a means of communication directly from the employees to administration on policy matters and other areas of employee concern. This organization would also serve as a means of communication on policy, salary matters, etc. from administration directly to the employees.
- b. A communication program from administration to employees would be an essential part of this employee relations section activities. This would include the establishment of house organs, newsletters, and employee suggestion programs and rewards, and employee manuals.
- c. A complete analysis of the health and safety program of the medical center would be a continuing activity of this section. Special emphasis should be placed on the need for employee health services with the establishment of a pre-employment physical examination program.
- d. Grievance procedures must be communicated to employees and the means to facilitate and expedite legitimate grievances established and maintained by this section.
- e. An analysis of employee facilities in the medical center should be made and constant support and activity given to improvement of these. This might include adequate locker space, washroom facilities, lounges and sitting areas.

5. Labor Relations

- a. Although labor relations is not an extremely important area of activity in the medical center at the present time, it must be recognized that the nation's hospitals are greatly affected. The program of this section would be to maintain effective liaison with the center and union representatives and University Civil Service and to work closely with supervisors and Civil Service and labor representatives in handling grievances.

6. Liaison with other Agencies

It shall be the primary program responsibility of the person responsible for this activity to make known the medical center's personnel story. This would be by personal attendance at meetings, constant liaison with University, state and local departments and agencies, and by great use of the news media organization present in the medical center.

B. Teaching Programs

1. A position should be created in the personnel organization which will permit a recent graduate in personnel or psychology to gain first hand work experience in a medical center setting. His duties would include aiding the civil service representatives, the research section, and gradual assumption of responsible duties through assignment of projects and special studies. A two-year period would be a minimum time for this work. After completion he should be well qualified to operate at top level positions in medical center personnel organizations.
2. The second teaching objective of serving as a model for students training at the center could best result from formal orientation programs arranged by the training section of the personnel department.
3. The third teaching objective would be accomplished as an ongoing program by all members of the department. Research and management reports to the professional journals would be expected and encouraged of all members of the organization. Attendance and delivery of papers at professional conventions and institutes would also be encouraged.

C. Research Program

1. A research organization arm of the personnel department would be established, headed by a chief with a Ph.D. in sociology or psychology and additional staff as needs and funds available would dictate. This organization would carry on basic and applied research in the medical center personnel field. An additional member of this staff would be an industrial engineer who would be available to both this section and to the training section. His work would include basic and applied operations research in the hospital setting. This section would be continually supported by the total personnel department so that the attitude of inquiry may permeate all levels of the organization.

PHARMACY DEPARTMENT

The role of the pharmacy department is to assist in providing the best patient care, to provide drug control throughout the hospital, provide and assist in professional educational programs, and participate and assist in research efforts.

OBJECTIVES AND RESPECTIVE PROGRAMS

- I. Improve patient care through efficient use of personnel, equipment and physical facilities.
 - A. Separation of outpatient and inpatient areas as much as possible to give better patient care and maximal service.
 1. Continue plans for new outpatient pharmacy area, including staffing, both new and in progress.
 2. Make plans for remodeling and usage of present pharmacy area and other areas that may be obtained for use (i.e., Formula Room, hall outside present pharmacy.)
 - B. Expansion of the present Automatic Stock Replacement System to OR, Anes., PAR, Cysto and the clinics (research for this is already done) and possibly expand the items now under this system.
 - C. Initiate replacements of IV solutions on the stations. Basic research has been done on this; further research may need to be done to put into operation.
 - D. Utilization of more non-professional personnel to perform routine functions under supervision. This would enable the professional personnel to better utilize their training and abilities in more specialized functions.
 - E. Expansion of the prepackaging function to include more non-sterile and sterile items now being packaged on an individual basis.
 - F. Expansion of a bulk compounding program with proper controls.
 1. Non-sterile manufacturing facilities need to be improved and expanded to provide more economical means of manufacturing and packaging.
 2. To provide a sterile manufacturing and packaging service, the pharmacy needs a clean room and a sterile work area.
 - G. Provide 24 hour coverage.
 1. Development of an emergency medication cupboard which would be accessible to nursing during the time the pharmacy is closed. This eliminates the need for the admissions clerk to enter the pharmacy and take medications from it. (This is a temporary measure until the pharmacy can provide 24 hour coverage.)
 2. Hiring and training of pharmacists to provide 24 hour coverage.
 - H. Development of satellite pharmacies to provide faster and better service to remotely located nursing stations.
 - I. To establish an information center for the medical staff of the hospital. This center could also serve as a Poison Control Center for the hospital as well as for the entire community.

