A STUDY OF THE ADMINISTRATIVE PROCESSING OF PRIVATELY REFERRED OUTPATIENTS AT METHODIST HOSPITAL OF DALLAS

A Problem Solving Thesis

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CHAPTER I

INTRODUCTION

General Information

In recent years several developments have caused an emphasis toward ambulatory patient care. Traditionally, the outpatient care system in hospitals has received low priority in the allocation of funds, personnel and material resources.[1] However, the need for change in the method of operating outpatient departments has been recognized by health professionals throughout the country. To some extent recognition of the necessity for improving the delivery of ambulatory care was forced by the demands of all segments of society for an accessible and low-cost health care system.[2] Additionally, the federal government was not mute on the subject. With the advent of Medicare and Medicaid, the federal government became a driving force to reduce the costs of delivering health care. In pressing for the examination and development of preventive medicine programs, the federal government asserted its authority to determine the mode of delivery of health care. The development of preventive medicine programs was a difficult goal to achieve because the federal government's motives were based on the desire to reduce costs, not on providing better health care.[3] The implementation of utilization review and medical audit programs, emphasized by Public Law 92-603, will serve as an impetus for increased use of ambulatory care services.[4] Inpatient care will be monitored closely and as reimbursement is denied, hospitals will be forced to seek alternate mechanisms

for health care delivery. The obvious choice is to expand the scope of the outpatient services.

Other developments have forced hospitals to assume a greater role in outpatient care. Physician migrations left areas without an adequate number of private practitioners to meet the needs of the population. People were forced to seek primary care in hospitals. Rapid technological advances reduced the useful life of medical equipment and escalated the acquisition cost. Rather than purchase expensive diagnostic and treatment equipment, physicians elected to base their private practice in a hospital setting.

For various reasons, in the past decade, ambulatory care has become big business for hospitals. From 1964 to 1970 outpatient visits to hospitals increased by 45 per cent. Within the same period, inpatient admissions increased 20.3 per cent, and the number of patients seen by office-based private practitioners remained essentially unchanged.[5] The number of patients seen in hospital emergency rooms grew from 10 to 15 per cent yearly in the twelve years preceding 1972. An estimated 60 million patients were treated in hospital emergency rooms in 1972.[6]

The dramatic rise in outpatients treated in hospitals created financial problems and forced a thorough examination of the systems for providing ambulatory care. When the number of outpatients seen in hospitals was relatively small, deficits of the outpatient departments were funded through philanthropy or increased inpatient rates.[7] However, large increases in outpatients created huge deficits in some hospitals, adding to other financial problems of the administrators.[8]

The trend was clearly for fewer hospital admissions and increased use of hospital outpatient services. Therefore, the development of accessible, efficient, and economically attractive models for delivering ambulatory care became very important to hospital administrators.

Hospital History

In the forty-eight years since its opening, Methodist Hospital of Dallas grew from a modest community health care facility of eighty-five beds to the present modern center of 500 beds.

Originally called Dallas Sanitarium Incorporated, the hospital, under the leadership of four administrators, increased its bed capacity in four increments. The first major addition was in 1940 when construction was started on a sixty-bed wing. In January of 1953 the east wing was completed, adding 106 beds to the hospital. Two other major expansion programs brought the capacity of the hospital to the present 500 beds.

The major additions to the hospital took place prior to the present nationwide emphasis on ambulatory care. As a result, the medical center was not designed to enhance the delivery of outpatient care. The location of the ancillary services did not provide for the easy flow of patient traffic from one service department to the next. Exception to the diffuse nature of the ancillary services was the contiguous location of the radiology and pathology sections. However, the two sections were removed from the normal traffic flow. The two service sections were on the ground floor of the central facility, but most outpatients utilized the main entrance to the hospital, one floor up, to gain access to the central building. The pulmonology section, located on the third floor

of a separate building, was connected to the main building by a concourse. Physical medicine patients were seen in the first basement, almost directly below the radiology and pathology sections.

Conditions Which Prompted the Study

The explosive growth in outpatient service which Bradford anticipated for Methodist Hospital did not materialize.[9] Bradford's study embodied the flow of all outpatients into Methodist Hospital. Clinic patients, that is patients who pay only a fraction of the total cost of care, were included in the study. Methodist Hospital, a teaching health care facility, provided ambulatory care to part-paying patients. The clinical material which the patients provided was essential to the teaching program. In return, Methodist Hospital provided a vital service to the medically indigent of the community. However, the number of clinic patients treated at Methodist Hospital was limited by the needs of the teaching program and the funds allocated to the program.[10] Historically, clinic patients outnumbered the full-paying, privately referred outpatients at Methodist Hospital. A comparison of these categories of outpatients was limited because separate statistics were not maintained for private pay patients prior to 1973. In 1973 Methodist Hospital had 12,691 clinic outpatient visits vis-a-vis an estimated 12,583 privately referred outpatient visits. Emergency room visits, which in 1966 totaled more than 18,000, stabilized at about 20,000 visits per year from 1969 to 1973.[11] The slow rate of growth in the Methodist Hospital emergency room visits was contrasted dramatically by the nationwide increase of 10 to 15 per cent yearly for the past decade.[12] Affiliated teaching

hospitals in Dallas gained 10.8 per cent in the number of emergency room visits from 1970 to 1973. During that period, one Dallas hospital had a 65 per cent increase in emergency room visits. In Methodist Hospital, emergency room visits declined by 4.7 per cent.[13]

There were other indicators which suggested that the ancillary services of Methodist Hospital were being utilized below capacity. The November 1974 Hospital Administrative Services Monthly Report demonstrated that the gross revenue generated by Methodist Hospital from outpatient services was well below the national average for teaching hospitals. For example, outpatient radiology and laboratory procedures provided .9 per cent and 1.5 per cent, respectively, of the gross revenue for Methodist Hospital. The national average for affiliated hospitals was 1.6 per cent and 2.5 per cent for the two services.[14]

In summary, the outpatient utilization of the ancillary services of Methodist Hospital needed to be increased. One possible means of increasing the utilization rate was to improve the method by which outpatients were processed within the system.

Statement of the Problem

The problem was to improve the administrative processing of privately referred outpatients at Methodist Hospital of Dallas.

Factors Bearing on the Problem

Factors bearing on the problem were:

1. A unit medical record system was to be implemented sometime in mid 1975.

2. The success of a well-rounded teaching program was contingent upon a large number of clinic patients.

3. Parking facilities for Methodist Hospital outpatients were extremely limited.

4. The diagnostic and treatment ancillary facilities of Methodist Hospital were not functionally located.

5. The fragmentation of the ancillary services caused problems in the coordinating of appointments which involved more than one of the services.

6. Waiting space for outpatients was inadequate and posed a barrier to increased utilization of the ancillary services.

7. The physical layout of Methodist Hospital confused the new patient.

8. The hospital possessed an excellent automatic data processing capability. The automatic data processing equipment handled all outpatient accounting.

9. An addition to the present physical plant, to house the radiology and pathology sections of the hospital, was planned to be ready for operation as early as January 1977.

Assumptions

The following assumptions had a bearing on this study:

1. The number of privately referred outpatients will increase.

2. Outpatients will depend primarily on their private conveyances as means of transportation to and from the hospital.

3. Removal of patients' inconveniences, such as delays in

registration, will promote better outpatient utilization of the hospital's ancillary services.

