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A STUDY OF THE ADMITTING OFFICE AT BAYLOR UNIVERSITY MEDICAL CENTER

A Problem Solving Thesis

Submitted to the Faculty of

Baylor University

In Partial Fulfillment of the

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By

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FOREWORD

Baylor University Medical Center, Dallas, Texas, is a multi-purpose community health service institution owned and operated by the Baptist General Convention of Texas. The Center history dates to 1903, with the establishment of the Good Samaritan Hospital in a simple frame building. Construction of the first permanent building, the Texas Baptist Memorial Sanitarium, was begun in 1904 and completed in 1909. The founding of the institution and the construction of the first permanent building were largely due to the dedicated efforts of Colonel C. C. Slaughter, cattleman and financier, and Dr. George W. Truett, pastor of the First Baptist Church.

By 1914, the Texas Baptist Memorial Sanitarium was a well organized and efficiently operated hospital with a capacity of 250 beds. By the end of its second decade of service, the institution, renamed Baylor Hospital, had become the largest hospital in the entire Southwest and the second largest in the South. The institution continued to grow in size and in the number of services provided and in 1936 the legal name of the hospital became Baylor University Hospital. In April, 1959, the institution became the Baylor University Medical Center, a title more properly describing its enlarged program of activity.

Included in the Center are the Baylor University Schools of Nursing and Dentistry, George W. Truett Memorial Hospital, Karl and Esther Hoblitzelle Women and Children's Hospital and the Minnie S. Veal Teaching and Research Hospital. In May, 1970, the Baylor University Medical

Center had a total of 909 beds, including bassinets. The Center is fully accredited by both the Joint Commission on Accreditation of Hospitals and the Texas State Hospital Association.

Baylor is one of the largest non-tax supported hospitals in the United States. In 1969, it recorded 38,060 admissions, 279,729 patient days and 5,707 births. The Center has been administered for the past 22 years by Mr. Boone Powell.

In keeping with the Center's tradition of growth and development to meet the needs of the community, two new hospitals are scheduled for completion in the near future. The Erik and Margaret Jonsson Medical and Surgical Hospital, a 200-bed facility, is scheduled for completion in late 1970; and the Carr P. Collins Center for Continuing Care, a 300-bed extended care facility, is scheduled to be opened in early 1972.

The writer wishes to express his sincere appreciation to Mr. Boone Powell, Executive Director and Mr. Howard Chase, Associate Director, for the cooperation and many courtesies extended during the period of this study. Additionally, special acknowledgment is extended to Mr. Allan Sutton, Director of Business Services and Mr. David Herring, Admissions Manager, for their kindness, support, and willing assistance during the course of this study.

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CHAPTER I

INTRODUCTION

General Information

Never before in history has the hospital been subject to as much scrutiny by both the private and public sectors of our population as in recent years. A population highly aware of medical problems and needs, firmly supported by an increased recognition of the concept that medical care is an inherent right of each citizen, is challenging many of the traditional concepts of the role of the hospital in the community.

Spiralling costs of hospital care, overcrowding of facilities, and the burgeoning administrative and record keeping requirements stimulated by the multitude and complexity of insurance programs and the demands of various government agencies, have eroded the rapport between patient and hospital and have tended to tarnish the public image of many hospitals. Frequent increases in health insurance premiums constantly remind the public of the growing cost of medical care. Numerous reports of inefficiency in our health care system and dire predictions about the future of the nation's hospitals are found daily in our newspapers and popular periodicals, keeping the hospital in the spotlight of this highly emotional setting.

The hospital on the other hand is hard pressed to answer the many criticisms directed against it. New requirements for expensive, sophisticated medical equipment, constantly rising labor costs and

increased operating costs in every area of the hospital have dictated frequent increases in patient service charges. The growing demand for health services coupled with a lack of adequate facilities and a critical shortage of qualified medical personnel has made it extremely difficult to provide the personal, individual attention expected by the patient.

One of the areas in the hospital that can exert a marked influence on the attitudes of patients is the admitting department. Through this gateway to the hospital, often called the heart of the hospital, nearly every patient passes and records some personal observation of the overall efficiency of the hospital.[1] Generally, this initial contact with the admitting department is the patient's first contact with a hospital as an institution intimately related to his welfare. Although the majority of patients arriving for admission have had previous contact with a physician and most physicians make a sincere effort to prepare the patient for his impending hospitalization, rarely is he totally prepared for the complex and often frightening process of entering the hospital.

According to Dr. Fred Singeisen there is much evidence to indicate that many of the complaints and much of the dissatisfaction of patients regarding their hospitalization stems from the admission procedure.[2] This does not necessarily indicate that admission procedures are inadequate or inefficient. It does however suggest that admitting procedures should be carefully evaluated, both in light of the needs of the patient and the requirements of the hospital, to isolate and eliminate areas of dissatisfaction to the maximum extent possible.

From the patient's viewpoint, he is being forced into a new role--that of being a patient. As an individual, the patient occupies a definite role in the family and the community in which he resides, and in this environment he is able to guide his behavior in channels that allow him to express his needs in ways that bring him satisfaction and security. When the patient is admitted to the hospital he is forced to give up his role in the family and the community.[3] Sickness profligates loneliness, apprehension and uncertainty, and the impact of these emotional aspects is intensified by the changing role of the individual and loss of personal identification in the hospital environment. To the patient, entering the hospital is a singular event, often never experienced before, and one which commands his undivided thought and attention at that particular time.

Although the patient is generally unqualified to judge or compare the quality of medical care received, and disinclined to challenge any medical treatment directly related to his welfare, he often feels well qualified to comment on the administrative processes that comprise most of the admitting process. The patient is prone to be very critical of factors such as excessive waiting time, complexity of admitting information, attitude of admitting personnel and the condition of facilities in the admitting department.

If the sole responsibility of the admitting department was response to the needs of the patient, most complaints and areas of dissatisfaction could easily be resolved. The admitting department, however, must initiate or complete a large number of other functions and procedures essential to the efficient provision of patient care and the overall functioning of the hospital. Some of these many areas

of responsibility are:

1. Reservation, allocation and control of rooms.
2. Scheduling of admissions.
3. Interviewing patients for social and financial information.
4. Obtaining signatures on appropriate forms and releases.
5. Coordinating referrals to proper agencies.
6. Reporting of cases as required by law.
7. Release of information to public media.
8. Maintenance of proper records.
9. Promoting patient relations.
10. Escorting the patient to the laboratory, X-ray and nursing unit.
11. Discharge of patients.
12. Efficient utilization of hospital resources.[4]

The exact scope of responsibilities of the admitting department will vary considerably between hospitals, but invariably the admitting department is the major coordinating center of hospital activities.

In examining the patient admitting system a certain divergence in effort and emphasis becomes apparent. On the one hand the patient is concerned with completing the complex admitting procedure as easily and rapidly as possible, and on the other, the hospital admitting department must obtain certain minimum essential information and complete certain procedures as required by law and hospital policies. Financial aspects of paying for the hospital bill must be considered if the hospital is to maintain its capability to accept and treat patients. Procedures that prove to be the most effective for the hospital and provide the most efficient method of collecting information may not lend

themselves to the expeditious processing of patients. Personnel staffing levels that can most efficiently accommodate patients may not be within the financial capabilities of the hospital.

In practice, a compromise of objectives must be obtained. This compromise must focus on a system to admit patients as simply and rapidly as possible, while still fulfilling the requirements of the hospital. The method by which this is achieved will vary considerably from hospital to hospital, but the success of the final compromise will have a significant impact on patient relations and the overall efficiency of the hospital.

The critical nature of admitting procedures is emphasized by Dr. Dolivo, Director of Yverdon Hospital in Switzerland who states:

> But to look after the patient well, it is not enough to have and to know how to use the latest medical discoveries--charitable human contact is also needed. This contact must be made as soon as the patient enters the hospital. Receiving a patient is a much more difficult and delicate art than receiving a guest. The patient (and how well he deserves the name) is anxious for a variety of reasons: worry about his health, and his family and work, about money--and we separate him from his family. He is thoroughly upset and it is up to us to put things right.[5]

There is a critical need to re-establish the rapport between the hospital and the community and foster a spirit of confidence in our hospital system with the public and private sectors of our nation. The admitting department with its constant audience of patients, their families and friends, is a key area to project the image of the hospital and establish a unity between the hospital and the community it serves.[6]

Conditions Which Prompted the Study

The Admitting Office at Baylor University Medical Center admits over 100 patients daily into a hospital complex consisting of three

separate hospitals, having a combined capacity of 801 beds and 108 bassinets. A high patient census rate dictates that few admissions can be completed during the morning hours and thus the majority of admissions must be processed during a relatively short period in the afternoon, after patients have been discharged and the rooms are prepared for the incoming patients. As a result, patient admitting areas are often overcrowded, and many patients experience an excessive waiting time prior to completing the admitting procedures and arriving at their rooms in the nursing units.

The Center administration recognizes that the patient's first impression of the hospital is generally a lasting one and is desirous of streamlining the admitting procedure for the benefit of both the patient and the efficiency of the hospital. In addition to fostering good patient relations, an effective admitting system is a key factor in maintaining control of collection problems. Effective patient financial counselling and accurate collection of financial and insurance data at the time of admission is essential for the hospital to maintain a strong financial position.

In late 1970, the present Admitting Office is scheduled to move into new facilities and assume responsibility for admitting patients into a new 200-bed hospital facility. Concurrent with the move to its new facilities, the Admitting Office is scheduled to phase in an on-line computer application of recording admitting information, by means of the IBM 2260 visual display input device.

Statement of the Problem

The problem is to determine the most efficient system for admit-

ting patients into the Baylor University Medical Center.

Objectives

The objectives of this study are:

1. To analyze Baylor University Medical Center's existing admitting system.

2. To discuss three patient admitting systems used by large hospitals in the United States.

3. To evaluate and compare the advantages and disadvantages of admitting systems discussed as applied to Baylor University Medical Center.

4. To recommend the best admitting system for Baylor University Medical Center.

Criteria

Any proposed solution to the problem should:

1. Result in the more accurate collection of patient admission information.

2. Support the requirements of other departments and services in the hospital that rely on the Admission Office for recording and/or collecting data.

3. Be adaptable to future expansion of hospital facilities and accommodate an increased patient work load.

4. Reduce patient waiting time in the admitting department.

5. Facilitate the collection of data for efficient patient billing and financial management.

6. Provide effective control over the input of patients into the Center.

7. Enhance the Center's public relations program.

8. Result in the more efficient utilization of resources.

Limitations

The limitations established for this study are:

1. Any proposed procedures must be compatible with the present automated data system and lend themselves to the use of IBM 2260 visual display input devices programmed for future installation.

2. Any proposed procedures must be consistent with the stated objective of Baylor University Medical Center to strive "to serve patients even when they cannot pay the full cost of the medical care they require."[7]

Assumptions

The assumptions considered in the development of this study are:

1. The mission of the hospital will remain the same.

2. The ratio of routine, urgent, and emergency patients admitted to Baylor University Medical Center will not change significantly in the future.

3. Financial resources will be available to implement any reasonable proposal.

Research Methodology

A recent study of admitting systems states: "The underlying reason for studying any admitting system is to find out how much of it can be avoided without affecting the fulfillment of the organization's requirements for efficient internal functioning."[8] This rationale is followed in this study and is the underlying principle guiding all areas of investigation.

Initially a preliminary on-site investigation was made of the Baylor University Medical Center Admitting Office to determine the nature of the problem. This investigation included an examination of the major departments and services within the hospital that utilized information collected during the admitting process.

Interviews were conducted with supervisors of departments and services dependent on the Admitting Office for the initiation of certain procedures and the collection of information to determine the responsiveness of the existing system to the entire hospital operation.

Additional interviews were conducted with supervisory and clerical personnel within the Admitting Office to discover if workers were satisfied with existing procedures and elicit suggestions for improvement from those most intimately associated with the hospital admitting system.

The reception and processing of patients was examined by queuing analysis to determine the impact of patient arrival intervals and service times on the admitting office work load.

An analysis of the incidence of errors in recording admission information was correlated with average daily work loads to determine if errors were associated with overwork of admitting personnel during peak work load periods.

Historical admission data were analyzed to determine the percentage of routine and emergency admissions. Data were examined to provide an indication of the maximum percentage of total admissions that could be processed by pre-admission registration under optimum conditions.

An analysis of admissions per day for the past six-month period was conducted to indicate days of the week when peak work loads occur

and assist in determining daily staffing levels.

A review of current literature was conducted to determine the types of systems now utilized for admitting patients and to determine the advantages and disadvantages of these systems.

Finally, with the background information gained from visiting other hospitals and from review of the literature, an extensive onsite survey was conducted to develop detailed information required to evaluate the current admitting system and make recommendations for procedural changes.

Review of the Literature

The importance of the admitting department is readily reflected in a review of current literature. McGibony emphasizes the critical role of the admitting department when he states:

> Admission procedures might well be the first chapter in any book on hospital management since activities in this area constitute perhaps the most important bridges between the public, management, and clinical services to the individual patient. Personnel responsible find themselves in one of the most difficult positions in the hospital in discharging duties involving public relations, business procedures, and clinical matters.[9]

While there is ready recognition of the importance of the admitting department and general agreement as to its primary objectives, standardization of policies and procedures to meet these objectives has not been forthcoming in hospitals in the United States. In practice, admitting procedures vary widely among different hospitals. Differences in hospital layout, population served, hospital mission, types of treatment offered, and the desires of the hospital administration are all reflected in the ultimate admitting system adopted by each hospital.

