A STUDY OF THE CLINIC APPOINTMENT SYSTEM FOR THE CONFEDERATE MEMORIAL MEDICAL CENTER, SHREVEPORT, LOUISIANA

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CHAPTER I

INTRODUCTION

General

As today's patients visit the modern, multistory facilities, many find it difficult to believe that hospitals were, at one time, nothing more than places of refuge. These institutions began as ecclesiastical organizations rather than medical, and offered faith and love as their primary mode of care.[1] Gradually, however, the hospital has been transformed from its original setting into a vital and necessary center for good community health. With this increase in hospital development, the public conception of what a hospital is, what it does, and what it should do has also developed and led to a demand for more primary, ambulatory care.[2]

The emergence of the hospital as the center for community health and as the provider of health services to all groups of ambulatory patients has been one of the most important developments in the health care field.[3] Although the concept of treating patients on an ambulatory basis is almost two hundred years old, and the quality of medicine practiced has been admirable, the way in which it was dispensed left much to be desired. Doctors, nurses, clerical

staff, and patients have been disorganized and at cross purposes, in most instances.[4] Frequently, necessary resources have not been available, or, when available have been misallocated with regards to patient volume. This unfortunate circumstance has often had an adverse effect on patient attitudes as exemplified by the following quote:

> If you go there in the morning, I don't care what's ailing you, you are there until 6 o'clock that afternoon--and might not be seen then. If there's one 9 o'clock appointment, you can bet your bottom dollar there's about five hundred 9 o'clock appointments.[5]

These remarks all too often have been the rule rather than the exception and merely serve to point out the institution's inability to provide effective and efficient medical care.

With clinical censuses constantly increasing, and with the number of clinics also on the rise, hospitals everywhere are faced with the necessity of meeting and overcoming the problems of excessive waiting and overcrowding. If these problems are not solved, providing more efficient and effective patient care becomes impossible. It is quite clear that the clinical department, characterized by its large waiting rooms, many hours of patient waiting, and apparent lack of concern for the patient's comfort and convenience is obsolete. The objectives for future clinical operations are to provide a one-to-one doctor-patient relationship, continuity of care, an effective appointment system, and a dignified setting for the patient.[6] This particular study

examined only one objective for the clinical operations--that of an effective appointment system.

Hospital Setting and History

In 1870, the need for a hospital for the indigent citizens of Louisiana was recognized, and it was in this year that construction began on a facility to be named "Shreveport Charity." In 1876, Shreveport Charity became a state charity hospital, with the passage of state legislation allocating $10,000 per year for its general operation.

The early 1950s saw the Charity Hospital in its aged and obsolete third home and in search of a new location and facility. In June, 1953, the doors to this new plant were opened at a cost of $8 million, and Shreveport Charity received a new name, the Confederate Memorial Medical Center. The new facility was so named because some of the funds of state care for widows of Confederate veterans were appropriated for this cause.

Today, Confederate Memorial Medical Center stands as a 650-bed institution with a new, modern outpatient and clinical department which was completed in 1973. It consists of organized and staffed departments, covering every medical and surgical specialty. The facility is affiliated with the Louisiana State University School of Medicine in Shreveport, which is constructing a new plant adjoining Confederate Memorial and is its major teaching hospital. In this regard,

Confederate Memorial is fully accredited for 48 internships and 122 residencies and currently has facilities to accommodate the adequate training of these physicians. Confederate Memorial is also affiliated with Northwestern State University and offers an associate degree program in nursing.

Presently, Confederate Memorial Medical Center is fully accredited by the Joint Commission on Accreditation of Hospitals and is the sole employer of approximately 1,300 persons. The hospital operates on a budget in excess of $15 million and as the major source of care for the charity, welfare, and Medicare patients for all of northern Louisiana.

Conditions Prompting the Study

This study was concerned with development of an appointment system for several clinics within the hospital. The primary conditions which prompted this study were those of overcrowded and congested waiting areas in each clinic; excessive patient waiting time in each clinic, with the exception of the obstetrical clinic; and, finally, an appointment system which was ill-adopted to the clinical setting. In addition to these problems, the hospital staff was concerned with the most effective and efficient use of space, manpower, and financial resources in providing patient care. The overriding reasons for this study were patient complaints regarding these overly congested waiting areas, excessively long waits with subsequent exposure by the local news media,

and the constant desire to improve the hospital's public image.

Statement of the Problem

The problem was to determine the best appointment system for the specialty clinics at the Confederate Memorial Medical Center, Shreveport, Louisiana.

Objectives

The objectives of this study were as follows:

1. Study and analyze the present system of clinic appointments.
2. Determine alternative methods of patient appointment systems.
3. Evaluate alternative appointment systems.
4. Select the most adaptable method for application to the existing clinic structure.

Criteria

The criteria utilized for this study were as follows:

1. The best appointment system should be flexible and capable of handling the clinic workload at Confederate Memorial Medical Center.
2. The appointment system should be responsive to the various requirements of each clinic, its physicians, and its patients.
3. The appointment system should be readily accessible to all those requiring interface with the system.

4. The appointment system should be designed for easy comprehension by the personnel who staff the clinical appointment desk and the patients.

5. The staffing for an appointment system should not disrupt the current administrative support to the clinics.

Limitations

This study was limited by the following factors.

1. There is no capability for computerization of the appointment system.

2. Evaluation of the appointment system will be limited to thirteen specialty clinics as requested by Confederate Memorial Medical Center based on workload data and complaints received.

Assumptions

The assumptions utilized in this study were as follows:

1. The ambulatory patient workload will continue to increase beyond the monthly average of 10,070.

2. The thirteen specialty clinics will continue to exist as presently organized.

Research Methodology

The collection of information for this study was accomplished by the following methods:

1. A thorough review of the literature was undertaken to determine trends and concepts with regard to clinic appointment systems.

2. Interviews with the administrator, the assistant administrator, and the various directors were conducted in order to ascertain their views and concepts of appointment systems.

3. Unstructured interviews were conducted with the appointment clerks to determine their attitudes toward the present appointment system and their ideas toward a proposed system.

4. An analysis of the clinical statistics was done to determine the workload and trends in patient visits.

5. A detailed evaluation of the present appointment system was conducted for an analysis of its functions, effectiveness, and applicability.

Review of the Literature

With the ever-increasing demand for ambulatory care continually in the forefront of health care delivery, it has become more and more common to find patients waiting in overly congested areas for extended periods of time in order to see a physician. To keep patients waiting in crowded waiting areas any longer than necessary is clearly undesirable. A thorough review of the literature indicates that appointment systems, in attempting to help reduce waiting and congestion,

have progressed on a continuum, beginning with a very basic pencil and paper system and ending with today's highly complex computerized systems. This progression has identified three desirable characteristics of appointment systems: the appointment mechanism itself, control, and speed. Each of these characteristics, in turn, has produced several separate and distinct appointment systems.