Definition of Unusual Terms

Service Sections--the revenue producing diagnostic and treatment service centers of the hospital. Included in this study were the radiology, pathology, cardiology and physical medicine sections of the hospital.

Clinic Patient--a patient who received medical attention as part of the hospital teaching program. This category of patients received clinic charges according to financial status, ranging from full charges to no charge.

Central Outpatient Registration--an office which provided information to the patients, obtained information for billing, and initiated the billing process.

Multiple Appointments--appointments for one patient at two or more service sections.

Part-Pay Patient--a patient who did not receive full charges for services rendered by the hospital.

Privately Referred Outpatient--a patient referred by his physician to Methodist Hospital for therapeutic or diagnostic services.

Requisition--a form, prepared in one to five copies, used to request service and to initiate the billing process.

Series Patient--a patient scheduled for a series of treatments or tests at the same service section.

Objectives

The objectives of the study were to:

1. Evaluate the procedures established for the processing of privately referred outpatients.

2. Determine the degree of compliance with the established procedures, provided the elements of the system were adequate.

3. Identify reasons for non-compliance with the procedures.

4. Recommend modifications which would increase the effectiveness of the processing system.

Criteria

The criteria for the study were that the system for processing privately referred outpatients should:

1. Provide clear, uniform instructions to outpatients.

2. Facilitate coordination between the patient registration center and the revenue producing diagnostic and treatment service centers of the hospital.

3. Regulate the flow of outpatients.

4. Minimize the waiting time of patients.

5. Expedite the billing process and reduce errors in billing.

Methodology

Interviews were conducted with the executive director and the administrator in order to gain their philosophical approaches to the problem. An interview was conducted with the business manager to obtain clarification of the directive which prescribed procedures for processing privately referred outpatients. Interviews were conducted with the

directors of the service sections to acquire a detailed knowledge of the method of operation in each section.

The records in the billing office were examined and samples were taken to test the efficiency of the registration system in use.

The literature was reviewed for solutions to similar problems in other health care institutions.

Literature Review

The literature reviewed was replete with documentation of innovations designed to meet the demands of the growing number of outpatients served by hospitals. The predominant trends were for the centralization and mechanization of the systems for patient appointments, registrations and billings. Electronic data processing proved successful in coping with the sizeable increases in clerical functions, collection procedures, and accounts receivables.[15]

In 1967, the outpatient department of the Ohio State University Hospitals utilized a computerized system to rid its central appointment department clerks of voluminous patient processing tasks.[16] Prior to instituting the new system, personnel at the registration desk were burdened with handwriting appointment lists, requests for medical records and complex patient billings. A system was developed to provide machine produced clinic appointment listings, sign-out cards for medical records and radiology films, patient billing and current statistical accounting data. The key elements of the system were a plastic addressograph card and the punch cards generated from a two-part appointment slip. The addressograph card was used to emboss the appointment slips and punch cards.

The punch cards were used to produce appointment listings for each clinic and the central appointment department. A packet of punch cards which contained the patient's name, clinic, date of appointment and hospital number were sent to the medical records department two days before the records were needed. The same procedure was used for signing out x-rays.

Lutheran General Hospital, Park Ridge, Illinois, installed a central outpatient registration (COR) system to expedite collection of data for billing, coordinate the scheduling of multiple appointments and establish adequate controls over the billing process.[17]

The COR was implemented in three phases. During phase one, patients with appointments at the ancillary services were directed to the COR where the requisitions were priced and typed. The COR also made advance collections for services or prepared the documentation for billings. The COR personnel then directed the patient to the appropriate ancillary service. Unless the patient had registered at COR, ancillary departments did not give him treatment or tests.

In the second phase, COR assumed responsibility for the appointment scheduling function of the ancillary services. Receptionists at COR accepted calls either from patients or physicians, recorded the appointments and prepared the requisitions for services.

In phase three a computer was used to manage the scheduling of patients' appointments in all ancillary departments. The first two phases were implemented one department at a time over a period of eighteen months. Prior to implementation, the medical staff and all employees were informed of the functions of the COR and its impact on the outpatient operations. Extensive training was required for personnel at COR before

they acquired a working knowledge of the services offered by each department, the service time required for various procedures and other variables which affected patient scheduling.

Through use of the COR concept, Lutheran Hospital achieved the following improvements:

1. Patients or physicians were required to make only one call for multiple appointments.

2. Patients were assigned the best possible appointment times because the schedules of the departments were coordinated. The coordinated effort reduced patient waiting time and prevented unnecessary return trips to the hospital.

3. Traffic flow was improved because COR personnel directed patients to the appropriate departments. Since payment arrangements were made before the service was rendered, patients were not required to return to COR. The patients left the hospital by the most direct access upon completion of the tests or treatment.

4. Clerical work was reduced for ancillary service personnel.

5. A standardization of collections and billing procedures was achieved because the functions were under the control of one department head.

St. Rita's Hospital, Lima, Ohio, increased its income by more than six thousand dollars per month by computerizing outpatient billing and centralizing the outpatient registration function.[18]

Other studies related the value of the individual appointment system. Villegas demonstrated that an appointment system which considered the arrival pattern and the patient load reduced patient waiting time

without increasing physician idle time.[19] Rosenblut, et al., concluded that an individual time appointment system reduced patient waiting time regardless of patient punctuality or clinic load size.[20]

During the middle to late 1960's and the early 1970's, hospitals improved their outpatient billing process by centralizing the registration function. The use of computers made the billing process more rapid, reduced clerical errors, and greatly facilitated the periodic evaluation of receivables. The improvements resulted in fewer write-offs, increased revenue and increased cash flow.[21]

Footnotes

[1]Paul Hofmann, John F. Rockhart, and G. Octo Barnett, "Planning for an Automated Clinic Appointment System," Hospital Topics, XLVIII (October, 1970), 37.

[2]Stanley Reichman, "Challenge to Hospitals: Improve Ambulatory Care," Hospital Medical Staff, III (May, 1974), 31.

[3]Ibid.

[4]Ibid., 33.

[5]Ibid., 32.

[6]Reinald Leidelmeyer, "Emergency-Department Design and Function," Hospital Topics, LI (October, 1973), 50.

[7]Reichman, 32.

[8]Ibid.

[9]Charles E. Bradford, "A Study of Outpatient Flow into Methodist Hospital of Dallas, Texas," (unpublished Master's thesis, Baylor University, Waco, Texas, 1958), p. 2.

[10]Glenn N. Scott, private interview held at Methodist Hospital of Dallas, Dallas, Texas, 12 March 1975.

[11]E. D. Rosenfeld Associates, Inc., "Program/Statistical Profile of Affiliated Teaching Hospitals," Dallas, Texas, 22 October 1974, p. 48.

[12]Leidelmeyer, 50.

[13]Rosenfeld, p. 58.

[14]American Hospital Association, "Hospital Administrative Services Monthly Report," Chicago, November, 1974, p. 5.

[15]Gustav A. Killenberg, "Use of Electronic Data Processing Equipment in Outpatient Billings," Hospital Topics, XLIX (March, 1971), 46.

[16]John H. Bergman and David L. Steffy, "Data Processing Improves Outpatient Management," Hospitals, XLIII (1 January 1969), 49; Daniel J. Pae, "Organizing Outpatient Clinics to Cure Chaos," Medical Record News, XXXVIII (April, 1967), 117.