It is interesting to note that in the Joint Commission on Accreditation of Hospitals' publication, Standards for Accreditation of Hospi-

tals, a universally accepted guide for judging quality and excellence in hospitals, no reference is made to the admitting department. Whether this is due to the complexity and individual nature of the admitting service, or a reflection of the separation of admitting from direct patient care services, is difficult to determine. Although the admitting function is primarily administrative, it plays a vital role in the hospital, influencing ultimately the professional care and treatment of the patient.[10]

Regardless of procedures followed, the primary objective of the admitting department is the effective and efficient processing of the patient into the hospital.[11] Three primary functions can be identified as common elements in all admitting systems that contribute toward the efficient processing of the patient into the hospital. These elements are control of the input into the hospital; patient contact; and the initiation of the information flow and records system.[12] The goal to be sought in a good admitting practice is the simplification of the process without impairing the efficiency of the hospital.[13]

Current literature reflects that most hospitals are genuinely interested in simplifying the admission process while still fulfilling the three basic admitting functions and contributing to the overall efficiency of the hospital. One procedure that has been effective in some hospitals is the direct admission procedure. Upon receipt of the bed reservation from the admitting physician the patient is contacted and given a specific time for admission. When the patient arrives for admission the spelling of the patient's name is verified in the admitting office, a patient identification band is put on and the patient is escorted directly to his room. After the patient is comfortably installed in his room, a representative of the admitting office comes in,

obtains the necessary personal and financial information, completes necessary forms and releases, and orients the patient on hospital rules and regulations.[14]

Another method used by many hospitals is the use of preadmission registration. This procedure is oriented toward gathering as much admission information and completing the maximum amount of the admitting process prior to the patients arrival at the hospital. When the bed reservation is received by the admitting department, the patient is mailed a pre-admission questionnaire, if time permits, or contacted by telephone to obtain necessary admitting information. Required forms are then typed in advance and filed until the patient arrives for admission. When the patient reports for admission, it is necessary only to have the patient verify the admitting data, provide necessary signatures and complete a minimum of administrative processing prior to being escorted to his room.[15]

A recent development utilized by the University Hospital in Ann Arbor, Michigan is called the patient representative system. This system emphasizes personal contact at time of admission. When a patient arrives at the admitting department he is introduced to a patient representative who assumes complete responsibility for the entire admitting process. The patient representative completes all admitting forms, counsels the patient on insurance and financial matters and orients the patient on hospital procedures and policies. Each patient remains identified with a single patient representative throughout his entire stay in the hospital and is encouraged to contact his representative for any required assistance after discharge.[16]

Major developments have taken place in computer-based hospital admission and discharge systems in recent years. Many hospitals now

process their admission information by computer on a batch-processed basis and some hospitals in the United States have integrated their admission procedures into computer systems on a real-time basis. Hospital objectives in changing over to a computer-based system include improved patient care, less patient waiting time and fewer errors, indicating that the search for a more simplified, effective admitting system is still continuing.[17]

Footnotes

[1]Robert Kelly Eisleben and James E. Moon, "Admitting," in Modern Concepts of Hospital Administration, ed. by Joseph Karlton Owen (Philadelphia: W. B. Saunders Co., 1962), p. 145.

[2]Fred Singeisen, "Hospitals Need More Patience with Patients," The Modern Hospital, XCV (December, 1960), 79.

[3]Bernard Seidenberg, Herbert M. Fineberg, Richard Christie, and Samuel B. Kutash, "How Patients Feel About Hospitalization," The Modern Hospital, XCV (July, 1960), 102.

[4]Robert M. Sloane, "The Admitting Department--Nerve Center of the Hospital," Hospital Management, XCVII (March, 1964), 62.

[5]Singeisen, "Hospitals Need More Patience," p. 79.

[6]Edward H. Clarkson, "The Admitting Department: Front Line for Public Relations," Hospitals, XLII (February, 1968), 75.

[7]Baylor University Medical Center, "Statement of Objectives and Responsibilities of Baylor University Medical Center," unpublished policy guidance, undated (mimeographed), p. 4.

[8]United Hospital Fund of New York, The Admitting System: A Special Study in Hospital Systems and Procedures (New York: United Hospital Fund of New York, 1965), p. 1-1.

[9]John R. McGibony, Principles of Hospital Administration (2nd ed.; New York: G. P. Putnam's Sons, 1969), p. 308.

[10]Eisleben and Moon, "Admitting," p. 145.

[11]Ibid.

[12]United Hospital Fund, The Admitting System, p. 1-2.

[13]McGibony, Principles of Hospital Administration, p. 310.

[14]Ernest C. Laetz, "The Rise of the Patient Representative," Hospital Financial Management, XXIII (September, 1969), 17.

[15]Samuel J. Tibbitts and Adelaide Brown, "Why Three California Hospitals Pre-admit 80 Per Cent of Their Patients," Hospitals, XXXIII (December 16, 1959), 37.

[16]Irwin Staller, "Go to Bed First, Get Admitted Later," Modern Hospital, CXII (April, 1968), 68.

[17]Arthur E. Rikli and Allen I. Scott, "Federal Survey Examines Computerized Admission Systems," Modern Hospital, CXI (October, 1968) 99-102.

CHAPTER II

DISCUSSION

Concept of Study

Two general approaches can be followed in most problem solving studies. First, the problem can be viewed as the result of an ineffective, unresponsive system, leading the study toward an examination and evaluation of alternate systems. A second approach is to examine the problem as the result of the inadequate, inefficient application of a system. In this approach, the major effort of study and research necessarily concentrates on the specific, detailed activities and procedures comprising the system.

An inflexible concentration on either of these approaches may result in the selection of a course of action that fails to confront the basic problem, even though substantially supported by statistical evidence, personal observations and empirical relationships. In any problem solving study, care must be exercised to preclude the elimination of any course of action solely on the basis of its present effectiveness. Conversely, application of recommended changes may not necessarily insure success. These considerations are particularly relevant when qualitative and human factors constitute a significant portion of the area of study. The hospital admitting department is significantly influenced by these factors in accomplishing its primary function of coordinating the initial contact between the hospital and the patient.

A controlled study of alternative total systems is rarely possible in the hospital environment. The high cost of making temporary changes, difficulty in training personnel for complex procedures and the danger of disrupting the ongoing hospital operation severely restrict the use of fully controlled studies. Empirical observations based on situations in other hospitals, regardless of apparent similarities, must take into consideration many variables such as hospital organization, administration, staffing, facilities and patient population served. The primary value of these observations is to make general inferences and indicate possible solutions to problem areas. A comparison of systems used in different hospitals should, however, indicate systems that have a high probability or potential for success.

The success of a system may be more dependent upon the careful organization, detailed execution and rigorous application of the many procedures comprising the system than upon the type of system as a whole. However, a study oriented solely toward a detailed or micro analysis of a system is also subject to some critical limitations. Refinement of procedures alone will not resolve problem areas if the basic system is not responsive to the needs of the hospital and aligned with the broad objectives of the hospital administration.

If limitations to the problem solving study are clearly recognized, the study of the Baylor University Medical Center Admitting Office will fall into a logical sequence, moving from a broad comparison of successful admitting systems to a detailed examination of the existing system. The study is organized into three major areas to facilitate analysis of the problem and assist in the development of valid conclusions and

recommendations. These areas include an examination of the present admitting system; comparison of three successful admitting systems used by large hospitals in the United States; and a detailed analysis of the hospital work load and its relationship to the specific admitting procedures used to satisfy this work load.

Present Admitting System

Organization and responsibilities

The present admitting system at Baylor University Medical Center is designed to control patient admissions into the three separate hospitals presently comprising the Center complex. These three hospitals are George W. Truett Memorial Hospital, a 436-bed medical and surgical hospital; Karl and Esther Hoblitzelle Women and Children's Hospital, which has 249 beds and 108 bassinets; and Minnie S. Veal Teaching and Research Hospital, a 116-bed facility. Although the Admitting Office is designed to be responsive to, and support the requirements of each hospital, it is removed from the direct control of each hospital administrator and is placed under the supervision of the Director of Business Services, who reports directly to an Associate Director of the Center. Organizational relationships are shown in Appendix A.

To accomplish the admitting function two separate admitting offices have been established. The Hoblitzelle Admitting Office controls all admissions into Hoblitzelle Hospital and the Truett Admitting Office controls all admissions into both Truett and Veal Hospitals. Both offices are staffed for 24-hour operations, seven days a week. The present organization is indicated in Appendix B.

The Admitting Office is responsible for the accomplishment of the following procedures:

1. Receive admitting reservations from attending physicians, and maintain a reservation list, a waiting list, and a bed vacancy work sheet.

2. Initiate pre-admission form and obtain by telephone or letter admitting and insurance data necessary to accomplish the admission procedure.

3. Maintain bed control and make room assignments.

4. Receive patient for admission, prepare admitting form, initiate insurance billing forms, initiate requisition for routine laboratory work, accept valuables for deposit and escort patient to assigned room.

5. Conduct weekly orientation program for expectant mothers.

6. Maintain liaison with physician staff and nursing divisions so as to minimize problem situations, maintain rapport, and promote efficiency.[1]

The Admitting Office is not responsible for coordinating the discharge of patients.

The present admitting system is oriented toward a goal of pre-admitting the maximum number of patients possible. This procedure reduces the amount of processing necessary when the patient arrives for admission; allows financial and insurance data to be verified prior to admission; and provides an initial contact with the patient to promote favorable patient relations. Although both Truett and Hoblitzelle Admitting Offices follow the same general procedures, variations in staffing and types of patients served have resulted in some procedural changes in the two offices.

Truett Admitting Office

The admitting process for most patients is initiated long before their actual arrival at the Admitting Office. The admitting process begins when the reservations clerk receives a request for a bed reservation from the admitting physician. At this time, the patient's name, address, telephone number, type of room desired, admitting diagnosis and name of admitting physician are entered on a master bed control work sheet. If the expected admission date is more than five days in the future, the reservation clerk mails the patient a copy of two pre-admission forms with a prepaid, pre-addressed return envelope. Copies of pre-admitting forms are contained in Appendix C. If the admission date is less than five days away, the reservation clerk contacts the patient by telephone and completes a consolidated pre-admission form (Appendix D) to provide necessary admitting information. Completed forms returned by patients or obtained by telephone are then placed in a file according to the expected date of admission. A credit check is conducted on the basis of information received and anticipated problem accounts are referred to the Accounts Manager or the Business Manager for necessary action.

During slack periods in the Admitting Office, primarily during the morning and late evening hours, admitting hostesses obtain the pre-admission forms from the central file and begin the final typing of the admitting packet. At this time the basic admitting form (Appendix E), personal history form, graphic chart form, laboratory request form and necessary insurance forms are completed to the maximum extent possible. Upon completion of forms, they are attached together in a packet and replaced in the file until the indicated day of admission.

On the morning of the day of admission, the admitting packet is again removed from the central file by the admitting hostess. At this time the admitting hostess prepares an addressograph identification plate, preprinted with a serialized inpatient case number, and prepares the patient identification wrist band. These are attached to the previously prepared admitting packet and placed on the receptionist's counter to await arrival of the patient.

As the patients arrive for admission, the admitting receptionist fills out an arrival slip to indicate the time of arrival, verify the patient's name, and insure that he is identified with the proper admitting packet. By this procedure, all admitting packets are aligned according to time of arrival. All patients are then processed for admission according to time of arrival at the Admitting Office.

When the admitting hostess is prepared to admit a patient, she goes to the receptionist's desk, selects the admitting packet with the earliest arrival time, calls the patient from the waiting area and escorts the patient to the admitting booth. In the admitting booth, the information on the admitting forms is verified with the patient and the forms completed. Insurance coverage is discussed with the patient and necessary signatures and releases obtained. The patient's questions are answered at this time and he is briefed on hospital policies and procedures. When all procedures have been completed, the admitting hostess attaches the patient identification wrist band and releases the patient to the waiting area. The completed forms are then separated according to final users and the forms to accompany the patient are placed on the reception counter to indicate that he is ready and waiting to go to the nursing unit. The

receptionist then assigns an orderly to escort the patient to his room, completing the admission procedure.

Emergency patients and other patients who have not submitted pre-admission information necessitate the completion of all admission processing at the time of admission. In these cases, the receptionist completes the arrival slip, prepares the patient identification plate, and assembles the necessary admitting forms. These are then placed on the reception counter according to time of arrival in the same sequence as for pre-admitted patients. Admitting hostesses then process these patients in the same manner as for pre-admitted patients, except that the admitting time is considerably lengthened by the additional typing and data collection required to fulfill the admitting procedure.

Hoblitzelle Admitting Office

The Hoblitzelle Admitting Office generally follows the same procedures as the Truett Admitting Office. A somewhat more austere staffing level and a separate office to handle maternity cases has resulted in some procedural changes. As with the Truett Admitting Office, the primary emphasis in this office is to pre-admit as many patients as possible. Two systems are currently in effect to obtain this information.

Pre-admitting information for maternity cases is obtained by providing pre-admitting forms in an information packet, which includes information on hospital procedures and prenatal classes. These packets are distributed to physicians who admit patients into the Center so they can provide them to their patients. Due to wide acceptance of the prenatal instruction program, this has proven to be an effective method of getting the forms in the hands of the maternity patients and the response has been

quite satisfactory. A special pre-admitting form (Appendix F) is used for maternity cases to insure that necessary information is available to prepare birth certificates.

For pre-admission processing of medical and surgical cases, forms are mailed out, or telephone contacts made by the reservation and room control clerk, upon receipt of room reservations. The admitting hostesses then utilize this information to complete the admitting forms prior to arrival of the patient for admission.

Patients arriving for admission are directed to two separate admitting areas. Maternity patients proceed directly to the maternity receptionist, in a separate office, adjacent to the labor room. Upon completion of admission processing, the patient is escorted directly to the labor-room nursing unit. Patients arriving for admission to medical and surgical wards report to the business office desk, which records the time of arrival. Using this arrival information, admitting hostesses select appropriate admitting packets on a first come-first served basis and complete the admitting process in the same manner as in the Truett Admitting Office.