The first characteristic, the appointment mechanism or how the patient was actually appointed, has led to three distinct appointment systems: (1) Pure Block Appointment System, (2) Individual Appointment System, and (3) Mixed Block-Individual Appointment System (Appendix A). All of these systems were adequately described in a study by A. Soriano.[7] Subsequent studies by Villegas,[8] Johnson and Rosenfeld,[9] and Rosenblut, et al.[10] have compared the relative merits of each of these systems and all have concluded that the pure block appointment system has inherent qualities which contribute to congestion and overcrowding. Moreover, when physicians and patients were punctual and when patients were given either individual appointments or mixed block-individual appointments, the patient's waiting time and the associated congestion were radically reduced.

The next characteristic addressed by the literature was that of control, which centered around the concepts of centralization, decentralization, or some combination of the two. The control characteristic also led to two distinct appointment systems: (1) centralized, and (2) decentralized

(Appendix A). As a general rule, major specialty clinics have adopted a centralized appointment system and the more esoteric subspecialty clinics have adopted a decentralized system.

Although the literature addressed each aspect of the control characteristic, the primary emphasis was in the direction of centralization or the combination approach and nearly always incorporated the individual system as a basic subsystem. Tillock, et al. described a centralized system designed to smooth the work flow by centrally controlling all appointments. This particular system utilized a master appointment schedule which was compiled daily, duplicated, and distributed in advance, specifying all patient service requirements for the following day. The key to this operation was expressed as the advance distribution of appointments.[11]

Doble[12] and Holston[13] both described a basic combination system of centralizing and decentralizing, although the systems were termed "centralized." Their objective was to increase the capacity of the "centralized" system by offering a higher degree of sophistication through the use of mechanical devices. They utilized the familiar rotary drum, lazy susan with several appointment clerks, and a multiline, phone-in system.

The final characteristic of appointment systems was that of adding speed to the relatively slow and often cumbersome manual system. This led to the concepts of

mechanization and computerization and, as such, was generally termed mechanized appointment systems or computerized appointment systems. Both of these systems, in the literature reviewed, utilized the centralized, individual concept and superimposed the mechanization or computerization on them.

Paulson,[14] in describing a mechanized system at Fitzsimmons Army Hospital, utilized a punch-card system with Automatic Data Processing (ADP) equipment. In this system, the scheduling clerk merely completed the appropriate punch card, and the mechanization completed the process.

Jessiman and Erat,[15] in an analysis of the computerized system at Peter Bent Brigham Hospital in Boston, Massachusetts, described a real time, time-shared system of patient appointments. They offered, as one of the more cogent reasons for their computerization, the idea of a major building block toward construction of a totally automated clinical or outpatient department information system.

In short, it seemed that patient appointment systems have progressed on a continuum from merely appointing patients in blocks, individually, or in some basic combination of the two, through the control concepts of centralization or decentralization and now rest with the computerization of the system. It appeared that hospitals and clinics were being told that the computerized, centralized, individual appointment concept is the panacea for what ails patient appointments.

Although the literature offered computerization as the final solution, this answer was obviously predicated on the availability of material resources and financing to provide such an appointment system. What about those facilities without the necessary resources? They must analyze their current situation with regards to patient volume and resources available, determine which appointment mechanism will be best suited to the existing circumstances, and decide which concept of control best accomodates their situation. To this end, the endeavor was directed.

Footnotes

[1]Abraham Soriano, "Comparison of Two Scheduling Systems," Operations Research, XIV (May-June, 1966), 388.

[2]Alexander McMahon, "Hospitals Must Adapt to Changing Community Perceptions," Hospitals, XLIX (March 1, 1975), 37.

[3]Conrad E. A. Herr and Elaine O. Patrikas, "Keeping Track of Ambulatory Care," Hospitals, XLIX (March 1, 1975), 89.

[4]Leonard W. Cronkite, Jr., and Thomas E. Cone, "Unified Outpatient Clinic Provides Single Level of Care," Hospitals, XLII (January 16, 1968), 57.

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

[6]Andrew J. Jessiman and Kathryn Erat, "Automated Appointment System to Facilitate Medical-Care Management," Medical Care, VIII (May-June, 1970), 234.

[7]Soriano, p. 388.

[8]Eduardo L. Villegas, "Outpatient Appointment System Saves Time for Patients and Doctors," Hospitals, XLI (April 16, 1967), 52.

[9]Walter L. Johnson and Leonard S. Rosenfeld, "Factors Affecting Waiting Time in Ambulatory Care Services," Health Services Research, III (Winter, 1968), 286.

[10]Rosenblut, et al., p. 48.

[11]Eugene E. Tillock, William W. Aberdroth, and Graham D. Clapp, "Central Scheduling Smooths the Work Flow," Modern Hospital, CIX (September, 1967), 123.

[12]Henry P. Doble, Jr., "Streamlining Walter Reed's Central Appointment System," Hospital Topics, XLII (October, 1964), 41-45.

[13]Charles A. Holston, "Central Appointment System for Outpatient Clinics," Hospital Management, CIV (October, 1967), 65-70.

[14]Isabel S. Paulson, "A Mechanized Appointment System for Outpatient Clinics," Hospitals, XL (September 16, 1966), 82.

[15]Jessiman and Erat, p. 237.

CHAPTER II

DISCUSSION

Clinic Arrangement

This study began with thirteen clinics, which were: general medicine, allergy, diabetic, comprehensive health care, general surgery, eye, obstetrics-gynecology, proctology, urology, E.N.T., orthopedics, pediatrics, and oral surgery. These particular clinics were studied at the request of the hospital staff, based on workload and complaints received. However, as the study progressed, the proctology clinic and the comprehensive health care clinic were eliminated, which left eleven clinics involved in the study. The proctology clinic was eliminated because of minimal workload, and the comprehensive health care clinic because of a proposed move to the new medical school.

The remaining eleven clinics were all located in the same general area and provided a high degree of accessibility to the patients. Six of the clinics were located in the newly constructed outpatient department, whereas the other five clinics utilized hospital wards which were contiguous to the outpatient building.

Laboratory services, located in the outpatient building, were available to all clinics. This service was

subdivided into three sections, with urinalysis work done on the first floor, minor blood work done on the second floor, and a few more complicated procedures on the third floor. This laboratory support was in addition to the main hospital laboratory. These clinics had no such support for radiology.

Appendix B shows a functional diagram of Confederate Memorial Medical Center, with the specialty clinics superimposed. Appendix C provides an organizational chart which shows the relationship of the specialty clinics to the remainder of the institution.