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[18]Raymond P. Woods, "Outpatient Desk Assures Proper Charging and Collection," Hospital Financial Management (October, 1971), 7.

[19]Eduardo L. Villegas, "Outpatient Appointment Saves Time for Patients and Doctor," Hospitals, XLI (16 April 1967), 52-57.

[20]Alan Rosenblut, et al., "Outpatient Waiting Time Reduced by Use of Individual Appointment System," Hospital Topics, L (March, 1972), 48-52.

[21]Killenberg, 46.

CHAPTER II

DISCUSSION

General Information

The concern for improving the outpatient utilization rate of the revenue producing service centers of the hospital was shared by the heads of the servicing sections and the hospital administrators (Appendix A). All the managers interviewed were actively seeking ways to promote better delivery of services to the privately referred outpatient. The philosophy of promoting outpatient satisfaction was particularly pronounced in the physical medicine section. Privately referred clients of that section were accommodated with appointment times which were most convenient to the outpatients. The scheduling of inpatient treatments was flexible and was arranged to avoid conflict with outpatient visits.

Deficiencies in two general areas were recognized as barriers to the hospital's goal of increasing the outpatient revenue produced by the service sections. The poor accessibility of the hospital, caused primarily by the extremely limited parking facilities, was an important and difficult barrier to overcome. Incomplete outpatient registrations resulted in loss of revenue and time unnecessarily expended, by service section receptionists and business office personnel, to correct information deficiencies. The directors of the outpatient service sections believed

that the amount of time required for patient registration was excessive and incompatible with the hospital's goal of attracting more privately referred outpatients.[1]

The Prescribed Procedures

The existing model for registration and billing privately referred outpatients was approximately five years old. Formerly, privately referred outpatients were required to register at the business office before proceeding to the service sections for treatments or diagnostic tests. The directors of the service sections believed that the old registration procedures increased patient waiting and disrupted appointment schedules because the time required for registration was excessive and unpredictable. Under the old system, the dilemma of patient waiting time or idle service time was unavoidable. If the patients were asked to register in sufficient time to insure that they would meet their scheduled appointments, the patients' waiting time increased. However, in minimizing patient waiting, the section risked having idle service time and/or disrupting the appointment schedules. Therefore, in deference to the desires of the directors of the service sections, changes to the sequence of the administrative process were made.[2] At the time of the study, registration of new outpatients was accomplished after the service was rendered.

The outpatient processing system relied heavily on the service sections. The procedures were as follows:

1. The appointment system was completely decentralized. Each service section accepted reservations. In some cases patients initiated

the requests for appointments, but usually the reservations were made by the patient's private physician.

2. The patient was asked to report to the information desk. If the referring physician made the initial appointment, the hospital depended on the physician to relay the reporting instructions to the patient.

3. Having accepted the appointment, the service section prepared a multicopy requisition for service and forwarded it to the information desk. At this point, the requisition ticket contained only the patient's name, the service to be rendered, and the date and time of the service.

4. The requisitions were filed by the information desk receptionist alphabetically, by date of appointment.

5. On the day of the appointment the patient reported to the information desk and was handed all copies of the requisition ticket, except for the unit hold copy. The information clerk retained the unit hold copies and delivered them to the business office at the end of the day.

6. The information receptionist directed the patient to the place of appointment.

7. Upon completion of the diagnostic tests or treatments the service section asked the patient to return to the information desk. The patient carried all copies of the requisition tickets.

8. At the information desk, no further processing was accomplished, and the patient was redirected to the registration clerk in the business office.

9. The clerk assigned a control number to the patient and completed the registration. If the patient wished to pay cash, the registration clerk was required to:

a. Record the patient's name, address, telephone number, physician, and service rendered.

b. Record the visit in a ledger.

c. Give the patient a receipt.

d. Record the patient number on all requisitions and transmit the requisitions to data processing.

e. Transmit all receipts and collections to the cashier.

If the patient did not wish to pay cash for the charges, the registration clerk was required to:

a. Complete the entire registration form.

b. Record the visit in a ledger.

c. Write the patient number on all requisitions.

d. Transmit the requisition to data processing.

The service sections were required to inform the registration clerk of patients who were to be seen on a continuing basis during a thirty-day period. For these patients, registration was necessary only on their first appointment. During the initial visit, a three-line addressograph plate was prepared by the registration clerk. The plate was transmitted to the service department and retained there for use in the preparation of future requisition charges. Other than the patient's name, the most essential information contained in the addressograph plate was the patient's series number. Unless the series patients wished to

pay cash for each visit, it was not necessary for them to report to the business office after the initial visit. For the series patients, the service sections sent the requisition charges via a pneumatic tube system directly to the business office.

The service section was required to return the addressograph plate to the business office after completion of the series tests or treatments. However, the director of the section was authorized to retain the charge plate if he felt that the patient would require further tests or treatments within ninety days.

For patients with appointments at more than one department, the primary department was responsible for coordinating all appointments. However, only the primary department had access to the addressograph plate. Requisitions for services generated by the secondary departments were handwritten. Other procedures for multiple appointments were the same as for single appointments. For series patients, the requisition charge slips were sent directly to the business office. Multiple-appointment, single-visit patients hand carried the requisition charge slips to the business office upon completion of the treatment or diagnostic tests.

Analysis of the System

The system provided very little information to the outpatients prior to their arrival at the hospital. The hospital relied on the referring physician to acquaint the new outpatient with the hospital environment. Most of the referring physicians had staff privileges at Methodist Hospital of Dallas and were familiar with the physical layout of the hospital.

However, the hospital, a complex facility, confused the new outpatient. His first barrier to entry into the hospital was locating a place to park.

The hospital security force controlled the flow of traffic into the nine parking lots of the hospital (Appendix B). A total of 778 spaces were available for the hospital staff, employees, and visitors. None of the parking lots were reserved exclusively for outpatients. Outpatient parking was permitted in five of the lots with a combined capacity for 325 vehicles. However, hospital employees were also authorized to park in the lots available to the outpatients, and the employees generally filled the parking spaces prior to 8:00 A.M. An outpatient, fortunate enough to locate a parking space, was charged a token parking fee of twenty-five cents, regardless of the length of stay.

Additionally, two commercial parking lots, immediately adjacent to the hospital grounds, offered 275 spaces for public parking. The fees at one lot were fifty cents for the first two hours or one dollar for the day. At the smaller lot, which had seventy-three spaces, the parking fees were thirty-five cents for the first two hours and seventy-five cents for the day. The commercial parking lots were privately owned, and the hospital had no financial arrangement with the owners.

The degree to which hospital parking facilities were controlled varied. The physicians' lot, the emergency lot, and a portion of lot number six were strictly controlled. In lot number six, 63 spaces were reserved for female employees assigned to the evening shift. According to the hospital security chief, the reserved spaces in lot six were rarely utilized prior to 2:30 P.M. The Women's Auxiliary of the hospital used the reserved spaces on the first and last Thursdays of each month.

For the auxiliary's general meeting, held on the first Thursday of the month, all reserved spaces were required from approximately 11:00 A.M. to 12:30 P.M. The auxiliary required about twenty-five spaces for its board meeting on the last Thursday of the month. Other than the auxiliary's scheduled use of the reserved spaces, the lot was vacant each day until 2:30 P.M., the arrival time of the evening shift employees.