Weaknesses in present system

A study of the present system indicates that all personnel in the Admitting Office are well acquainted with their individual responsibilities and are fully aware of the general policies and procedures of the Admitting Office. Although there is some variation in procedures between the Hoblitzelle and Truett Admitting Offices, established procedures are carefully observed in each office during the admitting process.

Despite the fact that established procedures are carefully followed and admitting personnel appear to be adequately trained and

fully qualified to administer admitting procedures, two major weaknesses are evident in the present system. The Truett Admitting Office is often unable to accommodate the patient work load during scheduled admitting hours. As a result, patient waiting time is excessively long and the Admitting Office is overcrowded, necessitating patients to stand for long periods and wait in the hospital corridor.

A second weakness, evident in both offices, focuses on the collection of accurate, complete admitting information. Approximately 10 per cent of the basic admitting forms have one or more errors and many others have omission of essential data, such as insurance policy numbers and social security numbers. The primary impact of inaccurate, incomplete admitting information is felt by other departments within the Center. Inaccurate information creates significant problems for the Medical Records Department and incomplete information hinders the operation of the Business Office, Insurance Office and Collections Office.

Patient Admitting Systems for Large Hospitals

Many successful systems

A great variety of patient admitting systems are currently used by hospitals in the United States. The complexity of these systems varies from the informal, unstructured procedures followed by many small hospitals to the highly complex, computer assisted systems employed by the larger hospitals. Generally, the larger the hospital and the greater the daily admission rate, the more clearly defined and highly organized the admitting system must be to accommodate the work load and satisfy the many responsibilities of the admitting department.

Although in practice many admitting systems evolve into a

combination of systems, each oriented toward a specific category of patient, certain basic approaches to the admitting function can be identified and isolated. Three of these approaches having potential application at Baylor University Medical Center are examined in this study. They are pre-admission, direct admission and patient representative approaches to the organization of the patient admitting department.

Pre-admission system

Pre-admission systems similar to the present system at Baylor University Medical Center have gained wide acceptance in recent years and constitute the major effort of most large hospitals to control the complex patient admitting function. Although specific procedures vary considerably between hospitals, the system at Baylor represents a typical model of a pre-admission system and the procedural aspects of pre-admission systems will not be further delineated.

An efficient, well organized pre-admission program offers many advantages to the hospital, the medical staff and the patient. It reduces lengthy admission interviews and decreases the length of time spent by the patient in the waiting room.[2] A recent study of patient opinions regarding hospitalization indicates that excessive waiting time during the admitting process is one of their major complaints.[3] In addition to faster admission, the discharge process is also expedited by the ready availability of insurance information and agreement on payment plans prior to admission.

In many cases pre-admission prevents patient embarrassment and misunderstanding by anticipating and rectifying credit problems in advance of the actual admission. The satisfactory resolution of financial matters prior to admission has proven to have a direct relation to the collection

of hospital bills after discharge. A recent survey of 16 general hospitals showed that the bad debt loss in the group of hospitals pre-admitting 50 per cent or more of their patients averaged only 2.65 per cent, while the group pre-admitting less than 50 per cent experienced an average bad debt loss of 7.65 per cent.[4] When related to the multimillion dollar budgets of most large hospitals, this represents a significant variation.

Pre-admission also facilitates the control of bed assignments and reservations so the hospital can plan admissions and establish a waiting list from which patients can be called when a bed is available.[5] It is particularly useful for those hospitals experiencing critical bed shortages in certain wards and allows full consideration of the desires of both the patient and admitting physician in the assignment of beds.

One of the major advantages to the hospital in a pre-admission system is the flexibility it provides in scheduling the admitting department work load. With the advance collection of admitting information the clerical staff can complete most of the typing and administrative processing during slack periods, and thus devote the maximum attention to the patient during peak admitting periods.

Pre-admission can prove to be a valuable system for creating favorable public relations. Advance contact with the patient shows that the hospital is concerned with the patient, and provides a positive contact with the patient essential to the alleviation of his fear and apprehension.[6]

Admitting physicians also benefit from an effective pre-admission program. It relieves them of the necessity to spend valuable time orienting their patients on hospital procedures and improved patient attitudes toward the hospital can have a positive effect on the eventual

recovery of the patient.[7]

Although many advantages can accrue from pre-admission, certain limitations and problem areas must be overcome if the program is to be successful. The primary problem is one of insuring adequate coordination and ready communication between the hospital, the physician and the patient. The success of a pre-admission system is dependent upon the receipt of advance notification of patient admissions. The admitting physician is the key figure in this area, and the complete cooperation of the hospital admitting staff is essential to insure that bed reservations are requested as far in advance as practicable. In hospitals with high occupancy rates and critical bed shortages, this is not usually a problem, as the admitting physician is aware that late requests often cannot be accepted, and their patients must go on a waiting list. Hospitals having readily available beds may experience less success in obtaining advance reservations and a vigorous, continuing orientation program will be necessary to promote the program and explain its advantages to both the hospital and physician. In addition to scheduling bed reservations in advance, the admitting physician must provide the patient's address or telephone number to enable the hospital to contact the patient prior to admission.

The second area presenting coordination and communication problems is in obtaining response from the patient. The inclusion of a welcoming letter and brochures on hospital policies and other pertinent information will encourage the patient to return completed pre-admission forms. An explanation to the patient of the benefits of pre-admission will also improve response. When accomplishing pre-admission by phone, it is often necessary to make most of the contacts after normal duty hours. If pre-admission forms are not too complex and the advantages to the patient are

fully explained, the return of completed forms will average from 70-90 per cent.[8]

The final limiting factor is one over which the hospital has little control. This factor centers on the ratio of emergency, urgent and routine patients admitted to the hospital. The major emphasis of a pre-admission system is directed toward the routine or elective admissions, although some of the urgent admissions can be pre-admitted by telephone, if time permits. The ratio of these different categories of patients will show a wide variation between hospitals, depending on the type of hospital, emergency services offered and location, and may be the critical factor in determining the feasibility of a pre-admission system. One hospital reports that its routine admissions constitute only 40 per cent of total admissions, but in most hospitals the percentage of routine admissions will be much higher.[9] Articles in current literature indicate that routine admissions constitute 60-90 per cent of admissions in most hospitals.[10]

Direct admission

A system of direct admissions has been initiated by a San Francisco Hospital to reduce the period of time that a patient must spend in the admitting office. By using this system, the average waiting time from arrival at the hospital until the escort takes the patient to his room has been reduced to 10 minutes.[11]

The major emphasis of the direct admission system is directed toward reducing the processing in the admitting office and deferring procedures until after the patient is comfortably situated in his room. When the patient arrives for admission his name is verified, a patient identification band put on, blood is drawn and the patient is escorted directly to his room. After a sufficient period of time to allow the

patient to become familiar with his new surroundings, an admitting clerk goes to the patient's room and completes the time consuming admission procedures, such as completion and verification of admitting information, completion of insurance forms, obtaining signatures on necessary forms and releases, collection of valuables and financial counselling. In hospitals that routinely collect blood samples in the patient's room, this step could be omitted during the initial admission contact and further reduce the admitting time.[12]

The primary advantage of the direct admission system is the rapidity with which the patient arrives in his room. Long, complex admitting procedures are a major cause of patient complaints and simplification of the admitting process is an effective method of promoting good public relations.

The direct admission system can also conserve space in the admitting office and allow a larger number of admissions to be processed in a limited area. Many patients bring two or more family members with them on admission day and waiting rooms are frequently crowded with patients and their families. With direct admissions, the number of patients in the admitting office is significantly reduced. In addition to the reduction in waiting area, individual admitting booths can be eliminated as the admitting process is completed in the privacy of the patient's room.

Direct admissions are not dependent on receiving advance admission information as are pre-admission systems and can be applied as easily to emergency patients as patients with previous reservations. This is an important factor in hospitals that experience a high rate of emergency admissions, as it provides a single set of procedures for all patients.

Although the direct admission system eliminates most of the areas

of patient dissatisfaction with the admission process, it creates certain difficulties for the hospital. Frequently admitting clerks must make several trips to the patient's room to avoid conflicts with services being offered by the professional staff.[13] In a large hospital the admitting clerks could spend a major portion of their time travelling to and from the nursing units.

Certain difficulties in obtaining complete admitting information could also be expected in this system. Many patients are not familiar with the type of information required for admission and, unless notified in advance, may not have available such information as insurance policy and social security numbers.

Patient representative system

An admitting system called the "patient representative" system has been developed by the University Hospital in Ann Arbor, Michigan to enhance its patient relations program and improve management techniques. This system places primary emphasis on a close, personal contact between the patient and the admitting office and has proven to be very successful in a large hospital of 1015 beds.[14]

With the patient representative system, the admitting process does not begin until the patient arrives at the hospital. Upon arrival at the admitting area, the patient is greeted by a receptionist and is introduced to a patient representative, who will represent the patient during the entire period of his hospitalization. After greeting the patient, the patient representative escorts the patient to a private office to complete the admitting process. The name of the patient representative is prominently displayed on his desk and individual calling cards are used to clearly identify him and assist in establishing a

close, personal relationship between him and the patient. In the privacy of his office, the patient representative completes the admission interview and counsels the patient on matters pertaining to his hospitalization. The patient's insurance program is discussed and financial arrangements for paying the hospital bill are arranged at this time. All other admitting forms, releases and administrative matters are completed and the patient is escorted to his room. All contacts with other departments of the hospital are coordinated by the patient representative to eliminate the need for the patient to travel around the hospital and search out offices to complete the admission process. The patient representative maintains contact with the patient during the entire period of his hospitalization, advising and assisting him as required. The patient is encouraged to contact his representative even after discharge if problems or questions arise. The patient representative thus provides a point of contact between the patient and the hospital during and after his entire hospital experience.[15]

The major advantage of the patient representative system is the marked improvement in hospital-patient relations. The personal attention and individual assistance provided the patient helps dispel the common notion that hospitals are cold impersonal institutions and instills in the patient a feeling of confidence in the hospital and its staff.

In addition to improved public relations the hospital using the patient representative system has experienced an improved collection effort and less difficulty in handling insurance claims. When questions arise the patient always has the name of a knowledgeable person in the admitting office who can offer assistance and take necessary action to benefit both the patient and the hospital.[16]

The success of the patient representative system is not dependent on receiving advance notification of admissions and can be used with equal success for emergency or routine patients. This can be a significant advantage in hospitals experiencing a high percentage of emergency admissions or unscheduled admissions.

The succes of a patient-representative system is limited by the hospital's ability to recruit and reward the high quality personnel necessary to perform this critical task. Patient representatives must be cross trained in all areas of admitting, business, and insurance operations in order to coordinate the admitting process and provide knowledgeable answers to patient queries. Experience has shown that personnel with at least two years of college are best qualified to cope with this wide range of responsibilities. Additional limitations are posed by the number of patients that one representative can adequately handle. One hospital using this method limits this number to 100 patients per representative. This could be a significant factor in hospitals normally treating large numbers of patients who require extended periods of hospitalization.[17]

The patient representative system is not designed to rapidly process large numbers of admissions. The individual attention that is the key to the success of the system limits the number of patients that can be admitted by one patient representative. In order to be effective and fully utilize personnel, admissions should be scheduled throughout the entire day. The arrival of large numbers of patients during a short time span could result in excessive waiting times.

More office space may also be required to institute a patient representative system. Each patient representative should have a private

office if he is to offer privacy to the patient and create the expected atmosphere of confidence and cooperation.

Comparison of admitting systems

Three distinct approaches to the organization and operation of the hospital admitting department have been discussed. Each system has proven to be successful for admitting patients into large hospitals in the United States. Although each system reflects a different approach for controlling patient admissions, each satisfies the three basic admitting functions of controlling input into the hospital, providing patient contact, and initiating information flow and records keeping. The major difference in these approaches rests in the method used to control these functions and the relative priority assigned to their accomplishment.

The direct admission system emphasizes the function of controlling input into the hospital. In this area, it has direct application to the existing problem area of excessive patient waiting time and overcrowding of the Admitting Office. This system, however, does not directly confront the problem of incomplete, inaccurate information on admitting forms, although the unhurried collection of information in the quiet of the patient's room could be expected to produce more complete admitting information.

Patient contact is exemplified in the patient representative system. The close, personal contact with the patient and the continuous monitoring of each case by a single person should result in a high degree of accuracy and thoroughness in gathering necessary admitting information. The emphasis on patient contact, however, does not lend itself to the expeditious processing of patients.

The pre-admission system attempts to initiate all three of the admitting functions simultaneously, by establishing contact with the

patient and collecting information prior to the date of admission. The prior contact with the patient should inform the patient of the information needed by the hospital and improve accuracy and completeness of admitting information. Completion of admitting forms prior to the patient's arrival should expedite the final processing of the patient. Although the pre-admission system is well suited to meet the three basic admitting functions it requires advance notification of hospitalization and cannot be used with emergency admissions.

In addition to facilitating the admitting process and contributing to the overall efficiency of the hospital, a major goal of any admitting system is to enhance the public relations image of the hospital. Every hospital must keep this in mind when organizing its admitting department. All of the admitting systems discussed have the capability of contributing to this goal.

In comparing admitting systems it should be recognized that all admitting systems demand approximately the same expenditures of resources to admit a patient. A certain amount of admitting information must be obtained to satisfy hospital requirements and comply with local, state and federal laws. Office space and equipment must be provided for the staff of the admitting department. A certain amount of time must be allowed for patient contact to orient the patient on hospital procedures and obtain admitting information. Regardless of whether most of the admitting process is completed in the admitting office, as in the patient representative system, in the patients room, as in the direct admission system, or prior to admission, as in the pre-admission system, a basic core of necessary actions must be accomplished in all systems.