In recent years, the entire outpatient department and the specialty clinics have experienced a tremendous increase in workload (Appendixes D and E). This expansion in patient volume created many difficulties for Confederate Memorial Medical Center and was the major contributor to the problem encountered in this study.

Present System

This study revealed that the appointment systems supporting the speciality clinics of Confederate Memorial were manually operated, with nine clinics appointing in pure block appointments and two clinics using a mixed block-individual appointment mechanism. Control of the clinical operation was decentralized and, in all cases, physicians were not assigned in advance.

Patients were appointed in all clinics by use of an appointment card system which featured three separate cards (Appendix F). A white card was maintained by the various clinics and functioned as the appointment book, although many appointment clerks transposed these cards to a special notebook. The second card, in all cases but one, a pink card, was maintained by the patient and indicated his day of appointment. The orthopedic clinic utilized a blue card for its patients as it apparently facilitated the patient's movement to the clinic once in the hospital.[1] An additional card was used as a mechanism for retrieval of the patient's medical record (Appendix G).

The patients who were appointed to the various clinics were referred from other clinics, the hospital wards, the walk-in clinic, or were appointed for a return visit by the individual clinic concerned. Patients appointed by the wards during week-ends or at night, and many patients appointed from other clinics, were given the appointment without consulting the clinic concerned. They merely completed a white appointment card for the patient and forwarded the card to the treating clinic.

The current trends in workload and more detailed information concerning appointment systems in the specialty clinics are more closely examined in Appendix H. Appendix I provides the hours of operation used to handle this workload. As indicated in Appendix H, nine of the specialty clinics used

the pure block appointment system. This resulted in crowded waiting areas, excessive patient waiting time, and a generally congested atmosphere. Two of the specialty clinics used a mixed block-individual appointment system with some improvement. Additionally, all these clinics were experiencing an approximate 30 per cent no-show rate, and an approximate 40 per cent walk-in rate (Appendix J). However, the pure block appointment system was generally considered the only possible system because of the low socioeconomic level of the patient population, and the general lack of transportation available to these patients.[2]

Although the use of a pure block appointment system contributed substantially to the overcrowded conditions, there were many other aspects of the operation which contributed equally as well. The population was of the lowest socioeconomic level and was almost entirely charity or Medicare patients. As such, the transportation available to them was limited, and consisted mostly of rides with friends who were employed either at the hospital or elsewhere in the community. These patients would arrive in the morning and remain in the hospital until picked up that night. Consequently, many patients were in the hospital during the course of the day. This was one of the major motivators toward use of the pure block appointment system and resulted in the excessive waiting time for patients and the minimization of doctors' idle time.

Another characteristic common to all clinics that was detrimental to any appointment-system concept was physician control. Most all patients were appointed at the beginning of each clinic session, but this was done without a physician work roster and in complete disregard to the presence of physicians. Appointments were simply given for a particular day, and there may or may not have been sufficient coverage. The majority of the clinics were experiencing something less than adequate coverage. This situation was further complicated by the educational aspect of Confederate Memorial being the teaching facility for the Louisiana State University School of Medicine in Shreveport. As a result of this affiliation, much more emphasis was placed on the physician's education, at the expense of the patient. Interns were, more often than not, left to run the clinics, while the more qualified residents were elsewhere. This was a situation that had to be corrected. The more qualified persons should spend much more time in the clinics where the real learning experience takes place.[3]

Resource utilization was another concern that contributed to the overly congested areas within the clinics. Early in the study, indications were that space, manpower, and funds would be available for adoption of any proposed appointment system. However, as the evaluation progressed, it became quite apparent that space was severely limited which, in

itself, created much overcrowding. As an example, the OB-GYN clinic and the pediatric clinic, two of the busiest clinics, both occupied the same hospital ward, each having one side of the hallway. Although a major renovation program was in progress, no funds were allocated toward space, manpower, and equipment for an improved clinical operation. Any additional space that could be developed for utilization of an improved appointment system could be much better utilized as additional waiting space or extended clinical facilities.

Other items have contributed to the institutional problems addressed by this study. Lack of communication between the various departments was frequent and precluded any continuity for the overall operation. Such seemingly insignificant items as a push button phone system without button lights created significant delays in the administration process within the clinics.

Moreover, the hospital used a plastic patient card, and these cards were frequently lost or left at home. The hospital policy precluded reissuance of a card until the patient was admitted to the hospital. This required the clerical staff of the clinic to fill out all lab forms, Medicare forms, and all others by hand when confronted by a patient with no card and not requiring admission. This was a significant contributor to patient waiting time because it approximately doubled the patient's administrative

processing time. In short, the system was in need of some alterations if the hospital was to improve its image with the patients served, and provide a more effective appointment system with more efficient resource utilization.

Alternatives

The attempt at developing a more appropriate system involved the application of several alternative systems: (1) Centralized individual appointment system, (2) Decentralized individual appointment system, (3) Centralized mixed or block-individual appointment system, (4) Decentralized mixed block-individual appointment system, (5) Centralized-Decentralized individual appointment system, and (6) Centralized-Decentralized mixed block-individual appointment system. Each system was evaluated with respect to how patients are appointed, either individually or mixed block-individual and mechanisms of control, either decentralized or centralized. Following this, the major advantages and disadvantages of each alternative were evaluated regarding its applicability for Confederate Memorial Medical Center.

Centralized Individual Appointment System

This particular appointment system could be implemented within the clinical areas by making all patient appointments in a central location, with each patient having an individual appointment time. However, when this system is applied to any given institution, there are advantages

and disadvantages peculiar to that facility which must be considered.

Advantages

The advantages of the Centralized Individual Appointment System were as follows:

1. The centralized approach would free clinic receptionists, nurses, and other personnel from appointment duties, which would enable them to more effectively coordinate the clinic's activities.[4]

2. The centralized approach creates a uniformity of patient scheduling and assists in standardization of the appointment system. Consequently, it also provides a uniform system of collecting workload data.

3. The centralized approach can be a source of information to the public concerning hospital clinic operations.

4. The centralized approach promotes fuller utilization of available physician time.

5. Excessive patient waiting time would be greatly reduced; consequently, the amount of waiting space required would also decrease.

6. Work flow for physicians would be improved. Rather than having the workload all lumped together at the beginning of the clinic session, the workload would be more equally spaced throughout the day.

7. Better control of physician personnel could be realized along with improvement in productivity.

Disadvantages

The disadvantages of the Centralized Individual Appointment System were as follows:

1. This system would require provisions for adequate supervision, which essentially means additional staff.

2. Transportation problems for the lower socio-economic patient population would eliminate many of the previously mentioned advantages.

3. A 30 per cent no-show rate as shown in Appendix F precludes this system from efficiently and effectively operating. The clerical staff of each clinic would spend most of its time determining who was and who was not there.