- J. Development of a Poison Control Center in the Emergency Receiving area, serviced by the pharmacy department.
 - K. Development of an abridged hospital formulary using the present American Hospital Formulary system as a guide.
 - L. To develop a system to provide the pharmacy with a copy of the original orders as written by the physician.
 - 1. This will allow the pharmacy to develop a medication profile for each patient.
 - 2. This will provide pharmacy with information to determine prescribing practices of the physicians and allow pharmacy to adjust their dispensing pattern to better coincide with present prescribing patterns.
 - M. To cooperate with the nursing and medical staffs to develop a uniform emergency medication cart or tray.
- II. Improve drug control in the Pharmacy and throughout the entire hospital.
- A. Development of a control laboratory.
 - 1. To provide a means for assaying and controlling all items that are manufactured or packaged in the pharmacy department.
 - 2. To provide a means for testing the quality of drugs and chemicals purchased by the pharmacy department.
 - 3. To provide facilities and personnel for developing special dosage forms, when they are required.
 - B. The dispensing and control of investigational drugs and information pertaining to them should be centralized in the pharmacy.
 - C. Development of an intravenous solution additive program performed by the pharmacy to eliminate almost all mixing of parenterals by nursing personnel. To have this system work properly, 24 hour coverage in the pharmacy should be a reality. The results of this program will be improved patient care.
 - D. Development of a unit dose dispensing system for all medications used in the hospital.
 - E. Development of more efficient methods for dispensing narcotics and barbiturates which would be accompanied by better controls for these drugs.
 - F. To plan an active role in the functioning of the pharmacy and therapeutics committee and the formulary system.
 - G. Implement a routine drug inspection program for all patient areas to maintain proper storage of all medications on nursing stations.
- III. Strengthen the professional contribution by the pharmacy through increased availability of educational programs and resources for pharmacy personnel.
- A. Develop a graduate hospital pharmacy residency program.
 - 1. Develop a manual for the course.
 - 2. Develop a program schedule for the course.
 - B. Establish a training program for pharmacy interns.

- C. Establish a training program which would work in conjunction with the School of Pharmacy for undergraduate and graduate pharmacy students.
 - 1. Provide a clinical teaching laboratory in sterile and non-sterile procedures.
 - 2. Provide for a dispensing experience in a hospital environment.
- D. Establish a drug information center.
 - 1. Accessible to the pharmacy staff, medical staff, nursing and other interested personnel of the hospital.
 - 2. Information needed in a poison control center would be available here.
 - 3. This center would contain information concerning medication available on the market and those used in this hospital.
 - 4. This would be staffed by a registered pharmacist.
 - 5. This center should be open 24 hours each day.
- IV. Maximize professional pharmacy services through improved interdepartmental relationships, especially with the nursing and medical staff.
 - A. Orientation of all new nursing staff and interns, and interested medical staff to policies of pharmacy.
 - B. Periodic meetings between pharmacy and nursing supervisors.
 - C. Drug information center (See objective #3)
 - D. Pharmacists should become part of the team with the medical staff on rounds as an information source concerning efficacy, use and choice of drugs for patients.
 - E. Establishment of a pharmacy newsletter to further improve communication between pharmacy and nursing.
 - F. Establishment of a means for better communication between pharmacy and the medical staff.
- V. Recruit and maintain well qualified staff in the pharmacy.
 - A. Salaries must be competitive or above the salaries paid in retail pharmacy.
 - B. Provide compensation for night work and shift rotations.
 - C. Improve working conditions.
 - D. Improve and provide adequate eating areas and lounge facilities in the hospital.
 - E. Provide better parking facilities.
 - F. Provide protection for personnel leaving the pharmacy when closing in the evening, both in the hospital and to parking areas.
- VI. Develop and assist in research projects.
 - A. Develop formulations and acceptable manufacturing and assay procedures for pharmaceutical products used within the hospital.
 - B. Development of programs through research to obtain fulfillment of future objectives.

- C. Assist other departments and paramedical groups in research studies that are directly or indirectly associated with pharmacy.
- D. Maintain research drug supplies and information pertaining to these drugs in the pharmacy. These drugs should be dispensed under pharmacy controlled conditions.
- E. Development of a program for utilizing data processing equipment to provide more controlled efficient pharmacy operation.
 - 1. Provide inventory and purchasing records.
 - 2. Provide a means for producing up to date patient medical profiles.

PURCHASING DEPARTMENT

The Purchasing Agent of the University is responsible for the procurement of all materials, supplies, equipment and services for all departments of the University. This responsibility of University Purchasing obviates University Hospitals from some functions of purchasing, such as selection of vendors, placing orders, and part of processing requisitions and maintaining records.