The only recent survey relating to the utilization of the hospital's parking facilities was conducted during the weeks of 16-22 December 1974 and 27 January to 2 February 1975. The survey was limited to the twenty-six spaces in the emergency lot. The purposes of the survey were to record the utilization pattern for the emergency lot and to identify periods during the day in which the lot could be offered to privately referred outpatients. Access to the emergency lot was limited to obstetrical patients for immediate admission as inpatients, emergencies, outpatients unable to ambulate, physicians-on-call, and others. Included in the "other" category were vehicles permitted to park in order to pick up discharged inpatients.

The survey indicated that peak usage of the emergency lot occurred between 9:00 A.M. and 11:00 A.M., Monday through Friday. During those times, the mean number of vehicles in the lot was 21.03 with a standard deviation of 5.18. The heavy use of the lot during the mid-morning hours corresponded to the times inpatients were discharged. From 8:00 A.M. to 6:00 P.M., the mean occupancy of the parking lot was 17.34 vehicles. Clinic and private outpatients accounted for only 14 per cent of the spaces utilized.

The results of the survey suggested that the emergency lot was under-utilized. Except from 9:00 to 11:00 A.M., more privately referred outpatients could have been afforded the convenience of parking their vehicles in the emergency lot (Appendix C).

Interviews with the directors of the service sections, as well as brief interviews with six privately referred outpatients, indicated that the hospital did not furnish its outpatients with adequate information prior to their first visit. Four of the six outpatients interviewed were making their first visit to the hospital. Appointments for each of the four new outpatients had been made by the referring physicians. The completeness of the information which had been given to the patients by the physicians varied; however, the orientation was considered deficient in all cases. Two of the patients had been informed only of the date and time of their appointments. The other two patients had been advised to seek assistance at the hospital information desk. Although the information desk was located in the main lobby of the hospital, both outpatients experienced some difficulty in locating it. None of the patients had been advised of the difficult parking situation at Methodist Hospital of Dallas, and three of the new patients related the frustration they experienced in locating a place to park their vehicles. The outpatients interviewed used the commercial parking lots, but only one of the patients was openly resentful at having to pay a parking fee for a visit to the hospital. The main complaint of the new outpatients centered around their feeling of helplessness and frustration in locating their place of appointment. The complexity of the physical layout of the

hospital facilities confused the patients even after they had received directions from the information clerk.

Conversely, the hospital had scant information about the new outpatients prior to their arrival. The information was limited to the patient's name, service to be rendered and the appointment time. Relevant information, such as the patient's address, telephone number, and third-party insurance coverage, was unavailable to the hospital. The entire registration process was accomplished after the patient received service at the diagnostic or treatment sections of the hospital. The registration clerk was not informed of patient appointment schedules. The lack of this information precluded the clerk from extracting the necessary data from existing files for patients making return visits to the hospital. Although the registration of each patient usually required no more than twenty minutes, the registration clerk could not regulate her work load. The clerk was constrained to process patients as they arrived, and the unregulated arrival of the patients created excessive waiting times.

The processing system relied heavily on communications initiated by the diagnostic and treatment service centers of the hospital. The processing of each privately referred outpatient began with the reservation prepared by the service section. The information desk clerk and business office personnel were not aware of the outpatients in the system unless they were specifically informed of the visits by the service sections. Often, communications failed in this critical step because the service sections, after accepting the reservations, did not

forward the requisition tickets to the information desk as required. In a five-day survey, only seven requisition slips were processed by the information desk. Only the cardiology section forwarded the requisition tickets to the information desk clerk during the survey period.

The efficient flow of outpatients depended on the information desk clerk. She directed patients to the place of appointment. However, from the few requisition slips forwarded to the information desk, it was evident that the service sections made only minimal use of the information desk clerk to perform the directing function. Moreover, when the service sections failed to forward the requisition slips to the information desk, the business office was left without a means of verifying which outpatients had received service. As a result, neither the servicing section nor the business office had any way of acknowledging which outpatients failed to report for registration after receiving service. The business office could identify registration failures only if the service sections forwarded the unit hold copies of the requisition tickets. Once the failure to process was discovered, the business office notified the service section of the discrepancy, and either the service section or the business office attempted to gather the necessary registration information. It must be remembered that at this point in processing, the hospital had minimal information on the outpatient. Since the information usually did not include the patient's address or telephone number, the clerk charged with compiling the registration data had no recourse but to ask for telephone directory assistance in order to locate

the patient. For those patients with no telephone, the registration clerk or the service section receptionist called the office of the referring physician to obtain the patient's address. The failure of patients to register was very costly to the hospital. Whereas not more than twenty minutes were required to register an outpatient routinely, once the patient left the hospital without registering, the amount of clerical effort to obtain the necessary information increased dramatically. The registration clerk estimated that such a registration usually required at least thirty minutes and often more. Therefore, breakdowns in the registration process unnecessarily consumed clerical time. Further, registration delays postponed the billing process. Consequently, outpatient accounts receivable were not maintained at the lowest possible level. A survey of the thirty-six records of single-visit, privately referred outpatients revealed that delays in outpatient registration were commonplace. Table 1 shows the results of the survey.

TABLE 1

SURVEY OF PRIVATELY REFERRED OUTPATIENT REGISTRATION RECORDS

Primary Section	Registrations	Errors	Error Rate	Appointment at Secondary Section
Cardiology	11	2	18.2%	2
Pathology	5	2	40%	0
Pharmacy	1	1	100%	0
Physical Medicine	3	0	0	0
Radiology	16	3	18.8%	0
Total	36	8	22.2%	2

Of the thirty-six records reviewed, 22 per cent (eight) of the registrations were accomplished after the patient had left the hospital.

Delays in billing were not confined to single visit patients. On 13 March 1975, the physical medicine section held charge tickets for fourteen series patients because the section had not received series registration numbers from the billing office. Table 2 shows the delay in registration for each of the fourteen series patients.

TABLE 2

DELAYS IN PROCESSING CHARGES FOR PHYSICAL MEDICINE OUTPATIENTS

Patient	Date of Initial Treatment	Number of Return Visits	Date Section Received Registration Number
A	28 February	2	
B	3 March*	6	
C	4 March	5	
D	4 March*	2	
E	5 March	0	
F	6 March*	2	
G	6 March	3	
H	6 March	0	13 March
I	6 March	0	13 March
J	6 March	0	13 March
K	7 March	0	
L	10 March	0	
M	11 March	0	
N	11 March	0	

*The patient was not requested to register until the third visit.

Charges for some of the patients had been delayed as much as thirteen days. In one case, the patient had received initial therapy on the twenty-eighth of February and had returned twice for treatment. The physical medicine section had not received a registration number from the billing office, and the billing office had no record of the patient. The physical medicine section, awaiting receipt of a registration number, withheld submission of charges. However, the registration number was not forthcoming because the business office was unaware that the patient had been treated. The patient had failed to register, or the business office had misplaced the registration. The aforementioned case was not an isolated instance. Two other physical medicine outpatients had received initial treatments on the third of March and fourth of March and had made six and five return visits, respectively. Neither of these patients' charge tickets had been forwarded to the billing office because the physical medicine section lacked the registration numbers. Billings for the series patients were also delayed because the physical medicine section had failed to direct the patients to the billing office or because the patients had failed to report for registration as directed. In three cases, series patients did not register with the billing office until their third visit to the hospital.