The final consideration in selecting an admitting system must

focus on the hospital within which the system must function. In selecting the best admitting system for Baylor University Medical Center several critical limitations must be recognized.

The Baylor hospital complex presently occupies several multi-story buildings, encompassing the major portion of a city block, and further expansion is planned in the near future. The direct admission system would not be responsive in this situation because an excessive period of time would be required for admitting clerks to go to each patient's room. As the direct admission system does not emphasize preliminary contact with the patient, it could be expected that often information would not be available and multiple trips would be necessary to complete the admitting process. Although the direct admission system offers many other advantages, particularly in expediting patient flow, it would be difficult to use this system in the large Baylor hospital complex.

Another factor that significantly influences the admitting system at Baylor University Medical Center is the high occupancy rate of Truett Hospital. As this is the largest hospital in the Center, particular consideration must be given to its requirements. Due to the high occupancy rate, almost all admissions to this hospital must be made during the afternoon hours, after daily discharges are accomplished and rooms are prepared for new patients. As a result, the admitting work load is compressed into a small time frame. The patient representative system, with its emphasis on personal contact at the time of admission and lack of previous patient contact, is not well designed to process a large number of patients in a short period of time. Additional personnel could be hired to accommodate the large number of patients arriving during the afternoon hours, but it would be difficult to effectively utilize them for the remainder of the day.

Based on a comparison of alternative admitting systems and consideration of limitations inherent in the Baylor University Medical Center, it is felt that the present pre-admission system is the best system for admitting patients into the Baylor University Medical Center.

The remainder of this study is directed toward a detailed analysis of the present system to identify problem areas that are limiting its effectiveness and develop recommendations to improve it.

Improving the Present Admitting System

Analysis of problem areas

The comparison of patient admitting systems indicates that a pre-admission system should offer five major advantages to the hospital. These five advantages can be summarized as follows:

1. Improved public relations.
2. Improved bed control.
3. Greater flexibility in scheduling work load.
4. Reduced admission time.
5. More accurate collection of admitting information.

The pre-admission system presently used by Baylor University Medical Center is not providing all of the benefits that could be expected from this type of system. Admission time has not been reduced sufficiently to prevent excessive patient delays and eliminate overcrowding in the Admitting Office. Under the present system, patients must wait one-half to two and one-half hours from the time they arrive at the Admitting Office until they are escorted to their rooms.

Additionally, excessive errors in recording admission information are compromising the effectiveness of the present system. A study of the incidence of errors in the basic admitting form revealed that approximately 10 per cent of all forms had one or more errors and numerous others had

omissions of essential data, such as insurance policy numbers and social security numbers.

The problem of excessive patient waiting time is primarily confined to the Truett Admitting Office. The Hoblitzelle Admitting Office has experienced little difficulty in accommodating the present work load and its patient waiting area is rarely crowded. The incidence of errors in admitting forms presents a problem to both admitting offices, although the error rate is somewhat higher in the Truett Admitting Office.

Basically, three different approaches can be taken to reduce the time a patient must spend in the Admitting Office. One approach is to speed up the admitting process by simplifying procedures, or reducing the amount of processing required for admission. A second approach is to increase the number of admitting hostesses to permit a larger number of patients to be processed during a specific period of time. The third approach to the problem is to schedule admissions over a longer period of time and reduce the intensity of the Admitting Office work load.

The problem of errors and incomplete information in admitting forms is much more subtle and difficult to isolate. Both the patient and the admitting hostess play an important role in the process of recording accurate, complete information. If complete information is to be obtained from the patient, he must be informed of the hospital requirements prior to his arrival at the hospital. In addition to knowing what information he should have available, the patient needs to be motivated to spend the extra time and effort necessary to collect it. If the patient provides the necessary information, the responsibility then rests with the admitting hostess to accurately record it. Individual capabilities, experience, training, supervision and job pressures will all influence the level of performance of the

admitting hostesses. Although certain mechanical factors, such as format and complexity of forms, can also induce errors, the major approach to reducing errors and omissions on admitting forms should center on the patient and the admitting hostess.

Analysis of admitting office work load

The three hospitals comprising Baylor University Medical Center show a wide variation in average bed occupancy rates. Truett Hospital is the most active facility and normally maintains a bed occupancy in excess of 90 per cent.

The occupancy rates for Veal and Hoblitzelle Hospitals are considerably lower and reflect a much greater monthly variation. Bed occupancy rates for the past six months are shown in Table 1.

Table 1

PERCENTAGE OF BEDS OCCUPIED
BAYLOR UNIVERSITY MEDICAL CENTER
OCTOBER 1969-MARCH 1970*

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Truett Hospital	96.3	92.0	85.2	92.8	97.4	93.5
Veal Hospital	83.8	71.5	61.2	74.2	88.3	72.8
Hoblitzelle Hospital	77.5	72.6	60.7	69.8	78.3	74.4
Nursery (Hoblitzelle)	64.3	58.8	61.8	52.8	56.7	50.9
Average	85.6	80.0	72.4	79.2	86.0	80.4

*Data obtained from "Monthly Patient Days Recap by Hospital," Baylor University Medical Center.

As could be expected, admissions to Truett Hospital present the greatest problem to the Admitting Office. Due to the high occupancy rate in Truett Hospital, very few beds are available for assignment during the

morning hours. The majority of admissions must be processed during the afternoon hours, after daily discharges are completed and beds prepared for new patients. Frequently, daily discharges are not completed early enough to insure the availability of rooms during scheduled admitting hours.

The admitting work load is distributed relatively evenly throughout the week, with the exception of a marked decrease in admissions on Saturdays and a significant increase on Mondays. Average daily admission rates for the past six months are shown in Table 2.

Table 2

BAYLOR UNIVERSITY MEDICAL CENTER
AVERAGE DAILY ADMISSIONS
BY ADMITTING OFFICE*

	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Truett	51.2	60.7	53.0	49.1	48.7	40.9	28.1
Hoblitzelle	54.8	70.9	64.5	51.8	56.0	53.9	32.7
Total	106.0	131.6	117.5	100.9	104.7	94.8	60.8

*Data compiled from "Daily Census Summary by Division and Hospital," Baylor University Medical Center, for period October 13, 1969-April 12, 1970.

Although the Hoblitzelle Admitting Office processes a larger number of admissions than the Truett Admitting Office, the impact of the work load on it is not as significant as at the Truett Admitting Office. Statistics for 1969 indicate that approximately 34 per cent of the Hoblitzelle admissions were maternity admissions and approximately 29 per cent were births. As these admissions are handled by a separate maternity reception office, less than 40 per cent of total admissions were processed by the main Hoblitzelle Admitting Office.

Patient admissions into the Baylor University Medical Center are categorized into four types according to the method of admission. These four categories are emergency room, emergency, reservation and waiting list admissions. Emergency room admissions, as the term applies are those admitted as emergencies, after first being seen at the Center emergency room. Emergency admissions are other patients who are reported as emergencies by a member of the hospital admitting staff, but who have not been seen at the emergency room. Reservation admissions comprise the majority of admissions and include all patients for whom the admitting physician has made a prior bed reservation. A relatively small number of patients are put on a waiting list when rooms are not available, and are categorized as waiting admissions when admitted. For statistical purposes this last group is included with the reservation admissions to identify the patient population that can be processed by pre-admission.

As the Center admitting system is designed to emphasize the pre-admission of patients, the percentage of patients falling into these categories exerts a significant influence over the ultimate success of the system. An analysis of all patient admissions for the six month period preceding this study reflects that during this period, 13.8 per cent of admissions were categorized as emergency room; 13.8 per cent of admissions were categorized as emergency; and the remaining 72.4 per cent were reservation admissions. It is toward this last group that the major emphasis of the present admitting system is directed.

Reducing patient admission time

The primary effort to reduce admission time at Baylor University Medical Center focuses on the pre-admission system. Although much time

and effort are expended, using both written and telephone contacts to obtain pre-admission information, the percentage of patients pre-admitted is not as high as in some hospitals using this method. The percentage of patients pre-admitted is shown in Table 3. Some hospitals using this system have been able to pre-admit 80 per cent or more of total admissions.[18]

Table 3

PERCENTAGE OF PATIENTS PRE-ADMITTED
BAYLOR UNIVERSITY MEDICAL CENTER
BY ADMITTING OFFICE*

	Percentage of Reservation Admissions	Percentage of All Admissions
Truett Admitting Office	46.9	27.9
Hoblitzelle Admitting Office (Less Maternity)	79.5	56.0
Hoblitzelle Admitting Office (Maternity)	78.0	77.9

*Data compiled from a random sample of 2,500 patient admissions during March and April, 1970.

The low percentage of patients pre-admitted at the Truett Admitting Office identifies one of the major causes of excessive waiting time. The impact of the low pre-admission rate on waiting time becomes clearly evident when the average service time for pre-admitted patients is compared to the average service time for patients not processed by pre-admission. An examination of patient arrivals, service times and the number of servers or admitting hostesses is necessary to develop these relationships.

Patient arrivals at Baylor University Medical Center generally reflect the hospital policy of admitting patients between the hours of 1:00 - 3:00 P.M. A significant number of patients, however, arrive for

admission during the hour immediately preceding and the hour following the scheduled admitting period. The distribution of arrival times is shown in Table 4. Early arrivals are quickly processed for admission in the Admitting Office but often must wait for their rooms to be prepared.

Table 4

HOURLY ARRIVALS AT BAYLOR UNIVERSITY MEDICAL CENTER ADMITTING OFFICES BY PERCENTAGE OF TOTAL DAILY ADMISSIONS*

	A. M.		A.M.	
	Truett	Hoblitzelle	Truett	Hoblitzelle
12:00 - 1:00	1.3	0.6	7.7	6.0
1:00 - 2:00	0.6	0.1	21.0	22.6
2:00 - 3:00	1.0	0.2	23.8	28.4
3:00 - 4:00	0.7	0.2	14.0	15.6
4:00 - 5:00	0.9	0.2	5.4	7.5
5:00 - 6:00	0.4	0.1	3.0	3.2
6:00 - 7:00	0.1	0.1	1.1	1.0
7:00 - 8:00	0.6	0.2	2.4	1.7
8:00 - 9:00	0.6	0.9	1.2	1.5
9:00 - 10:00	1.7	1.1	1.3	0.9
10:00 - 11:00	2.6	2.2	3.0	1.4
11:00 - 12:00	4.0	3.1	1.6	1.2

*Data obtained from a random sample of 2,500 patient admissions during March and April, 1970.

Late arrivals add to the backlog of patients remaining from the peak admitting hours and the major part of their delay is waiting to be processed in the Admitting Office. In the Truett Admitting Office, approximately 45 per cent of daily patients arrive for admission during scheduled admitting hours and constitute the peak work load that the office should be prepared to accommodate.

Pre-admitted patients are processed for admission much more rapidly than patients who have not been pre-admitted. A sample of service times for 50 pre-admitted patients and 50 patients not processed by pre-admission showed that the pre-admitted group had a mean service time of

12.7 minutes and a median service time of 13 minutes, while those not pre-admitted had a mean service time of 22.6 minutes and a median service time of 23 minutes. Service time histograms are contained in Appendix G.

Some hospitals have been able to reduce service time for pre-admitted patients as low as seven or eight minutes.[19] Admitting hostesses at Baylor, however, are responsible for completing all insurance forms during the admitting process, which adds to the total admission time. Many patients have several types of health insurance and the explanation of insurance benefits and the processing of forms occupies a large part of the total admitting time.

The extended service time for patients who are not pre-admitted is largely due to the difficulty in obtaining necessary information from the patient. The admitting hostess must ask the patient many more questions and in turn answer more patient queries. Although the admitting hostess also must complete more typing procedures at the time of admission, the additional typing constitutes only a small part of the total increase in service time.

Normally four admitting hostesses are on duty during scheduled admitting hours, but occasionally illness, vacation schedules, or other absences reduce this number. Patients are served on a "first come, first served" basis with the exception of emergency admissions.

Using Monday admissions at the Truett Admitting Office as an example, it can be predicted from the table of arrival times that approximately 45 per cent of total daily admissions, or 27 patients, will arrive for admission during scheduled admitting hours. If all of the patients were pre-admitted and hostesses processed them at the average service rate of 12.7 minutes, or 4.7 admissions per hour, four admitting hostesses

could easily process the peak admitting work load during the busiest day of the week. The present difficulty in processing patient admissions reflects the impact of the high percentage of patients who have not been pre-admitted.

Although the admitting system must be prepared for emergency patients who cannot be pre-admitted, they normally arrive at random intervals throughout the day and do not constitute a significant problem during scheduled admitting hours. The majority of patients arriving for admission during scheduled admitting hours are reservation patients and every effort should be made to pre-admit these patients if a pre-admission system is to be successful.

By achieving a pre-admission rate of 80 per cent of all reservation patients in the Truett Admitting Office, average service time per patient during scheduled admitting hours could be reduced from the present average of approximately 20 minutes to approximately 15 minutes. Based on present work load experience, four admitting hostesses could adequately accommodate admissions on Mondays, when peak work loads exist, and three hostesses would provide adequate staffing for the other days of the week.

Pre-admission processing is one of the major factors in reducing patient admission time and higher pre-admission rates should have a positive effect in reducing admission time in the Truett Admitting Office. Several methods should be considered to improve the effectiveness of the present pre-admission system.

The cooperation of admitting physicians is one of the most important considerations.[20] Periodically, letters should be sent to all physicians on the hospital admitting staff to explain the pre-admission program and solicit their cooperation. Letters should outline the information

that is needed from the physician when he makes the bed reservation and potential benefits to both the physician and the patient should be clearly explained.