The role of the University Hospitals Purchasing is, however, to provide a centralized service to the various departments of the Hospitals for assistance to procure necessary materials, supplies, equipment and services to provide quality patient care, teaching and research.

The objectives of University Hospitals Purchasing are:

1. To provide knowledge of products, which includes quality, price, source and availability.

Programs to achieve this objective:

- a. Assist persons wanting to purchase supplies, equipment or service in the preparation of the requisition. A person representing University Hospitals Purchasing can provide specifics as to quality, price and source during the process of preparing a requisition.
 - b. Promoting standardization, with re-evaluation of products, once a product has been chosen by the person using the product, will give breadth to decisions on quality, price and availability of a product.
 - c. Testing products, from counting the number of items in a box to analyzing the chemicals in floor cleaner, will provide knowledge of products.
 - d. University Hospitals has a responsibility to educate other persons in the health industry of product quality.
2. To assist a person in the choice of a product. The primary program to achieve this objective is to assist the person who originally requisitioned the product to analyze vendor bids and prices.
 3. To provide the mechanics to make the product available.

Programs to achieve this objective:

- a. Process requisitions with dispatch, whether using a paper system or computer system.
- b. Schedule purchases and deliveries.
- c. Follow-up on orders
- d. Maintain order records
- e. Receive the product and verify the product with the invoice
- f. Dispose of unsatisfactory products.

Two additional programs of broader scope seem indicated. First, study purchasing and receiving operations for the medical center to develop the most effective set of organizational relationships between departments in the medical center and University Purchasing.

Second, to study and clarify the purchasing and distribution functions in the medical center.

RADIOLOGY DEPARTMENT

Radiology is defined here to include all medical applications of radiation in medicine. The role of the Department of Radiology may be divided into three parts which are: service, teaching and research.

SERVICE must be considered of paramount importance. The numbers and varieties of examinations being performed in radiology are increasing very rapidly. In the area of nuclear medicine, there has been more than a five fold increase in numbers of patient examinations performed during the past year as compared to five years ago. Not only have the numbers of examinations increased, but likewise the complexity of these examinations has increased in diagnostic radiology and in nuclear medicine. For instance, the total number of arteriograms of all types performed in 1957 was 141. In 1966, this figure will be about 1,000. Whereas an arteriogram in 1957 represented only a needle puncture of an artery, in 1966 it commonly means a puncture followed by catheterization and often by replacement of one catheter with another and repositioning of the catheter in various orifices. As a result, this type of special procedure may often tie up a fully equipped room for half adday or more. Greater emphasis is constantly being placed on the use of internal and external radiation sources for evaluation of dynamic processes in the body such as blood flow and organ function.

TRAINING of physicians and individuals in the paramedical sciences in various aspects of radiology is intimately integrated with our service function. We have an on-going training program for residents in radiology which now includes approximately 50 physicians. An x-ray technician training school has been part of our program. This is the largest training school for x-ray technologists in the Upper Midwest. At the present time we are training approximately 40 students with immediate objectives to increase the student body to 50-60 students. More teaching faculty, equipment and facilities are badly needed to meet the present and future demand for x-ray technologists. Consideration is now being given to the inauguration of a training program for radioisotopic technicians. We anticipate also increasing post-doctoral training in special areas of radiology.

We are actively involved in the training of medical students. Lectures on diagnostic radiology, nuclear medicine as well as elements on medical physics, nuclear physics, and radiation biology are part of our training program for medical students. In addition to this, all medical students spend three weeks during their senior year on various aspects of radiology.

For many years the Department of Radiology has sponsored a week long continuing education course which has been very well received by radiologists throughout the country. We expect to continue this practice and offer, in addition, more frequent refresher courses in various aspects of radiology and nuclear medicine.

The National Advisory Commission of Radiation recently released a report anticipating a demand for twice as many radiologists in 1980 as are presently in practice and lamenting the grossly inadequate supply of these specialists at the present. The department presently trains the largest number of radiologists in the country. Despite this fact, there is presently an extreme shortage of trained radiologists within the State of Minnesota.

In order to satisfy the ever increasing need, we will have to further expand our residency training program which in turn demands increased space and staff.

RESEARCH is considered to be a very important part of the functioning of any department. In the past this activity has suffered somewhat because of lack of adequate staff, research space and other research facilities. Nonetheless, significant contributions have been made in research by our staff. Our emphasis has been on the development and evaluation of new diagnostic procedures relating to the visualization of body organs and to the determination of their vascular supply and function. This has required the development of new radiopharmaceuticals for use in nuclear medicine and the use of special contrast media and equipment in diagnostic radiology.