4. The teaching atmosphere developed feelings on the part of some physicians that centralization would cause a loss of clinic flexibility in that someone else would be controlling their appointment schedule. This inflexibility would not facilitate rapid schedule changes and could therefore adversly affect the teaching aspect of the clinic operation.

5. Although indications were that space and financing would be made available for centralization of appointments,[5] this study revealed that there were extreme limitations on each of these resources. As a result, higher priorities such as expanded clinic operations, existed for the resources available.

6. Although centralization of appointments would free the clerical personnel of the clinics from appointment duties, they would not be available to staff a centralized system because of other clinic management requirements. As a result, a requirement for additional manpower to staff a centralized system would exist; however, funds available had higher priorities than additional manpower for a centralized system.

Decentralized Individual Appointment System

The decentralized individual appointment system could easily be implemented by each clinic appointing each patient at an individual time. There are both advantages and disadvantages of this system.

Advantages

The advantages of the decentralized individual appointment system were as follows:

1. The decentralized aspect provides greater flexibility and adaptability to the idiosyncrasies of each specific clinic. The appointments for each clinic can be made in light of the individual requirements for that particular clinic, and there does not have to be a standardized method for making appointments for all clinics, which could be ill-adapted to a teaching setting.

2. The decentralized aspect is familiar to the clerical staff, professional staff, and patients at Confederate Memorial since this system is currently in use. Additionally, the present system would provide much less burden to the

already limited clerical staff because of the large no-show rate.

3. The teaching atmosphere developed feelings on the part of some physicians that they can render better care with the decentralized system. In a decentralized system, these physicians may make changes quite easily, whereas the centralized system does not facilitate these changes.

4. The decentralized aspect more closely approximates a private practice appointment system.

5. Excessive patient waiting time would be greatly reduced; consequently, the amount of waiting space required would also decrease.

6. Work flow for physicians would be improved. Rather than having the workload all lumped together at the beginning of the clinic session, the workload would be more equally spaced throughout the day.

7. Better control of physician personnel could be realized with improvements in productivity.

8. The number of clerical personnel required to make appointments is greater, since each clinic requires an appointment clerk on an individual basis. However, this system is already in use and would not require additional personnel.

Disadvantages

The disadvantages of the decentralized individual appointment system were as follows:

1. The decentralized system is, by its very nature, autonomous and requires supervision at the individual clinical level. When this is not done, the individual clinic as well as the entire operation suffers.

2. The decentralized approach requires a much greater effort to provide uniformity and continuity to the clinical operation.

3. Transportation problems for the lower socio-economic patient population would eliminate many of the previously mentioned advantages.

4. A 30 per cent no-show rate as shown in Appendix F precludes this system from efficiently and effectively operating. The clerical staff of each clinic would spend most of its time determining who was and was not there.

Centralized Mixed Block-Individual Appointment System

This particular appointment system could be implemented in the same manner as the centralized individual system. All appointments would be made at a central location; however, in this system the patients would be appointed in small blocks of five per hour per physician. As with any appointment system, when applied to a given setting, there are advantages and disadvantages which must be examined.

Advantages

The advantages of the centralized mixed block-individual appointment system were as follows:

1. The centralized aspect of this system would free clinic receptionists, nurses, and other personnel from appointment duties, which would enable them to more effectively coordinate the clinic's activities.[6]

2. The centralized aspect creates a uniformity of patient scheduling and assists in standardization of the appointment system. Consequently, it also provides a uniform system of collecting workload data.

3. The centralized aspect can be a source of information to the public concerning hospital clinic operation.

4. The centralized aspect promotes fuller utilization of available physician time.

5. The waiting time required of patients would be substantially reduced with a subsequent benefit of less waiting space required.

6. This system also allows increased control over physician personnel and provides much improved productivity.

7. This appointment system allows a clinic to compensate for a large no-show rate by simply "over-booking" patients by the same no-show percentage, or the difference between the no-show rate and the walk-in rate.

8. This system would not require additional staff because the requirement for supervision would not increase substantially over what presently exists.

Disadvantages

The disadvantages for the centralized mixed block-individual appointment system were as follows:

1. Transportation for patients would also be a problem with this system. However, the flexibility of this system would allow the clerical personnel more freedom in asking the patient if transportation were available for a later appointment; if so, the patient could be scheduled later in the day.

2. The teaching atmosphere developed feelings on the part of some physicians that centralization would cause a loss of clinic flexibility in that someone else would be controlling their appointment schedule. Further, this inflexibility would not facilitate rapid schedule changes and could therefore adversely affect the teaching aspect of clinical operations.

3. Although indications were that space and financing would be made available to centralization of appointments,[7] this study revealed that there were extreme limitations on each of these resources. As a result, higher priorities such as expanded clinic operations existed for the resources available.

4. Although centralization of appointments would free the clerical personnel of the clinics from appointment duties, they would not be available to staff a centralized system because of other clinic management requirements. As a result, a requirement for additional manpower to staff a centralized system would exist; however, funds available had higher priorities than additional manpower for a centralized system.

Decentralized Mixed Block-Individual Appointment System

This alternative system would continue to allow each clinic to make its own appointment schedule, but would also

feature patients appointed in blocks of five per hour per physician. This system also has advantages and disadvantages which must be discussed.

Advantages

The advantages of the decentralized mixed block-individual appointment system were as follows:

1. The decentralized approach provides greater flexibility and adaptability to the idiosyncrasies of each specific clinic.

2. The decentralized approach is familiar to the clerical staff, professional staff, and patients at Confederate Memorial.

3. The teaching atmosphere developed feelings on the part of some physicians that they can render better care in a decentralized system. In this system, these physicians may make changes quite easily, whereas the centralized system does not facilitate these changes.

4. The decentralized approach more closely approximates a private practice appointment system.

5. The waiting time required of patients would be substantially reduced with a subsequent benefit of less waiting space required.

6. This approach allows for increased control of physician personnel and provides much improved productivity.

7. This system would not require additional staff, because the requirement for supervision would not increase

substantially over what presently exists.

8. This approach allows a clinic to compensate for a large no-show rate. A study by Villegas indicated that a 30 per cent no-show rate is quite common in health care institutions which primarily treat patients from the lower socio-economic levels of society. Although he suggests no solution for prevention of a no-show, he did indicate that a 30 per cent upward adjustment in the number of patients appointed would adequately compensate for this problem.[8]

Disadvantages

The disadvantages of the decentralized mixed block-individual appointment system were as follows:

1. Decentralization is, by its very nature, autonomous and requires supervision at the individual clinical level. When this is not done, the individual clinic as well as the entire operation suffers.

2. Decentralization requires much more effort to provide uniformity and continuity to the clinical operation.

3. Transportation for patients would also be a problem with this system. However, the flexibility of this system would allow the clinical personnel more freedom in asking the patient if transportation were available for a later appointment; if so, the patient could be scheduled later in the day.