Patient cooperation should be encouraged by enclosing a welcome letter and a patient information booklet with the request for pre-admission information.[21] As with the physician, a clear explanation of benefits of the system will encourage the patient's cooperation. A suspense or "tickler" file should be established to monitor mail requests and remind the reservations clerk that a telephone contact is needed to complete the case. If telephone contact cannot be made with the patient and the time does not permit the return of mailed pre-admission information, the patient should be mailed the pre-admission forms with a note to bring the completed forms with him to the hospital. Although the forms cannot be typed in advance, the patient will be aware of information needed by the hospital and the ready availability of information can save valuable time during the admitting process.

Patient admitting time could also be reduced by increasing the number of admitting hostesses on duty during scheduled admitting hours. Although additional admitting hostesses could process more patients during scheduled admitting hours they would not be needed during the rest of the day. As the present number of admitting hostesses can accomplish the work load within one or two hours after normal admitting hours, it suggests that a more economical solution would be to extend the scheduled admitting hours.

Although admitting hours are presently scheduled from 1:00 - 3:00 P.M., the table of actual patient arrivals indicates that for all practical purposes, the admitting period extends from 12:00 until 4:00 P.M.

The wide time span of patient arrivals is partly due to lack of definition of the exact admitting hours. The Admitting Office instruction manual states that admitting hours will be from 1:00 - 3:00 P.M. Interviews with Admitting Office personnel indicated that many thought that the admitting hours were from 2:00 - 4:00 P.M. Interviews with several patients revealed that they did not know what the exact hours were and that they knew only that they should arrive in the afternoon.

At the present time, admitting hours are not shown on the pre-admission forms mailed to the patients who must obtain this information from the admitting physician or call the hospital. Patients pre-admitted by telephone are given the admitting hours when contacted for pre-admission information, but telephone contacts are made with only a small percentage of total admissions.

In order to provide an efficient admitting system, procedures should be established to insure that patient arrivals are coordinated with the hospital capability to process them. Based on the Admitting Office work load, a three hour admitting period would correspond to present arrival experience and allow more efficient utilization of personnel and facilities. Patient arrivals could be controlled by scheduling them according to alphabetical groups for each of the three hours during the scheduled admitting period. Notification of scheduled arrival times should be included during the pre-admission contact to insure that all patients are aware of exact admitting hours.

Prompt processing of patient arrivals can only solve part of the problem of excessive admission time at Baylor University Medical Center. A second problem exists in obtaining rooms for patients after they are processed in the Admitting Office. Frequently, due to late discharges,

rooms cannot be cleaned and prepared for new patients in sufficient time to allow their use during scheduled admitting hours. Patients who have already experienced a long wait to be processed then must be required to undergo another period of waiting prior to being escorted to their rooms. Observation of patient responses in the Admitting Office indicate that they object much more vigorously to the second waiting period than they do to the initial one.

In order to be completely effective, the admission system should be closely coordinated with the Center policies for discharging patients. Discharge policies should complement the admitting policies and insure that rooms are available during scheduled admitting hours. With the high bed occupancy rates in Truett Hospital, every effort should be made to discharge patients as early as possible to allow the nursing units sufficient time to prepare rooms for new patients.

Improved collection of admitting information

The total effectiveness of an admission system can be severely limited by inaccurate, incomplete admitting information. The basic information collected at the time of admission is reflected in every record and transaction pertaining to the patient's hospitalization and must necessarily be accepted as accurate, official information by other departments and services within the hospital. Errors are difficult to correct, once recorded, and missing information is difficult to obtain after the patient has been assigned to a nursing unit and medical treatment is initiated. Inaccurate, incomplete information is one of the major causes of dissatisfaction with the admitting service by other departments and services within the hospital.

At the present time approximately 10 per cent of all basic admitting forms completed in the Center Admitting Office contain one or more errors and numerous other forms have omissions of essential data. Errors are primarily identified by a review of daily admission forms by night shift personnel, reports of discrepancies noted by key punch operators when processing forms and by a review and comparison of admitting forms with medical records in the Medical Records Department. The most common errors include disagreement between recorded age and birthdate, improper identification of attending physician, improper terminology in recording admitting diagnosis, misspelled names, and errors in recording social security numbers and insurance policy numbers.

The secretary to the Admissions Manager spends approximately four hours each day correcting admitting forms from the previous day's admissions. Due to the rapid dissemination of admitting information, it is often necessary to contact several departments within the hospital to make corrections. If the incorrect information has been introduced into the Center data processing system, file maintenance forms must be processed to update the data bank.

A study of the incidence of errors was conducted to compare the error rate between the Hoblitzelle and Truett Admitting Offices, and identify periods during the week when the error rate was the highest. The average percentage of errors in admitting forms is shown in Table 5.

As is evident in Table 5, the Truett Admitting Office experiences the greatest difficulty with errors, with an error rate approximately five per cent higher than the Hoblitzelle Admitting Office. Although Mondays represent the peak work load for both offices, the intensity of the work load does not appear to be the primary cause of errors. Errors for

Table 5

AVERAGE PERCENTAGE OF ERRORS IN ADMITTING FORMS BY ADMITTING OFFICE*

	Hoblitzelle	Truett
Total period	8.8	13.5
Monday - Friday	8.9	11.6
Saturday - Sunday	8.6	18.6
Monday	9.1	10.2

*Errors reported for correction during the period February 20 - April 12, 1970.

the Truett Admitting Office reflect a marked increase on week-ends, which may be a result of the increased use of part-time personnel during week-end shifts.

The primary approach to reduce errors and omissions in admitting information should focus on the source of information--the patient. As with the problem of excessive admission time, a strong pre-admission program should produce positive results. The lower error rate in the Hoblitzelle Admitting Office, which has the highest pre-admission rate, suggests that pre-admission may be one of the factors influencing the error rate in the present system.

Several approaches can be taken to increase the accuracy and efficiency of the admitting hostesses. The duties and responsibilities of all admitting personnel should be clearly identified and related to the goals of the Admitting Office and the overall objectives of the Center. Admitting procedures and policies should be outlined in detail and disseminated in writing to all admitting personnel to standardize procedures and provide a ready reference when problems or unusual situations arise.

The establishment of a formal training program for new employees and the institution of a systematic program of refresher training for all employees should improve the performance and effectiveness of personnel. Although on-the-job training is effective for training personnel in a specific area, it often lacks the depth necessary to insure sensitivity to the total system and its essential relationships with other departments and services within the hospital.

A final area to consider is the supervision of the Admitting Office. At the present time the Admissions Manager is responsible for the direct supervision of 28 full time and 6 part-time, salaried employees in the Admitting Office. Although management experts have varied opinions regarding the exact number of personnel that a manager can effectively control, it appears that the present span of control is too wide for optimum supervision. Informal supervisory relationships have developed, based on experience and job positions, but these do not offer the positive control that is necessary to control a complex system such as the admitting service. The decision whether supervisory positions should be established on a shift basis, or on a functional basis, should rest with the Admissions Manager, but two or three additional supervisory positions should be considered to reduce the frequency and intensity of the Admissions Manager's supervisory responsibilities.

On-line computer application

During the latter part of calendar year 1970, the Baylor University Medical Center Admitting Office is scheduled to phase in an on-line computer application for the collection and recording of admitting information. In this system, the basic admitting information will be introduced directly into a central computer by the use of the IBM 2260 Display Station. An

illustration on the proposed input device is contained in Appendix H.

One of the major advantages of the present pre-admission system is that no major procedural changes will be required to adapt to the on-line computer application. Pre-admission information can be put into the computer during slow periods in the Admitting Office to promote the effective utilization of the expensive equipment needed to provide the on-line capability. Pre-admission information taken by telephone can be put directly into the computer, eliminating the need for completing a pre-admission form for later typing. Once the information is introduced into the computer, it can be recalled and displayed on the screen for completing the patient admission, or making necessary corrections or additions. When the admission information has been completed and verified, hard copies of necessary forms will be produced by a printer.

The two problem areas of excessive admission time and excessive errors in admitting information should be improved by use of the visual display stations. If the screen is visible to both the patient and the admitting hostess, errors in items that are not coded can be easily identified by the patient. Corrections need only to be typed over on the display station keyboard, eliminating time consuming erasures. To further reduce errors, the computer can be programmed to query the operator if omissions or inconsistencies occur. One hospital using this system has reduced admission time to 3-5 minutes for pre-admitted patients, with an error rate of less than 1 per cent.[22]

Although use of the on-line computer application will not necessitate any major procedural changes in the present admitting system, highly qualified personnel will be needed to operate the new equipment. Additional training of personnel will be required to insure that equipment is properly

utilized. Experience with similar systems has shown that some individuals cannot adapt to the use of the visual display stations even though experienced in admitting procedures, and some turn-over in personnel should thus be expected.[23]

The on-line computer application offers the potential of improving admitting procedures, but it can be successful only in a clearly defined, well organized system. The key factor is to design a good admitting system and then use the computer application to enhance it.

Summary

Although many different systems are used by modern hospitals to control patient admissions, three distinct admitting systems have proven to be particularly successful in controlling patient admissions into large hospitals. These three systems are the pre-admission system, direct admission system and the patient representative system.

The pre-admission system emphasizes the collection of admitting information prior to the patients arrival at the hospital. The primary advantages of this system are improved public relations, improved bed control, greater flexibility in scheduling work load, reduced admission time, and the more accurate collection of admitting information. As this system is dependent upon the advance notification of patient admissions, its effectiveness is limited in hospitals experiencing a high percentage of emergency admissions.

In the direct admission system, primary emphasis is placed on moving the patient to his room as quickly as possible and many of the admitting procedures are deferred until after he is settled there. This system reduces the period of time a patient must wait in the admitting

department and helps control overcrowding of the admitting office. The primary disadvantage is that admitting clerks must go to each patient's room to complete the admitting process. Travel to and from patient's rooms can be very time consuming in large hospitals and often repeated trips are necessary to prevent conflicts with the activities of the professional staff.

The patient representative system centers on the establishment of a close, personal relationship with the patient at the time of admission and the continuance of this relationship throughout the entire period of hospitalization. This system enhances the public image of the hospital and helps establish a close rapport between it and the patient. This favorable relationship enhances the collection of admitting information and facilitates the coordination of financial arrangements.

In comparing the capabilities of the three admitting systems with the requirements of Baylor University Medical Center, the pre-admission system should provide the most advantages to the Center. Although a pre-admission system is presently used at Baylor, all of the advantages of the system have not been realized.

An examination of the present system indicates that the two major problem areas are excessive patient waiting time and excessive errors in admitting forms. As the pre-admission system is designed to reduce both of these problem areas, it appears that the problems are primarily caused by deficiencies in the organization and application of the present system.

Emphasis should be placed on procedures to increase the percentage of patients pre-admitted. Increased pre-admission rates should significantly reduce both patient waiting time and the incidence of errors.

Footnotes

[1]Baylor University Medical Center, Business Services Office Memorandum. Undated. (typewritten)

[2]Robert A. Schott, "Preadmission and Credit," Hospital Accounting, XXI (January, 1967), 12.

[3]Margaret Wicker, "Opinions of Patients Regarding Hospital Admissions" (Unpublished Master's thesis, The University of North Carolina, 1963), p. 27.

[4]Rudy Kalebich, "Pre-admission and Credit," Hospital Accounting, XIX (March, 1965), 7.

[5]Schott, p. 12. [6]Kalebich, p. 6. [7]Ibid., p. 7.

[8]Schott, p. 13.

[9]Stephen B. Collins, "Collection before Admission," Hospital Accounting, XV (October, 1966), 6.

[10]Tibbetts and Brown, p. 37; Staller, p. 72; United Hospital Fund of New York, p. 2-2.

[11]Staller. [12]Ibid., pp. 68, 72, 76. [13]Ibid., p. 76.

[14]Laetz. [15]Ibid., pp. 17-19. [16]Ibid., p. 36.

[17]Ibid. [18]Tibbetts and Brown, p. 36. [19]Ibid., p. 39.

[20]Ibid., p. 36. [21]Ibid.

[22]Michael K. Caddell, Supervisor, Admissions and Discharges, Harris Hospital, Fort Worth, Texas, private interview held at Harris Hospital, April 27, 1970.

[23]Ibid.

CHAPTER III

CONCLUSION

Conclusions

As a result of the study the following conclusions are made:

1. A pre-admission system is the most efficient system for admitting patients into Baylor University Medical Center, Dallas, Texas.

2. The existing problems of excessive patient waiting time and excessive errors in admitting information are primarily the result of low pre-admission rates.

3. The percentage of patients pre-admitted could be significantly increased by improving operational procedures.

4. The preparation of a detailed procedures manual for distribution to all Admitting Office personnel will standardize and improve operational procedures in the Admitting Office.

5. The establishment of a training program for Admitting Office personnel will increase their effectiveness.

6. The present organization of the Admitting Office does not provide sufficient supervisory positions.

7. The present pre-admission system is fully adaptable to an on-line computer application for collecting and recording admission information.

Recommendations

Recommendations of this study are:

1. That a detailed admitting procedures manual be prepared and disseminated to all Admitting Office employees.

2. That information letters be dispatched periodically to all physicians on the admitting staff to acquaint them with pre-admission procedures.