OBJECTIVES

A summary of objectives in radiology are shown below:

1. To continue a high quality of medical practice in the use of internal and external radiation sources for the diagnosis and treatment of disease.
2. To continue in evaluation of our training program as it relates to residents in radiology, medical students, technicians specializing in x-ray and radioisotopic technology.
3. To strengthen our research endeavors by all staff members. This will include a continuation of our development and evaluation of new techniques in radiology as well as more basic research in areas of radiological physics and radiation biology.
4. To develop and maintain an interest in techniques for automation of some of our activities. This will include the use of computer facilities to permit more rapid and more accurate evaluation of data collected in diagnostic procedures, particularly those in which dynamic function is being evaluated.
5. To continue to stress the importance of interdepartmental cooperation in various aspects of service, teaching and research.
6. To recruit and maintain an adequate, well-qualified staff in radiology and nuclear medicine.

SPECIFIC NEEDS for the immediate future.

1. Possibly our greatest need at the present time is additional space for performing our service function. This includes rooms for equipment to be used for diagnostic evaluation of patients as well as office and secretarial space for departmental staff.

The staff has inadequate office space and several staff members have no office at all. It is in the interest of a more productive staff with better morale to provide each staff member with his own office space. In turn, space must be provided in increasing amounts for the residents for study and research and no such areas exist at present.

2. A need which will continue to be felt to be more pressing in the future will be for research space as our staff increases in size and the number of research projects likewise increases. The entire Department of Radiology including radiation therapy, currently shares research space in the basement of Diehl Hall which is presently being utilized to full capacity. As additional staff projects are added, the problem of space facilities for research will become exceedingly critical.

RADIOLOGY DEPARTMENT
Division of Radiation Therapy

Roles

The Division of Radiation Therapy is in the process of attaining the status of a department. The roles of this department are to provide:

1. Service and care of cancer patients;
2. Superb teaching consistent with the objectives of the University;
3. Leadership in research in the fields of radiation therapy, nuclear medicine, and radiation biology.

Objectives

I. Service

- a. To provide the best means of managing patients with cancer. The treatment facilities should include high energy linear acceleration, betatrons and cyclotrons which provide the most sophisticated methods in therapy.
- b. To modernize the existing department by provision and development of mould room and planning room facilities.
- c. To develop ancillary units such as a biophysics division and radioactive isotope division so as to assist in cancer management.
- d. To organize and assist peripheral cancer centers in fulfillment of objectives of the President's cancer commission.
- e. To provide an efficient cancer registry.
- f. To organize a joint tumor board so as to bring together the thoughts of physicians interested in cancer.

II. Teaching

- a. Teaching of medical and graduate students and their training in the art of radiation therapy so as to meet the country-wide shortage of specialists in this field.
- b. Training of radiotherapy technologists, biophysicists and radiologists as well as nuclear medicine specialists.
- c. Organization of education program in conjunction with the American Cancer Society.
- d. Provision of refresher courses and continuing medical education programs.
- e. Participation in joint programs with members of allied professions such as dentists and nurses, so as to disseminate the information about cancer.
- f. Coordination of teaching activities of local private and county hospitals.

III. Research

- a. To provide incentive to the staff to innovate and improve the techniques of treating cancer. Encouragement of research would interest physicians in training in entering the specialty. The research would involve simple biological systems and small and large animals, as well as patients with cancer.
- b. Develop radioactive isotopic, radiobiological and radiobiophysical research as these sections have an important bearing on management of cancer. The research activities of departments using ionizing radiations could be coordinated and assisted.
- c. Training of interested cancer research workers in the methods of research using ionizing radiations.