Centralized-Decentralized Individual Appointment System

This particular system would feature the centralization of appointments in the larger clinics and the decentralization of appointments in the smaller clinics. In each case, however, the patient is given an individual appointment time. As with any system, there are advantages and disadvantages which must be discussed.

Advantages

The advantages of the centralized-decentralized individual appointment system were as follows:

1. The centralized aspect of this system would free clinic receptionists, nurses, and other personnel from appointment duties, which would enable them to more effectively coordinate the clinic activities.[9]

2. A more uniform patient appointment system would result, particularly with the clinics utilizing the central appointment approach. Additionally, more accurate workload data could be generated from the clinics.

3. The larger clinics would realize fuller utilization of available physician time.

4. Excessive patient waiting time would be greatly reduced; consequently, the amount of waiting space required would also decrease.

5. The smaller, decentralized clinics have greater flexibility and adaptability to the idiosyncrasies of each clinic.

Disadvantages

The disadvantages of the centralized-decentralized individual appointment system were as follows:

1. Although indications were that space and financing would be made available for centralization of appointments,[10] this study revealed that there were extreme limitations on each of these resources. As a result, higher priorities such as expanded clinic operations existed for the resources available.

2. Although centralization of appointments would free the clerical personnel of the clinics from appointment duties, they would not be available to staff a centralized system because of other clinic management requirements. As a result, a requirement for additional manpower to staff a centralized system would exist; however, funds available had higher priorities than additional manpower for a centralized system.

3. The decentralized aspect of this system would require an increased effort to provide uniformity and continuity to the overall clinic operation.

4. The 30 per cent no-show rate virtually precludes the effective operation of this appointment system.

Centralized-Decentralized Mixed Block-Individual Appointment System

This appointment system could be implemented by centralizing the larger clinics and decentralizing the smaller clinics. In each case, however, the patients would be appointed

in small blocks of five per hour per physician.

Advantages

The advantages of the centralized-decentralized mixed block-individual appointment system were as follows:

1. The centralized aspect of this system would free clinic receptionists, nurses, and other personnel from appointment duties, which would enable them to more effectively coordinate the clinic activities.

2. The larger clinics would realize fuller utilization of available physician time.

3. Excessive patient waiting time would be greatly reduced; consequently, the amount of waiting space required would also decrease.

4. The smaller, decentralized clinics have greater flexibility and adaptability to the idiosyncrasies of each clinic.

5. The mixed block-individual aspect of this system allows for a percentage overbook of patients as a solution to the large no-show rate.

Disadvantages

The disadvantages of the centralized-decentralized mixed block-individual appointment system were as follows:

1. Although indications were that space and financing would be made available to centralization of appointments,[12] this study revealed that there were extreme limitations on each of these resources. As a result, higher priorities such as

expanded clinic operations existed for the resources available.

2. Although centralization of appointments would free the clerical personnel of the clinics from appointment duties, they would not be available to staff a centralized system because of other clinic management requirements. As a result, a requirement for additional manpower to staff a centralized system would exist; however, funds available had higher priorities than additional manpower for a centralized system.

3. The decentralized aspect of this system would require an increased effort to provide uniformity and continuity to the overall clinical operation.

Summary

This study was directed toward development of a clinical appointment system other than the decentralized pure block appointment system currently used by Confederate Memorial Medical Center. The general clinical arrangement and operational methodology has been presented for a basic understanding of what existed, and the general nature of the study. To better acquaint the reader with the problems of the current system, an in-depth discussion of the present system was also presented.

The development of the proposed appointment system involved the examination of six alternatives and their advantages and disadvantages to Confederate Memorial Medical Center. The six alternatives used were as follows: (1) Centralized

individual appointment system; (2) Decentralized individual appointment system; (3) Centralized mixed block-individual appointment system; (4) Decentralized mixed block-individual appointment system; (5) Centralized-Decentralized individual appointment system; and (6) Centralized-Decentralized mixed block-individual appointment system.

Four of these alternatives attempt to capitalize on the centralized control characteristic of appointment systems. As the study began, indications were that the resources of space, manpower, and money would be available for the centralizing aspect. However, as the study progressed, it became obvious that these critical resources were not readily available and what was available could have been much better utilized elsewhere.

The two remaining alternatives, the decentralized individual system and the decentralized mixed block-individual system, center primarily around the critical 30 per cent no-show rate. As previously indicated, a study by Villegas[13] demonstrates that the solution to this problem was a per cent overbook of patients which approximately equals the no-show rate. In order to accomplish this, one must choose the mixed block-individual appointment system.

Footnotes

[1]Interview with Miss Freda Fordham, Admitting Officer, Confederate Memorial Medical Center, Shreveport, Louisiana, March 5, 1975.

[2]Ibid.

[3]Interview with Dr. Ike Muslow, Medical Director, Confederate Memorial Medical Center, Shreveport, Louisiana, March 7, 1975.

[4]R. B. Stuart, "A Study of Appointment Scheduling Control for Outpatients," Report No. 6, Health Care Studies Division, Academy of Health Sciences, U.S. Army, Fort Sam Houston, Texas, January, 1973, p. 100.

[5]Joe L. Germany, Assistant Administrator, Confederate Memorial Medical Center, Shreveport, Louisiana, March 4, 1975.

[6]Stuart, p. 100.

[7]Interview with Joe L. Germany, Assistant Administrator, Confederate Memorial Medical Center, Shreveport, Louisiana, March 4, 1975.

[8]Villegas, p. 52.

[9]Stuart, p. 100.

[10]Interview with Germany, March 4, 1975.

[11]Stuart, p. 100.

[12]Interview with Germany, March 4, 1975.

[13]Villegas, p. 52.

CHAPTER III

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

An evaluation of the current system for clinic patient appointments at Confederate Memorial Medical Center resulted in the following conclusions:

1. The present decentralized system of control was the best method for insuring the effective, accurate, and efficient dispersement of clinic appointments.

2. The present pure block appointment mechanism was ill-adapted to the clinical setting.

3. There were several problems apart from the specific patient appointment system that must be corrected to insure an efficient operation.

Recommendations

The following recommendations resulted from the study:

1. The decentralized system for control of clinic appointments should be continued at Confederate Memorial Medical Center.

2. The current use of the pure block appointment mechanism should be eliminated and a mixed block-individual appointment system should be adopted. The specific time-frame

for blocks may vary with each clinic; but as a minimum, blocks should be one hour, with approximately five patients scheduled per hour per physician.

3. A physician-control roster of some type should be developed to insure patients are appointed at a time when physicians are going to be present. Moreover, for the recommended appointment system to work properly, the appointment clerks are going to require a physician schedule.