While failures by the physical medicine section contributed to haphazard patient registrations, the lack of control over the patient after he was treated was the biggest drawback to a timely billing process. Short of escorting the patients to the business office after treatments or diagnostic procedures, the hospital had no way of assuring that the

patients registered. Furthermore, the mechanism designed into the system to alert the business office of patients who failed to register was ineffective because the unit hold copy of the requisition ticket was not delivered to the business office. For physical medicine patients, only one copy of the requisition ticket was prepared, and it was hand carried by the patient. A routine check at the end of the day, to ascertain that all patients directed to register had reported to the business office, was not prescribed for the service sections.

Description of Procedures by the Service Sections

The service sections enjoyed a large amount of flexibility in their daily operations. The flexibility was possible because of the low volume of outpatients and the resulting surplus service time. In most of the sections, appointments were not required more than three days in advance of the visit. Except in the pathology section, Methodist Hospital outpatients received individual appointment times.

Pathology section

The pathology section accepted no reservations. Patients to the section were advised to report after 8:00 A.M. However, despite the disuse of individual appointments, patients lost very little time waiting to be served. Observation of the section during peak morning hours confirmed the pathology section director's statement that the waiting time of patients was usually less than fifteen minutes. Waiting room space in the pathology section was limited to an area in the hallway which accommodated five patients. However, the lack of

waiting room space was not a factor in the delivery of the section's services because of the low volume of outpatients and the minimal waiting time.

The pathology section deviated from the hospital system for the processing of outpatients in two ways. The pathology section did not provide advance notification of scheduled outpatients to the information desk. Outpatients were asked to report directly to the section. Without directions from the information desk clerk, patients sometimes had difficulty in locating the pathology section.[3] The section also departed from the prescribed procedures in that it did not arrange secondary appointments for multiple-appointment patients. Patients who required appointments for other hospital services were directed to the services by the pathology section.

From the pathology section director's viewpoint, one of the biggest drawbacks to increasing outpatient utilization of the hospital's laboratory services was the price of laboratory procedures. Outpatients were billed at the same rate as inpatients. According to the section director, commercial laboratories in Dallas offered the same procedures at less cost to the patient.[4]

Radiology section

The radiology section utilized an individual time appointment system. Reservations for privately referred outpatients were accepted as follows:

1. Fluoroscopies, barium enemas, upper gastrointestinal series, and gallbladder series were scheduled as soon after 8:00 A.M. as possible.

2. General radiography procedures began after 1:00 P.M.

3. Special studies were scheduled in the afternoon as time permitted. Certain time-consuming procedures such as mammographies were also scheduled in the afternoon.

General radiography procedures for clinic outpatients were scheduled beginning at 1:00 P.M. Other radiography procedures for clinic outpatients began at 10:00 A.M. and generally ended at noon.

The patient waiting space in the radiology section was insufficient. The lack of space posed no problem for general radiography outpatients as those patients usually waited less than thirty minutes before being served. However, for the more complicated radiological procedures such as barium enemas and upper gastrointestinal series, the patient waiting times ranged from one to one and one-half hours.[5] Furthermore, inpatient procedures occasionally exceeded the allotted service time and caused delays in the outpatient schedule. The disrupted schedule resulted in additional waiting time for the privately referred outpatients. As the patient waiting times increased, the inadequacy of waiting space became more evident.

The flow of inpatients and privately referred outpatients to the radiology section was well regulated. In contrast, the radiology section was not able to govern the flow of clinic patients. The lack of control over the arrival of clinic outpatients caused congestion and confusion in the section.[6]

Preoperative procedures also created a problem for the radiology section. The preoperative procedures were performed one

day prior to the scheduled surgery. Reports on the procedures were required early on the following day. The priority given to the pre-operative procedures restricted the section's flexibility in the scheduling of privately referred outpatients.

The radiology section had little difficulty in filling requests for reservations for patients with multiple appointments. Requests by primary departments for appointments were almost always accommodated on the same day. Patients with multiple appointments were worked into the schedule at minimum time expense to the patients. Usually, these patients waited no more than thirty minutes.[7]

The shortage of parking spaces was a constant problem for the radiology section. According to the section director, the section received many complaints because no parking area was available to outpatients.

The radiology section deviated from the hospital's procedures for processing outpatients. The section retained the requisition tickets and forwarded them to the business office after completion of the diagnostic tests. Patients carried three copies of the requisition ticket to the registration desk. The unit hold copy was forwarded to the business office separately. Patient registration information was compiled partly by the section's receptionist and partly by the registration clerk in the business office.

Physical medicine section

The physical medicine section also employed the individual appointment system. The section offered physical, occupational, and

speech therapy. Patients referred to the section for therapy comprised the majority of the section's work load. However, some of the outpatients were referred to the director of the section, a physiatrist, for consultations. Appointments for consultations were accepted by the director's secretary. Therapy patients were scheduled by the therapists. On the days that the section's activities were observed, therapists were also engaged in other clerical work.

For patients who required occupational therapy or speech therapy in addition to physical therapy, the appointments were coordinated to enable the patients to receive multiple services on the same visit. Detailed advance coordination for the multiple-appointment patients was not required because service time was usually available.

The section had a very small waiting space, but the lack of patient waiting space was not a constraint to the delivery of the section's services. In fact, the director of the section was contemplating closing the small waiting space because it was rarely used.[8]

The physical medicine section personnel accentuated the director's efforts to promote greater outpatient utilization of its services. The director was successful in creating a friendly, helpful atmosphere for outpatients. Assistance to the patients to ease their entry into the system was pronounced. The section director had obtained use of the emergency parking lot for therapy outpatients with ambulating difficulties. Section personnel met wheelchair patients in the emergency entrance and escorted them to the section. The section offered privately referred patients the preferred appointment times. Inpatients were

scheduled to avoid conflict with the outpatient treatments. The section personnel provided every courtesy to the privately referred outpatient without inconveniencing inpatient clients.

However, this section did not comply with the administrative procedures for processing of outpatients. Only one copy of the requisition for service was completed by the section. Single-visit patients and series patients making their initial visit were instructed to report to the business office with the lone copy of the requisition slip. A file copy of the requisition slip was not routinely kept in the section. When patients did not report to the business office as directed, neither the business office nor the physical medicine section was automatically alerted to the failure. Copies of the patient registrations, returned to the physical medicine section by the business office, indicated that the patients had registered. For series patients, the section expected the registration data within two days from the initial visit. No other positive, systematic procedures were established to detect registration failures. The physical medicine section periodically called the business office to check the status of registrations. However, the checks were made randomly. A record of patients treated and patients registered was not maintained for easy reference.

Cardiology section

Appointments in the cardiology section were available within one week. The section's work load consisted primarily of inpatient procedures. Patient statistics for the month of January 1975 confirmed the section director's estimate that less than 10 per cent of the section's

service time was devoted to outpatients. The section did not maintain separate statistics for privately referred outpatients, and it was not possible to determine the percentage of outpatients who were referred to the cardiology section by private physicians. However, the section director believed that the emergency room was the prime source of outpatient referrals.[9] Patients referred to the section for consultation usually required secondary appointments in the radiology, pathology, or pulmonology services. The secondary appointments were secured by the cardiology section secretary. She used a routing slip to assist the information desk clerk and the secondary service sections in redirecting the multiple-appointment patients.