Programs

I. Patient Care

- a. Equipment of the department with high energy linear accelerator beta-tron and a cyclotron. These high energy machines provide accurate therapy of cancers at any location in the body without damaging the normal tissues. To achieve this, space around the existing treatment facility will be excavated so as to provide more room for the new machines. The radium room with modern facilities of storing, sterilization and usage will be developed. The intention in the design of such a room for radium is to minimize the dosage to the personnel and efficient dispensation. The room will have the facilities for round the clock sterilization by means of a circulating gas inside the cabinet.
- b. The facilities for preparing moulds will be augmented. Mould techniques are an essential part of modern cancer therapy. The mould room will need an ancillary workshop on a small scale. This will be developed. Also in the planning of radiation therapy, a treatment simulator is an essential piece of equipment, and requires an additional room. Patients with cancer will be fluoroscoped or x-rayed on the treatment simulator which provides the same conditions as the therapy unit, thus permitting accurate dosimetry and treatment planning.
- c. The biophysics division is an integral part of the radiation therapy department. Most of the treatment planning is based on physical concepts. Problems arise from time to time and these will be solved by the facilities in the biophysics division. The biophysics division also would handle the problems of the care and maintenance of the high energy therapy units mentioned above. The radioactive isotope section provides facilities for diagnosis and the therapy of certain cancers, in certain locations. These facilities will also be improved.
- d. The President's cancer commission proposals require establishment of regional centers and certain peripheral centers for the management of cancer cases. Consistent with these concepts, the radiotherapy department will be one of the regional centers and would be able to organize other cancer centers not only in the State of Minnesota, but also in neighboring regions. Thus, the activities of various centers interested in the management of cancer will be coordinated. The peripheral centers will be encouraged to handle some of the patients at their level after consultation instead of sending them to the regional center.
- e. It is important to have an efficient cancer registry so as to maintain an adequate follow up of the patients with cancer, thus ensuring best patient care, and permitting analysis of results of therapy. Hence attempts will be made to institute an efficient cancer registry so as to be able to keep track of all the patients with cancer.
- f. Management of cancer requires the cooperation of multiple disciplines in the field of medicine. A meeting of minds of physicians interested in cancer can be achieved by a joint tumor board. The organization of a joint tumor board will serve to ensure efficient management with the cooperation of all the physicians.

II. Teaching

- a. The facilities for the teaching of medical students are being augmented with time. To meet the objectives of the University, additional staff members will be recruited to help in the teaching of medical students. Teaching of graduate students within the department also will be augmented. At the moment there is a shortage of specialists

in the field of radiation therapy in the country. The prime objective of the department would be to strive to train as many radiation therapists as possible. By instituting an efficient teaching program, perspective candidates may be attracted into the field.

- b. Ancillary personnel such as radiotherapy technologists and biophysicists are also in short supply in the country. The department will organize improved training programs to attract and train personnel in these specialties. Radiobiologists will also be trained to assist the radiotherapists. Radioactive isotope medicine is a progressive field and training of these specialists will be the responsibility of the department as envisioned at the moment.
- c. Organization of educational programs in conjunction with the Continuing Education Center and American Cancer Society will help to educate professionals and the public so as to dispel their misconceptions about the disease, assist in the early detection of cancer, and disseminate information regarding the latest and best therapeutic methods.
- d. Periodic examinations of patients in mass dental clinics will help to diagnose cancers of the oral cavity in the very early stage. This combined program will help the dentists to exchange information about the various cancers, so that they are more alert at the time of examining their patients. The joint conferences with nurses and their associations will help to educate them in the matters of management of cancer so that they are better prepared in their duties of assisting these patients. Such joint meetings will be organized when the occasion arises.
- e. The local hospitals have patient material and teaching facilities. By coordinating these, it will be helpful to organize the teaching as well as research.

III. Research

All staff members in the department have research programs underway. Facilities of the division are available to trainees at all levels, from medical students to post-doctoral fellows. Research activities encompass many fields including space medicine, patterns of cancer growth, factors that enhance radiation effects and clinical medicine.

REHABILITATION CENTER

At the present time chronic disability incapacitates more than ten per cent of our population. This proportion will increase in future years as acute medical care becomes even more effective in saving lives and thereby increases the number of persons with chronic disabilities. Adequate attention to the medical needs of patients with chronic disability requires the development of comprehensive medical management both from the standpoint of optimal medical care and from the standpoint of decreasing dependency. Comprehensive medical management of patients with chronic disease and disability requires a multi-disciplinary approach.

The Rehabilitation Center provides within a single area of the Hospitals for the multi-disciplinary approach necessary to provide the comprehensive medical management which is required for the care of patients with chronic disease and disability.

The major roles of the Rehabilitation Center are threefold:

- (1) To provide a level of care for patients with disability which will result in their obtaining their optimal level of function in society.
- (2) To provide a model of multi-disciplinary coordination in order to develop within students in the health professions the concept of comprehensive patient care as the minimal program for the assisting of patients to achieve their optimal physiological, psychological and social levels of function.
- (3) To develop new techniques and programs for the better management of patients, and for the better education of members of the health professions in comprehensive medical management of patients with chronic disease and disability.