3. That a welcome letter and a hospital information booklet be included with all requests for pre-admission information.

4. That the scheduled admitting period be increased to three hours.

5. That a system be established to schedule reservation admissions during normal admitting hours.

6. That all patients be informed of their admission time when the pre-admission contact is made.

7. That a training program be established for all Admitting Office personnel.

8. That the Admitting Office be authorized more supervisory positions.

9. That a further study be made to coordinate discharge and admission policies.

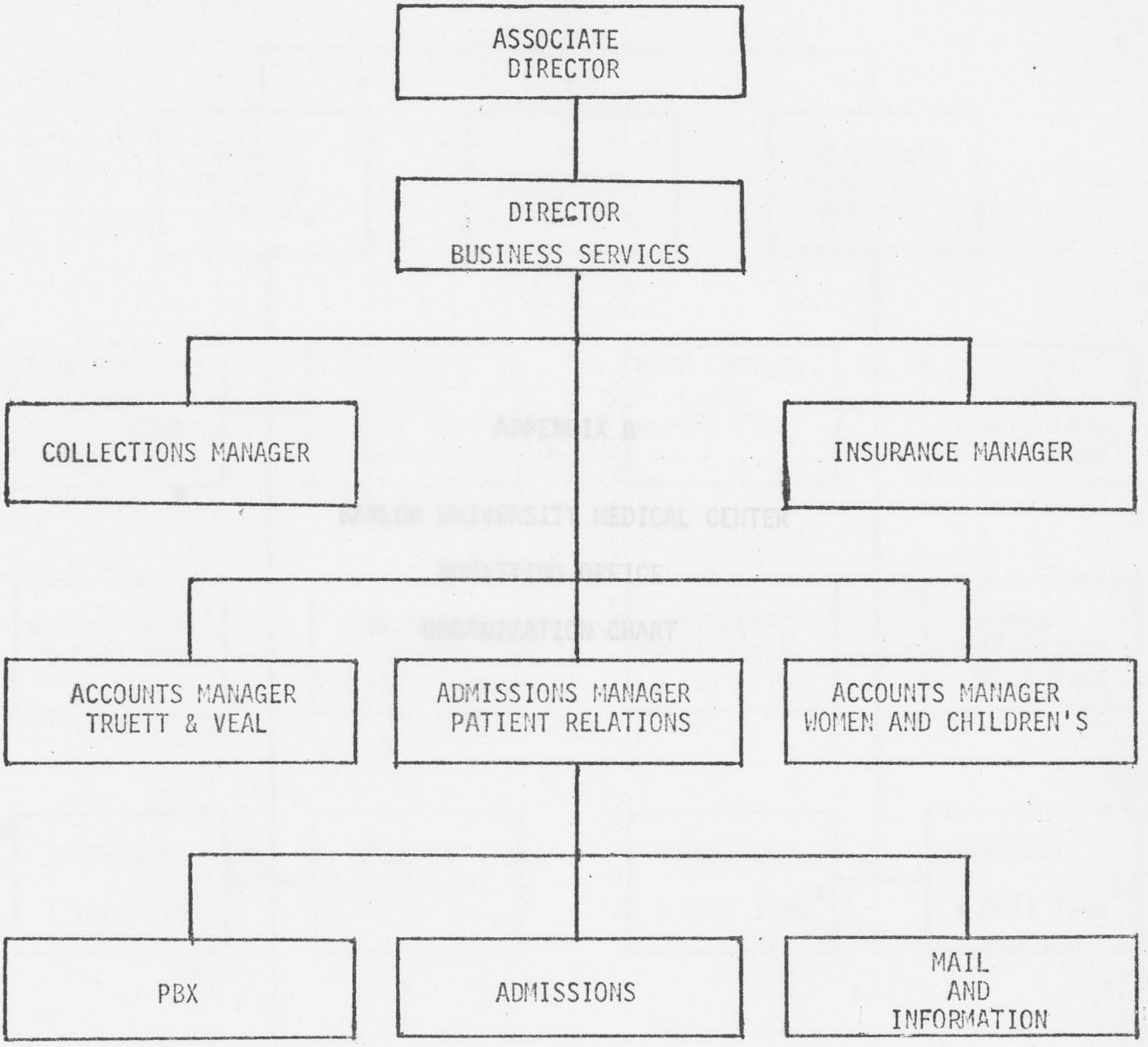
10. That a further study be made on the use of on-line computer applications in processing admission information.

APPENDIX A

BAYLOR UNIVERSITY MEDICAL CENTER

BUSINESS OFFICE

ORGANIZATION CHART

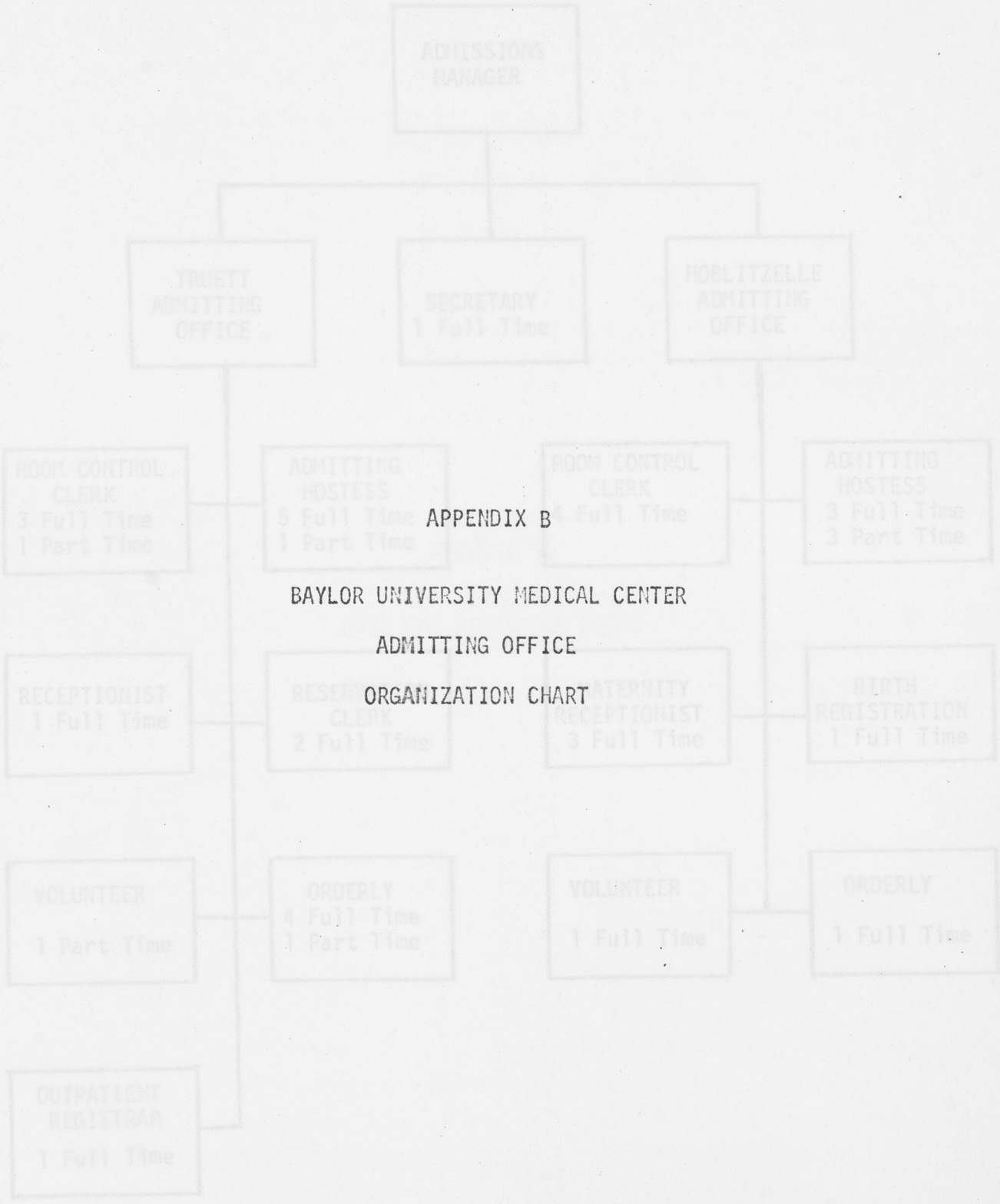

ASSOCIATE DIRECTOR
DIRECTOR BUSINESS SERVICES
COLLECTIONS MANAGER
INSURANCE MANAGER
ACCOUNTS MANAGER TRUETT & VEAL
ADMISSIONS MANAGER PATIENT RELATIONS
ACCOUNTS MANAGER WOMEN AND CHILDREN'S
PBX
ADMISSIONS
MAIL AND INFORMATION

APPENDIX B

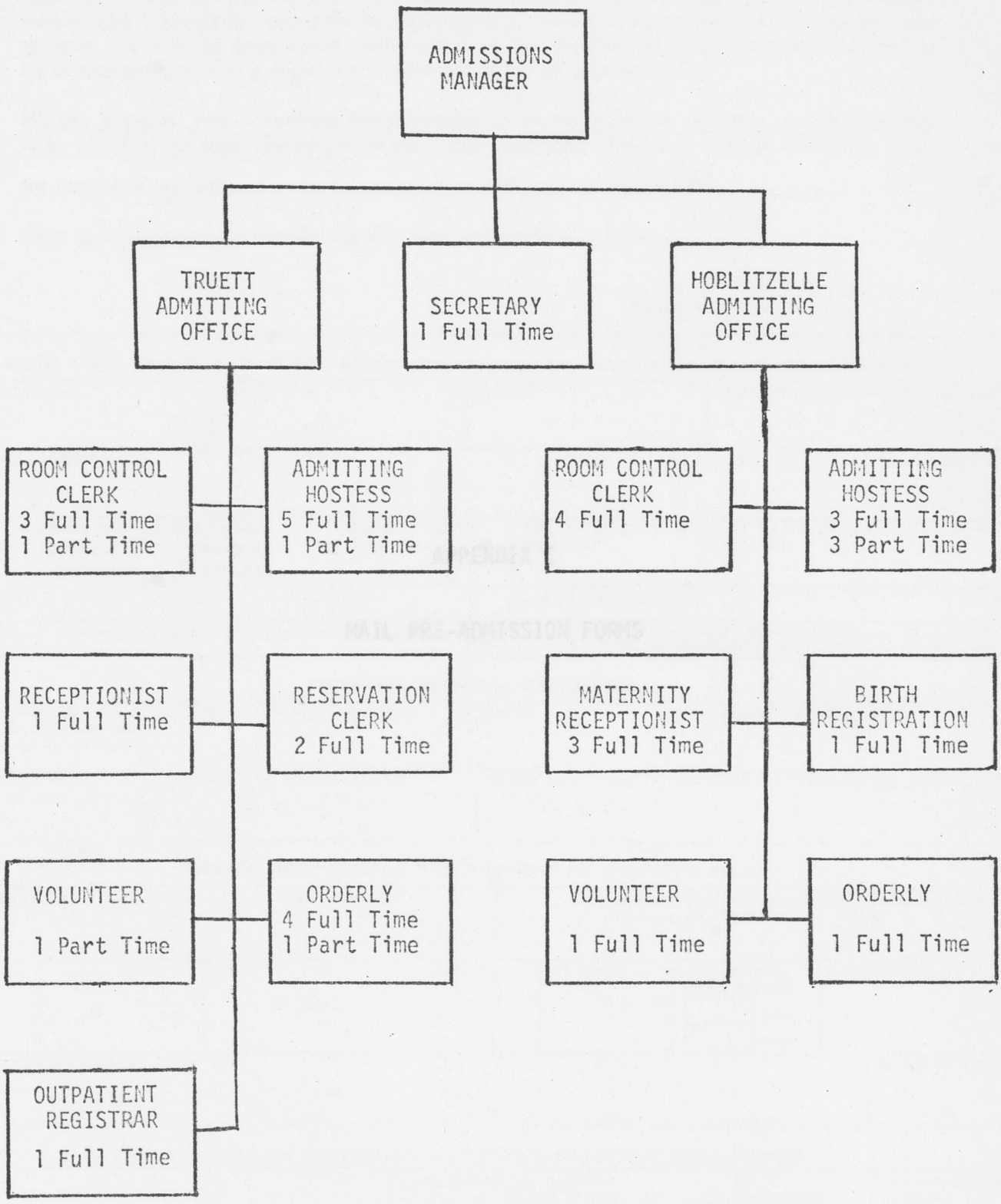
BAYLOR UNIVERSITY MEDICAL CENTER

ADMITTING OFFICE

ORGANIZATION CHART



Note: Designated blocks denote functional areas only and do not represent supervisory levels. All personnel are under the direct supervision of the Admissions Manager.



Note: Designated blocks denote functional areas only and do not represent supervisory levels. All personnel are under the direct supervision of the Admissions Manager.

APPENDIX C

MAIL PRE-ADMISSION FORMS

BAYLOR UNIVERSITY MEDICAL CENTER

DALLAS, TEXAS

PRE-ADMISSION INFORMATION

Your physician has made a reservation for your admission to the Medical Center. We would appreciate your completing the Pre-Admission Form so that we may confirm your reservation. The information requested on this form will become a permanent part of your medical records and will be considered confidential. A few minutes of your time now will assist us in assigning you to a room with a minimum delay on your arrival.

Please bring all your insurance identification cards and policies with you, so that we may help you file for your insurance. If you have questions about any part of this form, or if we can be of any other service to you, please call 820-2264.

Help us to help you by completing this form and mailing it today.

Thank You

PLEASE TYPE OR PRINT. SKIP ANY QUESTIONS IF YOU ARE IN DOUBT AS TO THEIR ANSWERS

ATIENT'S NAME (LAST)	FIRST	MIDDLE	HUSBAND'S FIRST NAME & MIDDLE INITIAL

ATIENT'S HOME ADDRESS	CITY	STATE	ZIP CODE	HOME PHONE NO.