Considerations for Change

A centralized system

The complete centralization of the patient information system was given prime consideration. In order to implement the centralized processing of privately referred patients, certain procedural changes were necessary. To be effective, the central outpatient registration (COR) unit would require advance notification of the patients that would be served by the hospital. It was possible to supply the COR with outpatient information schedules in two ways. If the appointment function was retained by the ancillary service sections, it was necessary for the sections to transmit to the COR a list of the patients and the scheduled procedures at least one day in advance. This would add a communication requirement between the ancillary service sections and the COR. Furthermore, unless the ancillary service section coordinated

the patient arrival times with the COR, the flow of outpatients to the COR would be unregulated. The unregulated flow of patients was undesirable because it led to longer waiting times for the patients. As an alternative, the COR's assumption of the patient scheduling function was evaluated. Patient scheduling by COR personnel would require extensive training of COR employees. The wide range of outpatient services offered by the ancillary sections of the hospital required that the person accepting reservations have a broad knowledge of the diversified functions of the sections. The necessary operational knowledge included:

1. The availability of physician or technician service time.
2. Service time required for each procedure.
3. The necessity, if any, for return visits by the outpatient.
4. The types of supporting, secondary appointments required by the primary department.
5. The special instructions for patients scheduled for tests and treatments.

Additionally, the registrars in the COR would be required to have a working knowledge of Medicare, Medicaid, private insurance benefits, and the Methodist Hospital charge rates.

Despite the requirement for extensive training of COR clerks, this writer favored the assumption of the patient scheduling function by the COR. The gain of accurate and timely information was the major advantage of installing the central appointments element in the COR. With knowledge of the patient appointment schedules, the COR would be able to

coordinate multiple appointments at the most convenient times for patients and the service sections. Further, by scheduling the appointments, the COR clerks would automatically gain the ability to predict the patient registration work load. This knowledge would enable the COR supervisors to arrive at a variable staffing pattern for the COR. With cross training in the various functions of the COR, the clerks could be assigned duties commensurate with the service demands. The flexibility inherent to the system would enable management to achieve optimal staffing in the COR without reducing service capabilities.

Through centralization of the patient information system, it would be possible to overcome the lack of information given to the patients prior to their arrival at the hospital. The COR clerk who accepted the appointment would be responsible for orienting the client to the Methodist Hospital outpatient system. If the referring physician made the initial reservation, the clerk who accepted the appointment would obtain the patient's telephone number or address and communicate directly with the patient. In addition to providing the patient with desirable information about the hospital, direct communications with the patient would promote improved public relations. Telephone conversations with patients were considered more effective than written correspondence. However, written instructions to the patient would follow the initial telephone call. The instruction packet to the patient would include:

1. A map of the hospital grounds which indicated which parking lots the patient was permitted to utilize and the location of the COR.

2. The time the patient was expected at the COR (emphasizing prompt but not early arrival).

3. Advice to the patient to bring third-party insurance coverage information.

4. The cost of the scheduled diagnostic tests and/or treatments.

Patient registration information would be secured by the COR clerk during the initial call to the patient. This technique would benefit both the patient and the COR. The COR would conserve time because the information gathering function would be performed during slack periods in the COR. Lengthy registration requirements after the patient's arrival at the hospital would be avoided. The patient would profit from the advance gathering of information because the technique would reduce the patient's time away from his job or home. Further, the early acquisition of patient registration information would enable the COR to identify patients who were potential credit risks.

Another advantage of the COR was that it would create a pool of expertise on third-party insurance coverage. Since the COR registrars would be well versed in Medicare, Medicaid and private insurance, they would be able to counsel patients on allowable benefits.[10]

The COR would improve the flow of patient traffic. Patients would be required to register in the COR before being directed to the proper service section. Patients would not be required to return to the COR after receiving diagnostic tests or treatments.

The billing of patients would be expedited because all of the essential information would be available in one office. The business

office would no longer rely on the ancillary service sections to provide pertinent data on the patients and the treatments or tests they received. Pricing of the requisitions would be accomplished by COR personnel after the appointment was made. The priced requisition would be filed, ready for distribution to the patients as they arrived. Patients who completed the registration procedures by phone would arrive at the COR, receive the requisition tickets and proceed directly to the appropriate service section. For a patient with multiple appointments, the COR would use a routing slip to indicate the order of the patient's visits. The COR would direct the patient to the place of the first appointment. Subsequently, each succeeding service section would re-direct the patient.

The sequence of processing patients offered vastly improved patient control. Under the old procedures, the hospital had no assurance that the patient would register after receiving service. In contrast, the preservice registration requirement at the COR would eliminate registration failures. The ancillary service would retain the requisition slips for each patient served and return them to the COR at the end of the day. The COR would compare the returned requisition slips to the unit hold copies. Discrepancies would be discussed with the service sections without delay. If there were no discrepancies, the COR would bill the patient and/or third-party insurers for services rendered. The billing of patients would be expedited, and the outpatient accounts receivable would be maintained at a low level.

The COR would reduce the clerical work load which had previously burdened the ancillary service sections. The COR would provide

each ancillary service with appointment schedules at least one day in advance. The computer would be used to print the schedules. The sole patient registration responsibility of the sections would be to verify the services that each patient received. Before returning the requisition ticket to the COR, the service sections would verify services rendered to each patient by annotating the requisition ticket. The sections would use the appointment schedules to ascertain that requisition tickets were returned to the COR for each patient served.

The COR was adaptable to the hospital's computer capability. A cathode-ray tube terminal would be used to input all patient registrations.[11] Patient identification would be accomplished through use of the unit numbering system. The computer would be used to prepare all patient billings and to provide statistical data on patients tested or treated. The computer would also be used to facilitate the outpatients' use of the parking facilities. Lot number six would be reserved from 8:00 A.M. to 1:00 P.M. for patients with appointments. During the initial telephone contact, the COR would inform the patients of the availability of the parking facility. A listing of scheduled outpatients would be transmitted to the chief of hospital security for his use in permitting outpatients to utilize parking lot number six. The use of lot six would be more restricted during the first and last Thursdays of the month because the lot would be reserved for the Women's Auxiliary.

A decentralized system

The complete decentralization of the patient information system, in lieu of the COR, was also considered. Under a decentralized system,

each ancillary service section would accept patient reservations, complete the service requisition vouchers, compile patient registration data, and transmit the entire packet to the business office.

Patient billings would be completed by the business office. The business office would control patient registration numbers. The ancillary service sections would obtain a 12-digit patient registration number from the business office for each new outpatient. The first six digits of the number would be unique to the patient. The last six digits of the registration number would denote the date of the visit. Returning outpatients would retain the unique element of the registration number, and the ancillary service section's receptionists would add the date component of the number.[12]

Receptionists of the ancillary services would be responsible for the patient orientation functions performed by COR personnel under centralized procedures. Similarly to COR registrars, the receptionists would obtain registration data for new patients by contacting the patient after the appointment was confirmed.

Computerization of decentralized procedures would require that a cathode-ray tube terminal be accessible to each section receptionist. As with the centralized procedures, the computer would contain a patient index file.[13] For outpatients making return visits to the hospital, the section receptionist would retrieve the registration data stored in the computer.