The goals and objectives are:

- (1) To provide within one area an integrated team approach in the provision of comprehensive rehabilitation services for the chronically disabled with the Center operations so designed that the patient becomes the focus of a comprehensive program of care.
- (2) To provide for coordination with physicians and other health professionals in our state and region in the best methods of continuing management of patients with chronic disease and in educating them to meet the problems of the ever increasing number of these patients.
- (3) To provide exemplary rehabilitation programs for the disabled and chronically diseased in a coordinated manner both within the Center and the Hospitals.
- (4) To provide for evaluations of our programs as to their effectiveness in furthering the concept of comprehensive medical management, and of our efforts to further coordination with the community at large of the procedures and methods used in providing comprehensive rehabilitation services.

The programs of the Rehabilitation Center involved in carrying out the goals and objectives are:

- (1) Integral participation in the ambulatory care programs of University Hospitals Outpatient Department in providing comprehensive rehabilitation with a multi-disciplinary program. At the present time, but even more so if there is an expansion in the outpatient population to be seen at University Hospitals, there is a need for additional facilities in the Rehabilitation Center for providing the expanding needs for rehabilitation services.
- (2) To provide comprehensive services to inpatients of the University Hospitals. At the present time the facilities of the Rehabilitation Center can just provide for the present hospitalized population. If the hospital expands the number of patients cared for and in addition consideration is given to the increasing number of chronically disabled, the present facilities will need to be increased and/or the methods of operation changed in order to provide the necessary rehabilitation services for patients. Particularly critical at the present time and certain to increase is the need for additional facilities for the professional personnel providing psychological, social and vocational rehabilitation services.
- (3) Providing students of the health professions clinical experience as members of a multi-disciplinary team in the management of the chronically disabled. This involves providing the necessary clinical experiences and training for medical students, physical therapists, occupational therapists, speech therapists, clinical psychologists, vocational counselors and public health nurses. There is a need for more of these members of the health professions and as the number of students in each field is increased, the present facilities and/or operations of the Center will need to be expanded in order to provide for their training.
- (4) Providing the clinical facilities necessary for the training of physicians specializing in the field of medical rehabilitation.
- (5) Developing better methods of assessing the programs of the Center. There is at present a need to more objectively evaluate the services provided patients, the effectiveness of the clinical training programs, and the administrative operations. In the future as the utilization of this comprehensive rehabilitation facility for teaching, research and service increases, it will be necessary to provide for and employ those pertinent technological advances in communication, automation, and computers to improve the effectiveness of the service and educational programs as well as to provide for their evaluation.

SOCIAL SERVICE DEPARTMENT

I. Programmatic Activities

The primary role of the Social Service Department is to assist the doctor, hospital staff and community agencies in helping the patient and his family to solve the social or personal problems which affect medical care and adjustment to disability.

The Department at the University Hospitals operates from a broad base and serves as the focal point of contact for community and social agencies concerned with the social problems of people and is a liaison between the Hospitals and areas of the state from which patients come. In doing so, the staff interprets the services of the Hospitals to community agencies and brings to the attention of the Administration those changes and developments which may affect the work of the Hospitals in providing care for people. The Department services are designed to protect and facilitate the services provided by the Hospitals staff. A large portion of the social worker's concern is directed to the life of the patient and family in his own community.

A social service department, in order to carry out its essential functions, must depend upon the cooperation of social agencies to provide services and facilities. The creative skill in casework depends upon the proper use and selection of resources. Because of the complexities of modern medical care, no community has all the resources required for the use of patients with varying conditions. A combination of resources and the creation of services becomes a part of this function of coordination resources for the benefit of patients.

A. Teaching

The Social Service Department was started to facilitate medical education and has continued in its 52 years of existence to participate in the teaching program of the medical school. The staff has been involved in the educational program to students in medicine, nursing, physical therapy, occupational therapy, hospital dietetics, and hospital administration and medical residents. The staff has also been involved in the training program of the School of Social Work. In interpreting the specific medical conditions of patients and the requirements of the medical plan to community agencies, county welfare social workers, county commissioners, township officials, court judges, etc., the Social Service staff contributes to the education of people in the communities who are responsible for providing medical care. Periodically the Department sends material to 250 agencies on medical subjects or topics of mutual interest or concern and plans programs of special interest.

1. Major Program

Participation in teaching medical and medical graduate students in medicine, psychiatry, child psychiatry, physical medicine and rehabilitation, comprehensive clinic and other services. Social workers also participate in courses in nursing, hospital administration and hospital chaplaincy.