GE	SEX	MARITAL STATUS (CHECK ONE)	DATE OF BIRTH			TENTATIVE DATE OF ADMISSION	NAME OF PHYSICIAN ADMITTING PATIENT TO HOSPITAL
	☐ M ☐ F	☐ SINGLE ☐ MARRIED ☐ DIVORCED ☐ WIDOWED	MONTH	DAY	YEAR		

AME OF CHURCH	LOCATION OF CHURCH

O YOU PREFER A: ☐ PRIVATE ROOM ☐ SEMI-PRIVATE ROOM (THE TYPE OF ACCOMMODATION REQUESTED WILL BE FURNISHED IF AVAILABLE AT TIME OF ADMISSION, BUT CANNOT BE GUARANTEED)

PREVIOUS HOSPITAL ADMISSIONS

AS THE PATIENT BEEN OSPITALIZED IN THE LAST 60 AYS (OTHER THAN AT BAYLOR)	NAME OF HOSPITAL & LOCATION	DATES	REASON FOR ADMISSION

AS PATIENT EVER BEEN OSPITALIZED AT BAYLOR?	DATES (MAY BE APPROXIMATE)	UNDER WHAT NAME IF DIFFERENT	SOCIAL SECURITY NO.
			– –

PERSON RESPONSIBLE FOR PAYMENT OF HOSPITAL BILL

AST NAME	FIRST NAME	MIDDLE INITIAL	RELATIONSHIP TO PATIENT	HOME PHONE

OME ADDRESS	CITY	STATE	ZIP CODE	HOW LONG AT THIS ADDRESS	OCCUPATION OR POSITION
				☐ YRS. ☐ MOS.	

AME OF EMPLOYER AND WHERE LOCATED	BUSINESS PHONE

NEXT OF KIN OR EMERGENCY NOTIFICATION (OTHER THAN ABOVE)

AME	HOME PHONE OR ADDRESS (IF OUT OF DALLAS SPECIFY CITY AND AREA CODE)	RELATIONSHIP TO PATIENT

BAYLOR UNIVERSITY MEDICAL CENTER

DALLAS, TEXAS

CERTIFICATE OF INSURANCE COVERAGE

ENT'S NAME (LAST)	FIRST	MIDDLE	ROOM NO	DATE ADMITTED	CASE NO.

ERTIFY THAT I HAVE NO HOSPITALIZATION COVERAGE

ERTIFY THAT THE FOLLOWING IS A COMPLETE LISTING OF ALL MY HOSPITALIZATION COVERAGE

		INSURANCE CARRIERS NAME	ADDRESS	GRP	INDIV

POLICY HOLDER'S OR MEMBER'S NAME	RELATION TO PATIENT	SOC. SECURITY NO.	BUS. TELEPHONE NO.

EMPLOYER	ADDRESS	CONTRACT OR PLAN NO.	POLICY OR CERTIFICATE NO.	GROUP NO. OR EMPLOYEE NO.

		INSURANCE CARRIERS NAME	ADDRESS	GRP	INDIV

POLICY HOLDER'S OR MEMBER'S NAME

EMPLOYER	ADDRESS	CONTRACT OR PLAN NO.	POLICY OR CERTIFICATE NO.	GROUP NO. OR EMPLOYEE NO.

		INSURANCE CARRIERS NAME	ADDRESS	GRP	INDIV

POLICY HOLDER'S OR MEMBER'S NAME

EMPLOYER	ADDRESS	CONTRACT OR PLAN NO.	POLICY OR CERTIFICATE NO.	GROUP NO. OR EMPLOYEE NO.

IS PATIENT ELIGIBLE FOR BENEFITS UNDER MEDICARE		DOES PATIENT HAVE PART B (SUP. MEDICAL INS) UNDER MEDICARE		MEDICARE IDENTIFICATION NO. (PLEASE BRING IDENTIFICATION CARD WITH YOU WHEN YOU COME TO THE HOSPITAL)
YES	NO	YES	NO	

IS PATIENT ELIGIBLE FOR BENEFITS UNDER STATE ASST. PROGRAMS		NAME OF PROGRAM AND IDENTIFICATION NUMBER (PLEASE BRING IDENTIFICATION CARD WITH YOU WHEN YOU COME TO THE HOSPITAL)	IS PATIENT ELIGIBLE FOR BENEFITS UNDER ANY GOVERNMENTAL PROGRAM NOT ALREADY INDICATED? (IF ANSWER IS YES, GIVE COMPLETE INFORMATION AT RIGHT)
YES	NO		YES ——— NO ———

IS THE PATIENT'S ADMISSION THE RESULT OF AN ILLNESS OR INJURY CONNECTED WITH HIS EMPLOYMENT (IF ANSWER IS YES, GIVE NAME AND ADDRESS OF EMPLOYER)

YES NO

IS THIS PATIENT'S ADMISSION THE RESULT OF AN ACCIDENTAL INJURY WHICH WAS POSSIBLY THE FAULT OF ANOTHER PARTY (IF ANSWER IS YES, TELL AT RIGHT WHAT HAPPENED, INCLUDING WHERE AND WHEN

YES NO

ABOVE FORM ADVOCATED BY THE HOSPITALS—INSURANCE- PHYSICIANS JOINT ADVISORY COMMITTEE OF TEXAS. THIS COMMITTEE IS COMPOSED OF REPRESENTATIVES FROM TEXAS HOSPITAL ASSOCIATION; PRIVATE CLINICS AND HOSPITALS ASSOCIATION OF TEXAS; TEXAS HEALTH INSURANCE ASSOCIATION; TEXAS MEDICAL ASSOCIATION; GROUP PITAL SERVICES, INC. (BLUE CROSS & BLUE SHIELD); HEALTH INSURANCE COUNCIL; TEXAS ASSOCIATION OF HEALTH UNDERWRITERS; TEXAS ASSOCIATION OF LIFE UNDERTERS.

BAYLOR UNIVERSITY MEDICAL CENTER
ASSIGNMENT

N CONSIDERATION OF SERVICES RENDERED OR TO BE RENDERED, I HEREBY ASSIGN AND TRANSFER TO BAYLOR UNIVERSITY MEDICAL CENTER OF DALLAS ANY MONEY PAYABLE UNDER HOSPITALIZATION INSURANCE COVERAGE AND/OR SICKNESS OR ACCIDENT INSURANCE COVERAGE AND/OR ANY OTHER ARRANGEMENTS WITH THIRD PARTIES FOR PAYMENT OF SUCH SERVICES, UP TO THE TOTAL AMOUNT OWED THE MEDICAL CENTER. I UNDERSTAND THAT AM RESPONSIBLE FOR THE TOTAL CHARGES FOR SERVICES RENDERED AND AGREE TO PAY TO THE MEDICAL CENTER ANY AMOUNTS DUE BUT NOT PAID BY SUCH INSURANCE COMPANIES OR THIRD PARTIES.

THIS WILL ALSO AUTHORIZE MEDICAL OR SURGICAL BENEFITS (IF ANY) TO BE PAID TO THOSE PERFORMING THE VICES BILLED.

* TO BE SIGNED BY PATIENT IF AN ADULT AND ABLE TO SIGN (OTHERWISE BY SPOUSE OF PATIENT. IF MARRIED OR PARENT IF PATIENT IS A MINOR. IF NO SUCH PERSON AVAILABLE AND ABLE TO SIGN, THEN BY PERSON PROVIDING INFORMATION)	SIGNATURE	DATE	RELATION TO PATIENT

APPENDIX D

TELEPHONE PRE-ADMISSION FORM

PRE-ADMISSION INFORMATION

IENT'S NAME (LAST)	FIRST	MIDDLE INITIAL	HUSBAND'S FIRST NAME & MIDDLE INITIAL

IENT'S HOME ADDRESS	CITY	STATE	ZIP CODE	HOME PHONE NO.

SEX	MARITAL STATUS (CHECK ONE)	DATE OF BIRTH			TENTATIVE DATE OF ADMISSION	NAME OF PHYSICIAN ADMITTING PATIENT TO HOSPITAL
☐ M ☐ F	☐ SINGLE ☐ MARRIED ☐ DIVORCED ☐ WIDOWED	MONTH	DAY	YEAR		

ME OF CHURCH	LOCATION OF CHURCH

YOU PREFER A : ☐ PRIVATE ROOM ☐ SEMI-PRIVATE ROOM (THE TYPE OF ACCOMMODATION REQUESTED WILL BE FURNISHED IF AVAILABLE AT TIME OF ADMISSION, BUT CANNOT BE GUARANTEED)

PREVIOUS HOSPITAL ADMISSIONS

S THE PATIENT BEEN SPITALIZED IN THE LAST 60 YS(OTHER THAN AT BAYLOR)	NAME OF HOSPITAL & LOCATION	DATES	REASON FOR ADMISSION

S PATIENT EVER BEEN SPITALIZED AT BAYLOR?	DATES (MAY BE APPROXIMATE)	UNDER WHAT NAME IF DIFFERENT	SOCIAL SECURITY NO.
			– –

PERSON RESPONSIBLE FOR PAYMENT OF HOSPITAL BILL

ST NAME	FIRST NAME	MIDDLE INITIAL	RELATIONSHIP TO PATIENT	HOME PHONE

ME ADDRESS	CITY	STATE	ZIP CODE	HOW LONG AT THIS ADDRESS	OCCUPATION OR POSITION
				☐ YRS. ☐ MOS.	

ME OF EMPLOYER AND WHERE LOCATED	BUSINESS PHONE

NEXT OF KIN OR EMERGENCY NOTIFICATION (OTHER THAN ABOVE)

ME	HOME PHONE OR ADDRESS (IF OUT OF DALLAS SPECIFY CITY AND AREA CODE)	RELATIONSHIP TO PATIENT

CERTIFICATE OF INSURANCE COVERAGE

		INSURANCE CARRIERS NAME	ADDRESS	GRP	INDIV

POLICY HOLDER'S OR MEMBER'S NAME	RELATION TO PATIENT	SOC. SECURITY NO.	BUS. TELEPHONE NO.

EMPLOYER	ADDRESS	CONTRACT OR PLAN NO.	POLICY OR CERTIFICATE NO.	GROUP NO. OR EMPLOYEE NO

		INSURANCE CARRIERS NAME	ADDRESS	GRP	INDIV

POLICY HOLDER'S OR MEMBER'S NAME

EMPLOYER	ADDRESS	CONTRACT OR PLAN NO.	POLICY OR CERTIFICATE NO.	GROUP NO. OR EMPLOYEE NO

		INSURANCE CARRIERS NAME	ADDRESS	GRP	INDIV

POLICY HOLDER'S OR MEMBER'S NAME

EMPLOYER	ADDRESS	CONTRACT OR PLAN NO.	POLICY OR CERTIFICATE NO.	GROUP NO. OR EMPLOYEE NO.

IS PATIENT ELIGIBLE FOR BENEFITS UNDER EDICARE		DOES PATIENT HAVE PART B (SUP. MEDICAL INS) UNDER MEDICARE		MEDICARE IDENTIFICATION NO.	STATE PROGRAM	IS PATIENT ELIGIBLE FOR BENEFITS UNDER STATE ASST. PROGRAMS		NAME OF PROGRAM AND IDENTIFICATION NUMBER (PLEASE BRING IDENTIFICATION CARD WITH YOU WHEN YOU COME TO THE HOSPITAL)
YES	NO	YES	NO			YES	NO	

PATIENT ELIGIBLE FOR BENEFITS ER ANY GOVERNMENTAL PROGRAM T ALREADY INDICATED? (IF ANSWER ES, GIVE COMPLETE INFORMATION RIGHT)		IS THE PATIENT'S ADMISSION THE RESULT OF AN ILLNESS OR INJURY CONNECTED WITH HIS EMPLOYMENT (IF ANSWER IS YES, GIVE NAME AND ADDRESS OF EMPLOYER)		IS THIS PATIENT'S ADMISSION THE RESULT OF AN ACCIDENTAL INJURY WHICH WAS POSSIBLY THE FAULT OF ANOTHER PARTY (IF ANSWER IS YES, TELL AT RIGHT WHAT HAPPENED, INCLUDING WHERE AND WHEN
ES _____	NO _____	X	YES NO	X YES NO

APPENDIX E

BAYLOR UNIVERSITY MEDICAL CENTER

ADMITTING FORM

BAYLOR UNIVERSITY MEDICAL CENTER

DALLAS, TEXAS

CASE NO.

PATIENT

PATIENT NAME (LAST) (FIRST) (MIDDLE) | ADMIT DATE | ADMIT TIME

HOME ADDRESS | CITY | STATE | ZIP CODE | HOME PHONE | ROOM NO.

AGE | SEX | RACE | MAR. STAT. | DATE OF BIRTH | NAME OF CHURCH & LOCATION | CODE

DEPT.

ADMIT. DEPT. | ATTENDING PHYSICIAN | PHY. NO.

CO ATTENDING PHYSICIAN | INTERN OR RESIDENT

TYPE ADMISSION | EMERG. UNIT | EMERG. | RESERVA | WAITING | ADMITTING DIAGNOSIS

PREV. ADMIT.

PREVIOUS PATIENT AT BAYLOR | INPATIENT, DATES | ADMITTED UNDER WHAT NAME (IF DIFFERENT) | SOCIAL SECURITY NO.

F. C.

0	1	2	3	MEDICAID 4	EMP. 5	PHY./MIN. 6	CLINIC 7	GEN. CHAR. 8	OTHER SPECIFY 9	TYPED BY
NO INS. 0	ONE INS. 1	TWO INS 2	THREE + INS. 3	WORK COMP 4	STATE 5	MEDICARE 7	PT. CLAIM 8	ACCID. 3RD PTY. 6	DATE OCCURRED	OTHER 9	ADMITTED BY

RESP. PARTY

NAME RESPONSIBLE PARTY (LAST) (FIRST) (MIDDLE) | RELATION TO PATIENT | HOME PHONE

ADDRESS | HOW LONG AT THIS ADDRESS | OCCUPATION OR POSITION

NAME OF EMPLOYER & LOCATION (CITY & STATE) | BUSINESS PHONE

N. of K.

NEXT OF KIN OR EMERGENCY NOTIFICATION | HOME PHONE OR ADDRESS | RELATION TO PATIENT

I AGREE TO EITHER DEPOSIT MONEY, JEWELRY, OR OTHER VALUABLES WITH THE CASHIER FOR SAFE KEEPING, OR TO ASSUME RESPONSIBILITY FOR THEM.