Coordination of multiple appointments would be the responsibility of the section receptionist who received the request for the patient's appointments. A totally automated outpatient appointment system,

described by Hofmann, et al., would have eased the coordination of secondary appointments.[14] However, the low volume of privately referred outpatients to Methodist Hospital did not justify the installation of an automated appointment system. Therefore, section receptionists would coordinate multiple appointments by calling the receptionists of sections in which secondary appointments were required. Under decentralized procedures, coordination of multiple appointments would be more cumbersome and time consuming than it would be under the COR concept. In order to allocate the most convenient appointments to the outpatients, the receptionist who coordinated the appointments would have to ascertain the availability of service time in the secondary sections. She would then return the physician's or patient's call and confirm the appointments.

New patients would be asked to report to the information desk. The information desk receptionist would direct the patients to the section where the treatment or test was scheduled. Patients familiar with the configuration of the hospital would report directly to the ancillary service section.

Each service section would provide a list of scheduled patients to the hospital security chief. The security guards would authorize outpatients on the listings to utilize parking lot number six from 8:00 A.M. to 1:00 P.M.

Footnotes

[1]Kyle Adkins, private interview held at Methodist Hospital of Dallas, Dallas, Texas, 5 March 1975.

[2]Ibid.

[3]Gerald Noteboom, private interview held at Methodist Hospital of Dallas, Dallas, Texas, 10 March 1975.

[4]Ibid.

[5]Robert Burns, private interview held at Methodist Hospital of Dallas, Dallas, Texas, 5 March 1975.

[6]Ibid.

[7]Ibid.

[8]John Schull, private interview held at Methodist Hospital of Dallas, Dallas, Texas, 11 March 1975.

[9]F. A. Bashour, private interview held at Methodist Hospital of Dallas, Dallas, Texas, 4 March 1975.

[10]Granstrom, p. 45.

[11]Hofmann, et al., p. 40.

[12]Kyle Adkins, interview.

[13]Hofmann, et al., p. 42.

[14]Ibid.

CHAPTER III

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Conclusions drawn from the study were as follows:

1. Procedures for processing privately referred outpatients were inadequate. The patients received insufficient information prior to reporting for their appointments. Conversely, the hospital had scant information about new outpatients before their arrival.

2. The absence of a preservice registration requirement and incomplete postservice control of the outpatients contributed to the hospital's difficulties in obtaining accurate and timely registrations.

3. The emergency parking lot and lot number six were not fully utilized.

4. Either of the models considered for implementation offered improved patient control. However, the centralized system (COR) offered the hospital the better opportunity to improve its total patient information system.

Recommendations

The study resulted in the following recommendations:

1. The hospital should implement a centralized information system for privately referred outpatients (Appendix D).

2. The system should be implemented in two phases.

3. In phase one, the COR should provide information to outpatients, prepare requisitions, complete patient registrations, and bill patients and/or third-party insurers.