2. Service Courses to Other Units of University

School of Social Work - 215, 216, 217 Group Work

3. Continuation Education

- a. Planned programs for students in Social Work in the undergraduate sequence of private colleges in Minnesota.
- b. Programs on social service relationships for county welfare members.
- c. Programs on the University Hospitals contribution to the general welfare programs of the State for county welfare boards.
- d. Programs of special interest to various groups--county nursing boards, child welfare workers, probation officers, judges, etc.
- e. Distribution of pertinent literature on medical subjects to county welfare departments, public health nurses, vocational rehabilitation centers and selected private social service agencies.
- f. Special lectures to certain groups.

B. Research

The Department has engaged in collaborative research with the Department of Psychiatry. Over the years the staff has participated in research projects of other departments by following the patients and handling the problems in relation to participation in projects.

II. Goals and Objectives of each program over the next 20 years.

In order to make its greatest contribution to the total University Hospital program, the functions of the Social Service Department must fit into the state welfare structure. In so doing the staff takes an active role of leadership in assisting the state welfare organizations to plan and operate medical care programs for people and fulfills the larger responsibility of all University departments to serve the people of the state. Therefore, no plan for the Department can be designed without references to changes and trends in mind, the role of the Social Service Department as seen at this time will be modified in the future. The primary responsibility of providing social services to patients will remain the same. There will be new knowledge, refinements of techniques, changes in methods, but the core area of the practice will remain.

SERVICE OBJECTIVES

1. To provide skilled social casework services to patients whose social, personal or family problems require solution as a part of the medical care plan.
2. To assume leadership role in helping patients obtain the maximum benefit from the medical care received, and to prevent recurrences of illness.
3. To participate with social workers and other professions in community agencies in effecting plans for patients in accordance with the medical recommendations.
4. To contribute medical, social and psychiatric social work evaluations of specific patient situations to assist the community social workers in their work with the patient and his family.
5. To provide consultative services from the field of social work, experience in community organizations and general social work knowledge to the medical and allied professions in the hospital team, allied professions and community social workers, and others involved in programs concerned with health.

6. To integrate the services of the department into the total program of the Hospitals and to take an active part in assisting the hospital administration in providing the best possible services for the people who come to us for medical care
7. To work with the medical staff, health teams, allied medical professions in the total effort to provide good medical services for patients.
8. To provide leadership to the social welfare field in the development of resources and programs designed to serve the medical and health needs of people.
9. To stimulate the development of new services essential to good patient care.
10. To participate with community organizations, agency boards, etc, in an effort to support and strengthen programs and facilities concerned with various aspects of medical care or with the prevention of illness.

The role of the Social Service Department's participation in the educational programs of the College of Medical Sciences in the future is defined as follows:

OBJECTIVES OF THE SOCIAL SERVICE DEPARTMENT TEACHING ACTIVITIES

I. Medical Education

1. To strengthen the teaching programs of the medical school by providing knowledge about the impact of the patient's social situation upon his medical condition.
2. To assist the physician in his concerns for the total care of the patient which extend to family and community relationships.
3. To enrich the general medical education of the doctor by providing those services which will assist him to obtain maximum benefit from the medical treatment given to patients.
4. To implement the teaching program through cooperation and joint participation of services available to assist him in his work with patients through social work and social agencies.
5. To augment the medical plans through knowledge of local, state and national resources.
6. To help the physician define his role as a citizen in providing leadership in the development of health care programs.

II. Hospital Administration

To provide an educational experience directed in three different ways:

1. To broaden the administrator's knowledge of social problems of patients which affect his goals.
2. To increase his familiarity with the specific operation of welfare programs, particularly those concerned with medical care.
3. To demonstrate the services the social service department performs which assist him in his administration.

III. Ancillary Medical Professions

1. To increase the student appreciation of the social problems of patients related to the medical condition.
2. To interpret the functions of the social worker as a member of the health team.
3. To augment the knowledge of resources available to assist patients or their families.

4. To broaden and extend the students' general information about social welfare programs.

IV. Community Agencies

1. To offer programs of health education for social workers, county commissioners, etc., and other special groups, planned and given at the Hospitals by the staff.
2. To plan programs designed to demonstrate the services which the Hospitals can contribute in the social casework plans for people.
3. To contribute materials of special significance to county welfare departments, public health nurses, vocational counselors and other interested persons.
4. To promote inclusion of timely medical information on programs designed for people interested in the health fields.
5. To work with other groups--public health nurses, vocational counselors, social workers and citizen groups in an effort to extend knowledge about specific medical conditions and the requirements of care and treatment.
6. To be ever conscious of the educational value of well written medical social reports on patients.
7. To initiate programs and cooperate with the other departments in the Hospitals in the recruitment of young people into the health professions.
8. To be ever mindful of the educational aspects of medical and social work practice as related to specific patients and their families.
9. To take leadership in working out institutes and conferences for social workers, particularly those employed in medical settings.