4. Coordination between all clinics and wards be maximized, particularly those clinics and wards that may be making appointments for other clinics. This will impact greatly on the ward and clinic appointments made during other than normal operating hours.

5. A system should be initiated which will insure each patient has a plastic patient card when presented at the clinic. One method which would work, would require placing the card in the patient's medical record.

6. A standard clinic model for patient appointments should be developed. This model would include a standard clinic procedure, standard forms, and standardized management reports. Each clinic could modify the standard model to meet the particular idiosyncrasies of that clinic.

7. A lighting system should be installed on the push-button phones in all cinics.

8. A weekly or bi-monthly staff meeting should be required to improve communication between departments. This should substantially increase continuity and uniformity to the clinical operation.

APPENDIX A

DEFINITIONS

DEFINITIONS

Centralized Appointment System: A system which schedules all clinic patient visits at a single location.

Computerized Appointment System: A system which utilizes a computer for scheduling patient appointments.

Combination Centralized-Decentralized Appointment System: A system which centralizes the major speciality clinics and yet allows the more esoteric subspecialty clinics to make their own appointments.

Decentralized Appointment System: A system which allows each individual clinic to schedule its own appointments.

Individual Appointment System: A system in which each patient is assigned a different appointment time and these times are equally spaced throughout the clinic session.

Late Arrival: A patient who arrives at the clinic late for his scheduled appointment.

Mechanized Appointment System: A system which utilizes ADP equipment for scheduling patient appointments.

Mixed Block-Individual Appointment System: A system in which an initial group of patients arrives at the beginning of the clinic session with other groups of patients scheduled to arrive at equally spaced intervals throughout the session.

No-show: A patient who fails to keep a scheduled appointment.

Physician Idle Time: The period of time physicians must wait between scheduled patients.

Pure Block Appointment System: A system in which all patients are scheduled to arrive at the beginning of the clinic session.

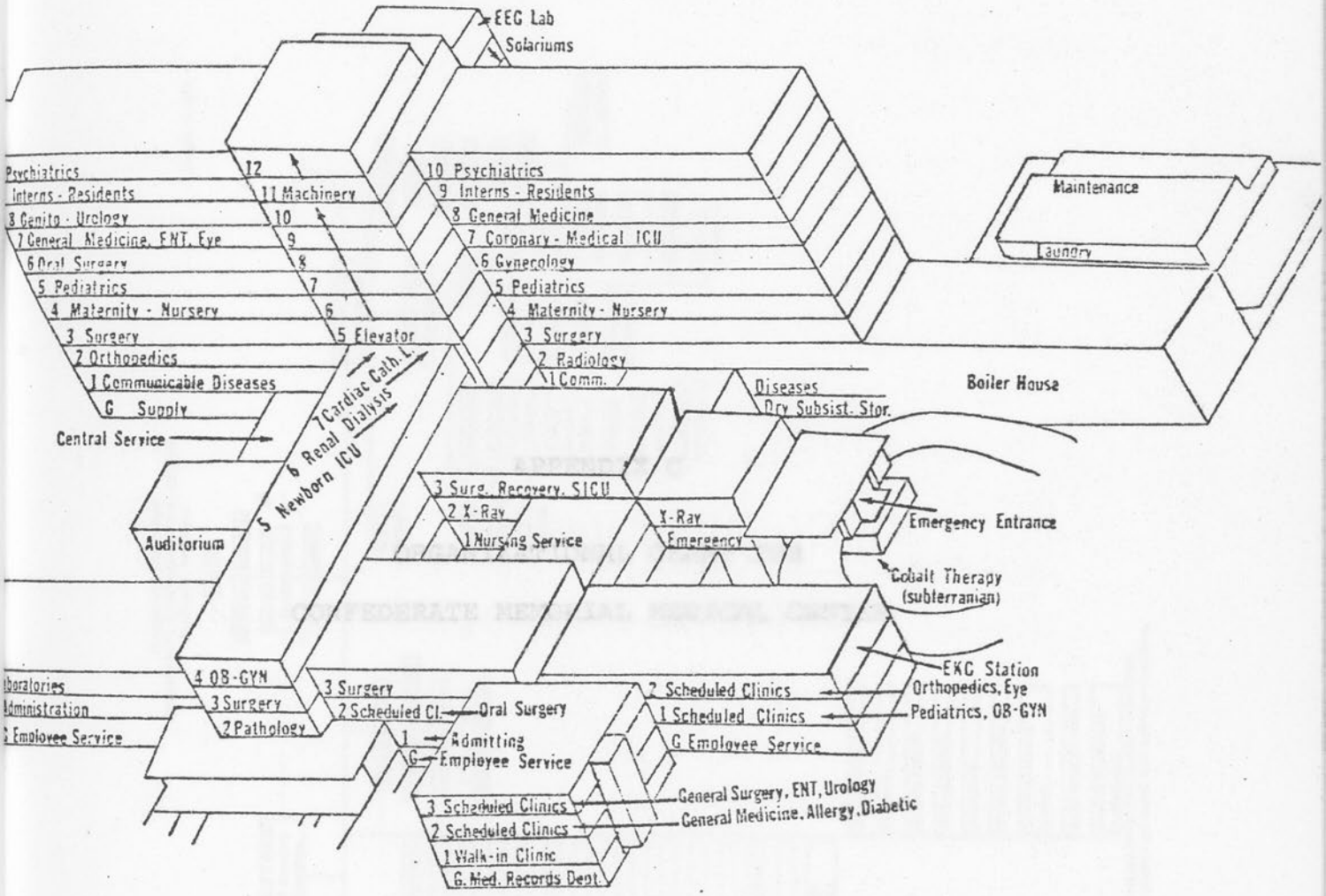
Walk-in: A patient who arrives at the clinic for treatment without a scheduled appointment.