4. In phase two, the COR should assume the patient appointments function.

5. Privately referred outpatients should be permitted to park in lot number six from 8:00 A.M. to 1:00 P.M.

6. Restrictions on the outpatients' use of the emergency parking lot should be eased.

APPENDIX A

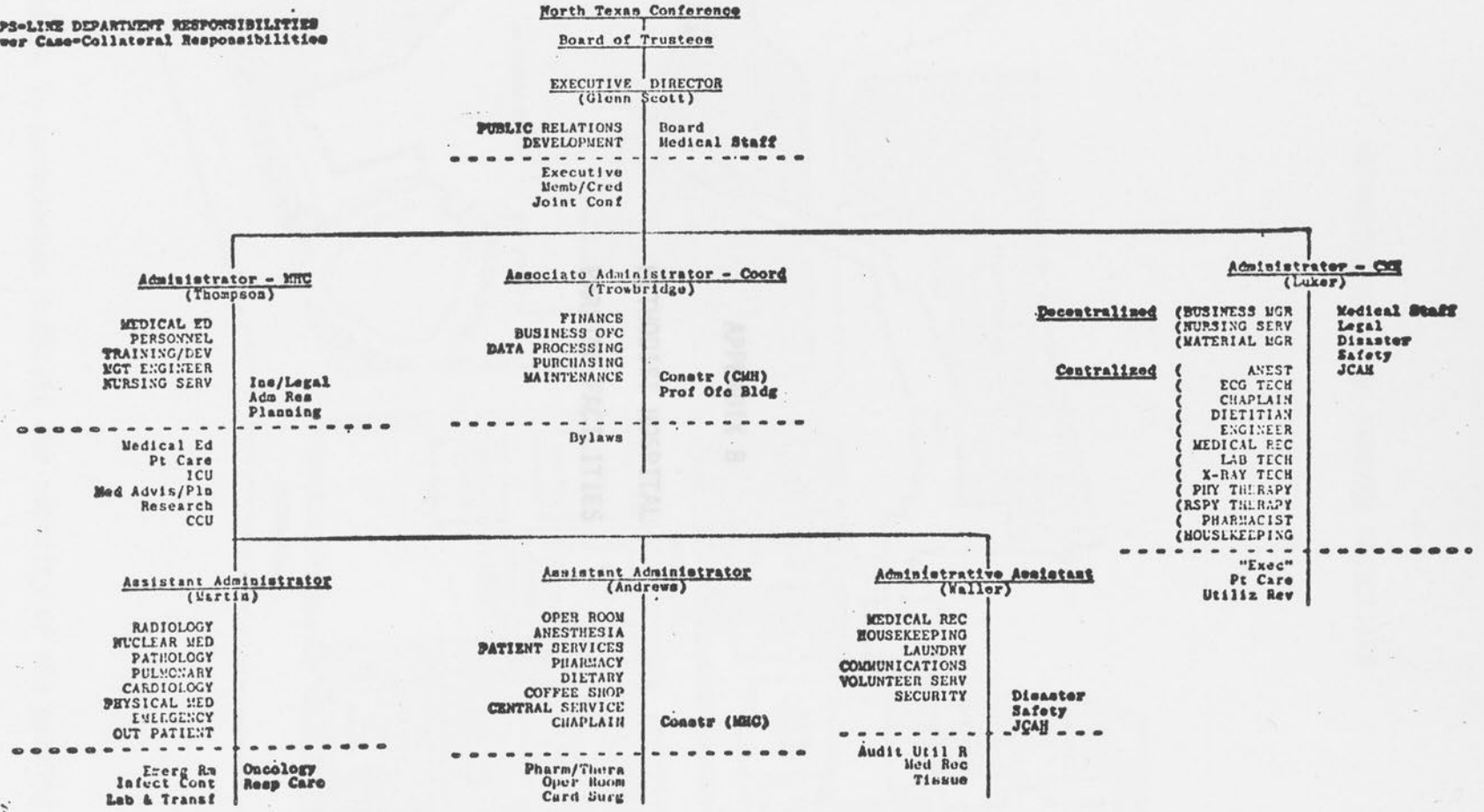
METHODIST HOSPITAL OF DALLAS

ORGANIZATION CHART

Issued 12-17-74
Revised 12-20-74

CAPS-LINE DEPARTMENT RESPONSIBILITIES
Lower Case-Collateral Responsibilities

ORGANIZATION CHART
METHODIST HOSPITALS OF DALLAS
January 13, 1975

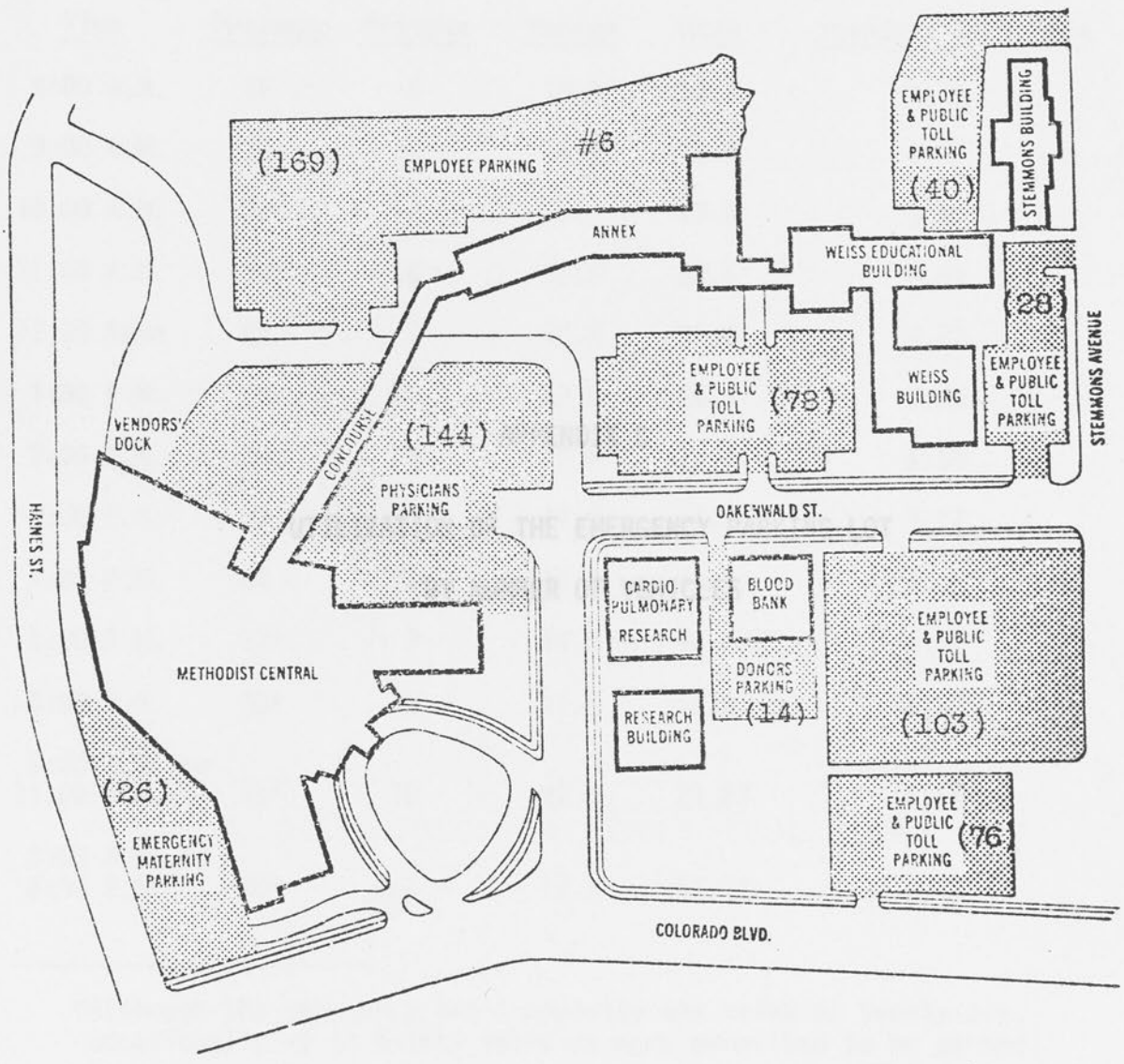


APPENDIX B

METHODIST HOSPITAL

PARKING FACILITIES

METHODIST HOSPITAL PARKING FACILITIES



Numbers in parentheses indicate the capacity of the parking lot.

APPENDIX C

UTILIZATION OF THE EMERGENCY PARKING LOT

BY NUMBER OF VEHICLES

UTILIZATION OF EMERGENCY PARKING LOT
BY NUMBER OF VEHICLES

Time	Maximum	Minimum	Median	Mean	Standard Deviation
8:00 A.M.	16	5	10.5	10.0	3.16
9:00 A.M.	22	12	16.5	16.7	3.37
10:00 A.M.	28*	14	25	23.8	4.44
11:00 A.M.	30*	16	22.5	22.6	4.84
12:00 Noon	22	7	16.5	16.0	4.37
1:00 P.M.	23	11	17.0	16.3	3.59
2:00 P.M.	24	9	17.5	17.4	4.58
3:00 P.M.	22	10	17.0	16.3	3.77
4:00 P.M.	24	12	18.5	18.5	4.50
5:00 P.M.	27*	7	16.5	16.6	7.07
6:00 P.M.	30*	9	17.5	16.5	6.02
9:00 A.M. to 11:00 A.M.	30*	12	22.0	21.03	5.18
8:00 A.M. to 6:00 P.M.	30*	5	17.5	17.34	5.62

*Although the emergency lot's capacity was rated at twenty-six, occasionally up to thirty vehicles were permitted to be parked.

Source: Survey of emergency parking lot utilization, 16-22 December 1974 and 7 January to 24 February 1975. The survey was conducted by Methodist Hospital of Dallas security personnel. Evaluation of the survey was limited to Monday through Friday of each week surveyed.

APPENDIX D

PROPOSED SEQUENCE FOR OUTPATIENT PROCESSING

PROPOSED SEQUENCE FOR OUTPATIENT PROCESSING

1. The service sections transmit information on available service time to COR.
2. The COR maintains a record of all service time allocated via appointments.
3. The service sections post changes to the available service time other than changes caused by the appointments accepted by the COR.
4. The referring physician or patient calls for appointment.
5. Appointment is accepted by COR.
6. If referring physician called for the appointment, the COR obtains patient's telephone and address.
7. COR searches patient data file to identify outpatients making return visits.
8. COR extracts patients' registration information for returning outpatients.
9. COR contacts patient and orients client to Methodist Hospital outpatient system and obtains registration data. For returning outpatients, COR verifies information.
10. COR mails instruction packet to patient.
11. COR prepares service requisition voucher(s).
12. COR produces appointment schedules and transmits them to the service sections and the hospital security chief.
13. Patient arrives at hospital and parks in lot number six.
14. Patient reports to COR.

15. COR verifies appointment.
16. COR completes registration information. (For patients which have completed registration by phone or who are making return visits, this step is omitted.)
17. COR gives the patient the service requisition voucher.
18. COR directs patient to place of appointment. If the patient has appointments at more than one section, the COR notes the sequence of appointments on a routing slip and directs patient to the first place of appointment.
19. Patient arrives at service section.
20. Patient receives diagnostic test or treatment.
21. Patient departs hospital.
22. Service section verifies the service rendered by annotating the requisition voucher.
23. Service section compares the appointment schedule with service requisition vouchers processed. The section corrects any discrepancies and forwards the vouchers to COR.
24. COR receives the verified service requisition vouchers.
25. COR bills patient and/or third-party insurers.

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BIOGRAPHICAL SKETCH

Major Ricardo Alba [redacted]. When he was twelve, the Alba family moved to Deming, New Mexico, where Major Alba completed his primary and secondary education. In 1957, he enrolled in New Mexico State University. He was awarded a Bachelor's degree in Biology on 5 August 1961 and was commissioned as a second lieutenant in the Medical Service Corps on the same date.

Major Alba has served in a variety of administrative positions ranging from administrative officer of a medical research laboratory to commander of a medical battalion.

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