V. Research

1. To conduct independent research programs into areas of social factors as related to medical care, motivation and rehabilitation.
2. To assist the medical and paramedical field in research projects insofar as patient care is concerned.
3. To participate with the medical and paramedical professions in the areas of social work concern of research projects.

VI. Training in Social Work

The Department shares the responsibility of participating in the training of social workers for the health fields. The responsibility to be met is as follows:

1. To offer field work experience to graduate students in social work.
2. To assist colleges offering an undergraduate sequence in social work by helping to strengthen the students' understanding of medical conditions of people through conferences, tours, materials, etc.

VOLUNTEER SERVICE DEPARTMENT

Volunteer Service in hospitals has seen distinct growth in the last five years. Coming years should see a far greater expansion. People of all ages and social levels will have more leisure time. The trend to the machine and computer will allow for some of this. Work weeks will be shortened and retirement will come earlier for many. Growing auxiliary memberships will mean more individual and group interest in extending their services. The population explosion, as well, has already resulted in acceptance of the fifteen-year-old in a proven hospital volunteer service program for teenagers. Age requirements could well be lowered to fourteen years and even thirteen years for certain services. Although each has an individual motivation, all want to spend their time in a meaningful way.

To reach the fullest potential in the use of this time and manpower means that sincere effort must be placed on adequate personnel for good administration in planning an efficient and functional volunteer service program. Sufficient space and proper planning of this space are imperative for smooth physical operation.

ROLE

Projects and services of the Volunteer Service Department are applicable to all areas of the Medical Center. It is a department to which administration can turn to develop a needed service that can be organized and implemented through the use of community members who are either professionals or non-professionals in hospital work.

The Volunteer Service Department is responsible for recruitment and training of individuals and groups who can be assigned to authorized service and to maintain a good level of work performance through evaluation once the service has been approved and instituted. Continuous communication and relations with department heads in work supervision is an ever present responsibility.

OBJECTIVE

Community interest and enthusiasm are necessary assets for good recruitment. To maintain this, the aim of the Volunteer Service Department is to achieve good relations with the community through the organization of projects and work activities that have tangibility and purpose for the individual volunteer or group as well as a supplemental service that is of value to the hospital and the patient. The endeavors of the volunteer department's personnel in processes of interviewing, orientation, and training are productive when a volunteer is placed where her time, talent and interests can best be used. Good placement is an ever-reaching goal on which time is well spent.

The primary consideration in organizing any service is the welfare of the patient and how the service can best assist in quality patient care. Beauty shops, patient libraries, shopping cart services, and greeting card racks are some of the courtesy services that are extended as patient conveniences through volunteer programming. Volunteer receptionists at information desks give added courtesies to patients who need assistance. Interpreters are continuously helpful to the doctor and the foreign patient. Volunteers in pediatric areas give many hours of valuable assistance in play and recreation, as well as those who assist nurses on the station and the teacher in the school room. Teenagers give year-round service on stations and in Central

Service Supply. Adults of all age groups and social levels are channeled to a number of other services that are coordinated with the volunteer's individual time and abilities. The volunteer who feels he or she is meeting a need with work satisfaction, can accomplish an amplification of the type picture the hospital wishes to interpret or present to the public.

PROGRAM

Changes and progress in hospital health programs and the broadening scope of hospital operation will create more new and challenging work areas and service projects for volunteers. Established work areas naturally will enlarge. There will be need for a greater force of volunteers. To keep astride with this growth, the following is recommended for future planning:

- a. Addition of a Hospital Auxiliary: Presently in the first stages of organization--will strengthen recruitment for volunteers.
- b. More outside contacts for the Volunteer Director to express hospital needs and projects: To be accomplished through the addition of assistants for the areas of Heart Hospital, Masonic Hospital, and Youth Program to administer scheduling, training and record keeping.
- c. Development of a training program coordinated with training programs for new personnel on staff acceptance of volunteers to alleviate turnover of volunteers.
- d. Organization of a patient recreation program to better use outside groups for day and evening entertainment projects for patients.
- e. Organization of a men's volunteer program to utilize the area of retired persons and college students.
- f. Better facilities for volunteers such as parking, and planning of a dressing area. (Difficulties such as parking and personal facilities discourage volunteers.)
- g. Development of an educational program for auxiliaries.
- h. More extended use of message volunteers.
- i. Visual aids for volunteer training and orientation.
- j. A new guide book recently written to be used more extensively.