APPENDIX B

FUNCTIONAL DIAGRAM OF

CONFEDERATE MEMORIAL MEDICAL CENTER,

SHREVEPORT, LOUISIANA



CONFEDERATE MEMORIAL MEDICAL CENTER

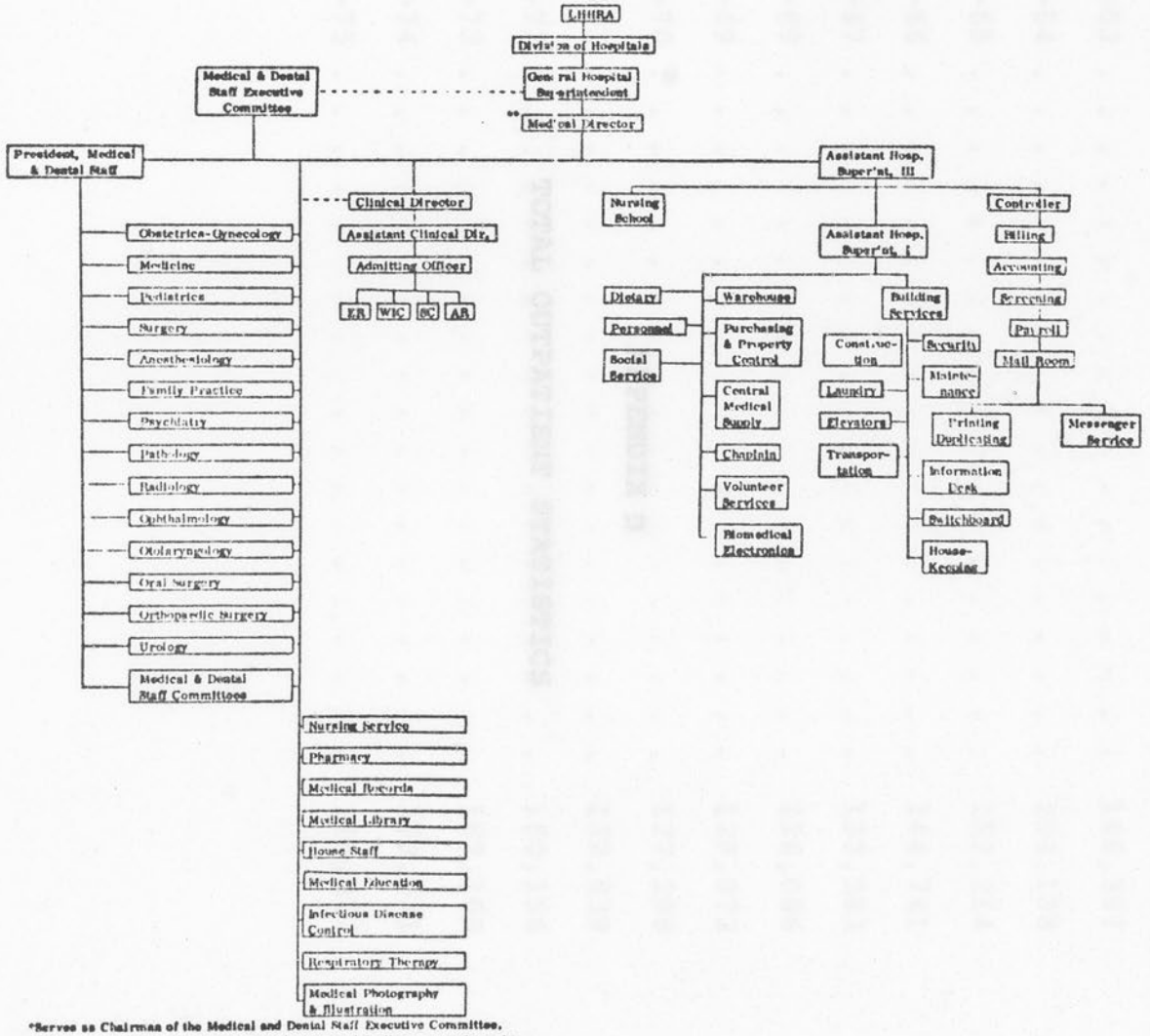
APPENDIX C

ORGANIZATIONAL CHART FOR

CONFEDERATE MEMORIAL MEDICAL CENTER

ORGANIZATIONAL CHART
CONFEDERATE MEMORIAL MEDICAL CENTER
Shreveport, Louisiana

January 1, 1975



*Serves as Chairman of the Medical and Dental Staff Executive Committee.
**Serves as Executive Secretary, Medical and Dental Staff Executive Committee.

APPENDIX D

TOTAL OUTPATIENT STATISTICS

TOTAL OUTPATIENT STATISTICS

Year	Total Patients Seen
1962-63	146,397
1963-64	154,138
1964-65	152,214
1965-66	144,741
1966-67	137,583
1967-68	136,086
1968-69	129,972
1969-70	127,290
1970-71	139,839
1971-72	150,156
1972-73	167,105
1973-74	179,371
1974-75	186,417

APPENDIX E

TOTAL SPECIALTY CLINIC STATISTICS

TOTAL SPECIALTY CLINIC STATISTICS

Year	Total Patients Seen
1962-63	83,006
1963-64	84,598
1964-65	84,478
1965-66	80,537
1966-67	79,444
1967-68	75,652
1968-69	73,644
1969-70	70,773
1970-71	76,543
1971-72	79,711
1972-73	94,191
1973-74	97,580
1974-75	120,830

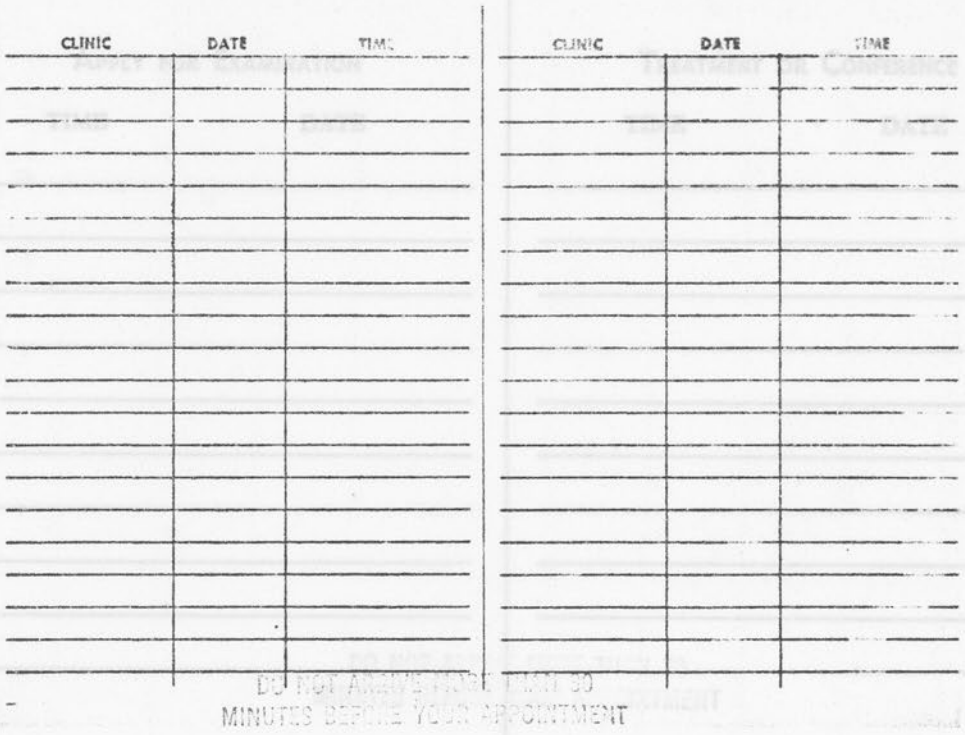
APPENDIX F

PATIENT APPOINTMENT CARDS

NAME _____ No. _____

CLINIC	DATE	CLINIC	DATE

This represents the white appointment card used by the clinic clerical staff as an appointment book.