SIGNED

RELATION TO PATIENT

FORM NO. 1-229-U (4/68)

DATA PROCESSING - FILE

APPENDIX F

BAYLOR UNIVERSITY MEDICAL CENTER

MATERNITY PRE-ADMISSION FORM

BAYLOR UNIVERSITY MEDICAL CENTER

WOMEN AND CHILDREN'S HOSPITAL
MATERNITY PRE-ADMISSION FORM

MOST OF THE INFORMATION REQUESTED ON THIS FORM IS REQUIRED BY THE STATE OF TEXAS FOR THE PROPER REGISTRATION OF YOUR CHILD'S BIRTH.

TIENT INFORMATION

ENT'S FULL NAME (LAST)	(FIRST)	(MIDDLE)	(MAIDEN)
E ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE) / HOME PHONE
DATE OF BIRTH TH / DAY / YEAR	BIRTHPLACE (STATE OR FOREIGN COUNTRY)		COLOR OR RACE
E OF CHURCH & LOCATION	YOUR DOCTOR'S NAME		MONTH YOU EXPECT TO DELIVER
PATIENT EVER N HOSPITALIZED BAYLOR?	DATES (MAY BE APPROXIMATE)	UNDER WHAT NAME, IF DIFFERENT?	SOCIAL SECURITY NUMBER

BAND INFORMATION

BAND'S FULL NAME (LAST)	(FIRST)	(MIDDLE)	COLOR OR RACE
DATE OF BIRTH TH / DAY / YEAR	BIRTH PLACE (STATE OR FOREIGN COUNTRY)	USUAL OCCUPATION	KIND OF BUSINESS OR INDUSTRY

RSON RESPONSIBLE FOR PAYMENT OF HOSPITAL CHARGES

E (LAST)	(FIRST)	(MIDDLE INITIAL)	RELATIONSHIP TO PATIENT	HOME PHONE
E ADDRESS	CITY / STATE	ZIP CODE	HOW LONG AT THIS ADDRESS?	OCCUPATION OR POSITION
E OF EMPLOYER AND WHERE LOCATED				BUSINESS PHONE

ERGENCY NOTIFICATION (OTHER THAN ABOVE)

E (LAST) (FIRST) (M.I.)	ADDRESS	RELATIONSHIP	PHONE

PE OF ACCOMMODATION

YOU PREFER A PRIVATE ROOM ☐
OR A SEMI-PRIVATE ROOM ☐

(THE TYPE OF ACCOMMODATION REQUESTED WILL BE FURNISHED IF AVAILABLE AT TIME OF ADMISSION, BUT CANNOT BE GUARANTEED)

FOR OFFICE USE
MO
CC
IV
SA
DATE
TIME
CASE #

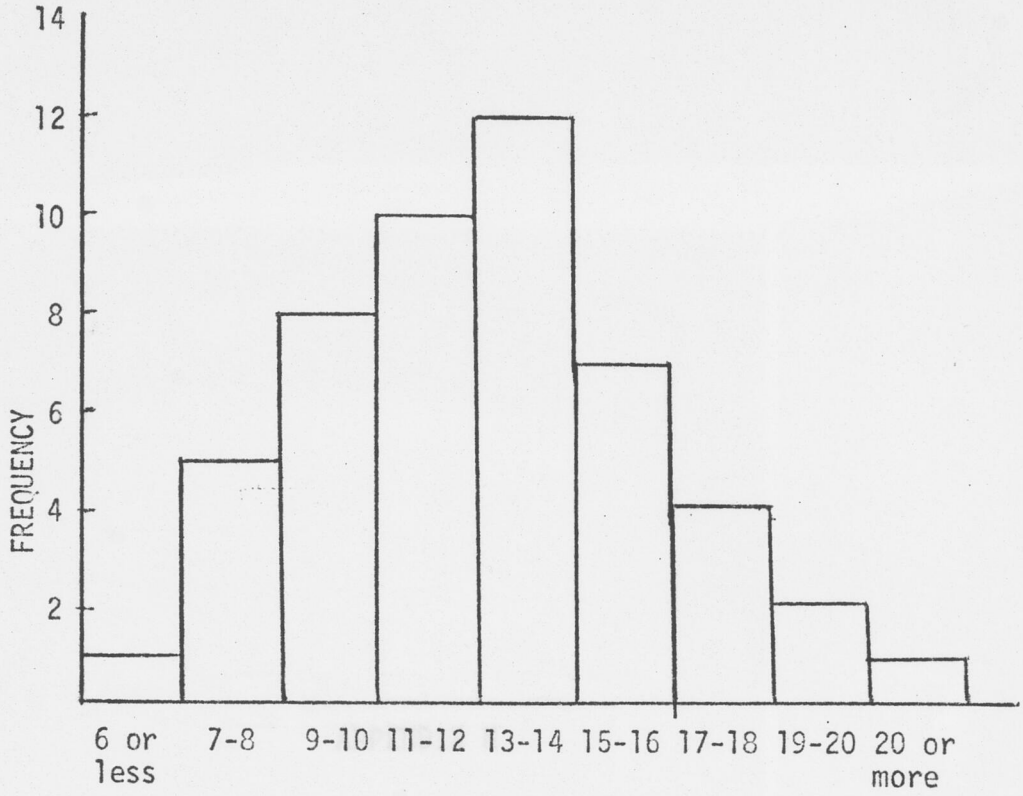
APPENDIX G

BAYLOR UNIVERSITY MEDICAL CENTER

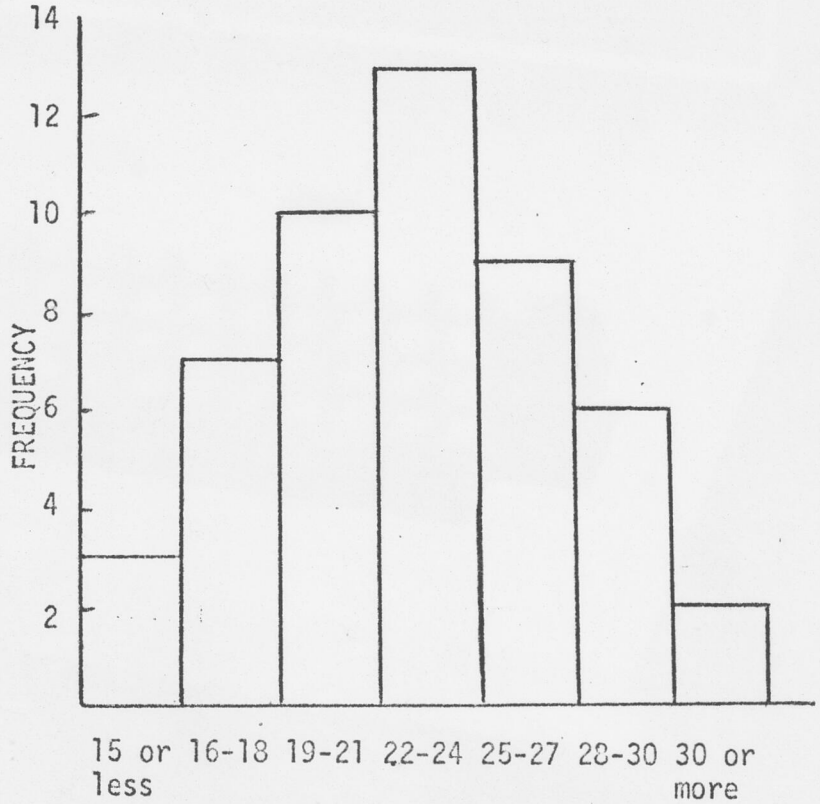
PATIENT ADMISSION

SERVICE TIME

HISTOGRAMS



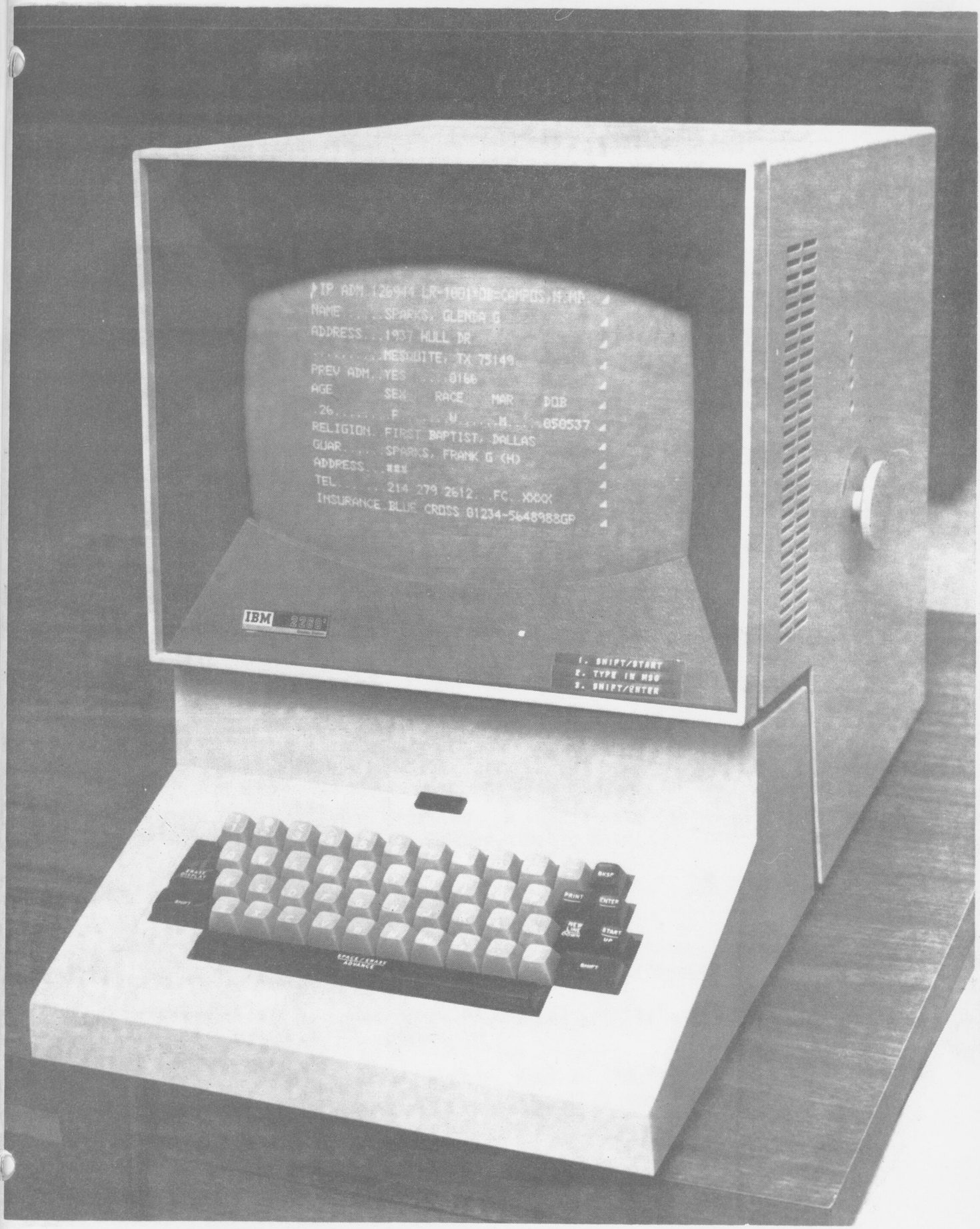
Service Time (Minutes) Pre-Admitted Patients



Service Time (Minutes) Patients Not Pre-Admitted

APPENDIX H

ILLUSTRATION OF IBM 2260 DISPLAY STATION


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ADDRESS . . 1907 HULL DR
. . . . . MESQUITE, TX 75149
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AGE SEX RACE MAR DOB
26 . . . . . F . . . . . M . . . . . M 050537
RELIGION . FIRST BAPTIST, DALLAS
GUAR . . . . SPARKS, FRANK G (HD)
ADDRESS . . ###
TEL . . . . 214 279 2612 FC XXXX
INSURANCE . BLUE CROSS 01234-5648988GP
1. SHIFT/START
2. TYPE IN MSG
3. SHIFT/ENTER
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ABSTRACT

A STUDY OF THE ADMITTING OFFICE AT
BAYLOR UNIVERSITY MEDICAL CENTER

A Problem Solving Thesis Submitted to the Faculty of Baylor University
in Partial Fulfillment of the Requirements for the Degree of
Master of Hospital Administration

by
Lieutenant Colonel Charles B. Conselman, MSC

August, 1971 76 Pages

A copy of this document may be obtained on interlibrary loan from Stimson Library, United States Army Medical Field Service School, Brooke Army Medical Center, Fort Sam Houston, Texas.

The purpose of the study was to determine the most efficient system for admitting patients to Baylor University Medical Center, Dallas, Texas.

Techniques employed in the study included interviews with personnel in the Admitting Office and other departments of Baylor University Medical Center; interviews with managers of admitting departments of selected hospitals; statistical analysis of the Admitting Office work load; and a review of admitting procedures discussed in the current literature.

The study revealed that a pre-admission system should be the most efficient system for controlling patient admissions into Baylor University Medical Center, but that a low pre-admission rate was reducing the effectiveness of the present system. Although benefits expected from this system should include improved public relations, improved bed control, greater flexibility in scheduling work load, reduced admission time and more accurate collection of admitting information, difficulty was experienced with excessive admission time and excessive errors in admission information.

Recommendations were made concerning procedures to increase the percentage of patients pre-admitted and improve the operation of the Admitting Office.