This card must be kept with you at all times and be presented on your return visit.

It is very important that you be on time for your appointment.

SCREENING NUMBER

Confederate Memorial
Medical Center

OUT PATIENT CLINIC

APPOINTMENT CARD

This represents the pink patient card which is maintained on the patient's person and serves to inform him of his scheduled appointment.

APPLY FOR EXAMINATION		TREATMENT OR CONFERENCE	
TIME	DATE	TIME	DATE

DO NOT ARRIVE MORE THAN 30
MINUTES BEFORE YOUR APPOINTMENT

This card must be kept with you at all times and be presented on your return visit.

It is very important that you be on time for your appointment.

HOSPITAL NUMBER

SCREENING NO.

ORTHOPEDIC CLINIC
Confederate Memorial Medical Center
Shreveport, Louisiana

OUT PATIENT CLINIC

APPOINTMENT CARD

This represents the blue card used by the orthopedic clinic.

APPENDIX G

RECORD RETRIEVAL FORM

OUT CARD

U. H. NO.	NAME	DATE	CLINIC – WARD – DOCTOR

APPENDIX H

SPECIALTY CLINIC STATISTICS AND CLINICAL INFORMATION BY CLINIC FOR CALENDAR YEAR 1974

GENERAL MEDICINE STATISTICS

Month	Total Patients Seen
January	1,392
February	1,368
March	1,657
April	1,541
May	1,671
June	1,663
July	2,070
August	1,963
September	1,750
October	1,812
November	1,553
December	1,458
Total for Year 1974	19,898

The patient load, as reflected in the statistics above, was basically processed by the pure block appointment system. The clinic clerical staff consisted of one appointment clerk who was responsible for maintaining an appointment book and retrieving medical records. Recently, the staff of the general medicine clinic instituted a mixed block-individual appointment system. However, this newer system did not consider the presence of physicians. The professional staff and the clerical personnel were interested in improving the present system.

ALLERGY CLINIC STATISTICS

Month	Total Patients Seen
January	212
February	219
March	153
April	255
May	209
June	214
July	273
August	155
September	179
October	254
November	181
December	138
Total for Year 1974	2,230

The allergy clinic actually functioned as a subspecialty of the medicine clinic and, as such, shared the same appointment desk, although it did have a separate appointment clerk. This clinic featured the pure block appointment system and expressed interest in improving the present system.

DIABETIC CLINIC STATISTICS

Month	Total Patients Seen
January	235
February	250
March	223
April	129
May	287
June	232
July	252
August	333
September	275
October	288
November	198
December	200
Total for Year 1974	2,667

As with the allergy clinic, the diabetic clinic functioned as a subspecialty of the medicine service. The pure block appointment system was also used here, and the staff was concerned with improving the current system.

GENERAL SURGERY CLINIC STATISTICS

Month	Total Patients Seen
January	781
February	834
March	792
April	888
May	687
June	689
July	889
August	884
September	895
October	995
November	806
December	651
Total for Year 1974	9,835

The general surgery clinic featured the use of the pure block appointment system, with one appointment desk responsible for their patient appointments. This particular clinic did express interest in improving the current system.

UROLOGY CLINIC STATISTICS

Month	Total Patients Seen
January	512
February	476
March	478
April	441
May	511
June	526
July	605
August	507
September	496
October	549
November	460
December	372
Total for Year 1974	5,933

The urology clinic, as a subspecialty of surgery, utilized the same appointment desk but used its own appointment clerk and book. The staff of this clinic, in particular the chief, expressed doubt about the abilities of any other appointment system because of the socioeconomic level of the patients and an unstable surgical schedule due to inadequate anesthesia support. It is certainly noteworthy that no other clinic expressed the anesthesia problem.

E.N.T. CLINIC STATISTICS

Month	Total Patients Seen
January	391
February	458
March	448
April	467
May	448
June	403
July	457
August	412
September	463
October	454
November	395
December	385
Total for Year 1974	5,181

As with urology, the ENT clinic utilized the same appointment desk as general surgery, but had its own appointment clerk and book. The staff of this clinic also expressed a desire to improve the existing circumstances.

E.N.T. CLINIC STATISTICS

Month	Total Patients Seen
January	391
February	458
March	448
April	467
May	448
June	403
July	457
August	412
September	463
October	454
November	395
December	385
Total for Year 1974	5,181

As with urology, the ENT clinic utilized the same appointment desk as general surgery, but had its own appointment clerk and book. The staff of this clinic also expressed a desire to improve the existing circumstances.

ORTHOPEDIC CLINIC STATISTICS

Month	Total Patients Seen
January	616
February	719
March	829
April	815
May	856
June	889
July	882
August	891
September	819
October	812
November	733
December	557
Total for Year 1974	9,418

This clinic also used the pure block appointment system and operated with one appointment clerk and book. The clerical staff expressed a desire for improved clinical working conditions and improvement of the current appointment system. The professional staff also favored improvements in the system, but indicated that little could be done about additional clerical space because of the unique requirements concerning the cast rooms for the orthopedic clinic.

PEDIATRIC CLINIC STATISTICS

Month	Total Patients Seen
January	1,457
February	1,359
March	1,384
April	1,164
May	1,418
June	1,276
July	1,219
August	1,189
September	1,306
October	1,673
November	1,229
December	1,340
Total for Year 1974	16,014

The pediatric clinic also appointed its patients by the pure block appointment system. The system featured the use of two clerical personnel who were responsible for the appointment book and the supervision of the large number of walk-ins experienced in this service. The staff was most interested in developing some improvements in the present system.

ORAL SURGERY CLINIC STATISTICS

Month	Total Patients Seen
January	1,000
February	963
March	1,030
April	1,063
May	1,117
June	1,134
July	1,114
August	1,098
September	889
October	1,056
November	971
December	690
Total for Year 1974	12,125

The oral surgery clinic used the pure block appointment system with one appointment clerk. The staff of this clinic did express concern over the current system, but seemed to be quite hesitant about any new system offered. The clerical and ancillary staff were quite concerned about physician punctuality which would certainly create problems with any proposed appointment system.

EYE CLINIC STATISTICS

Month	Total Patients Seen
January	946
February	970
March	847
April	949
May	1,016
June	738
July	897
August	1,059
September	929
October	1,051
November	791
December	669
Total for Year 1974	10,862

The eye clinic used the pure block appointment system with one appointment clerk. The staff of this clinic was quite interested in improving the system.

OB/GYN CLINIC STATISTICS

Month	Total Patients Seen
January	1,971
February	1,885
March	1,952
April	2,122
May	2,306
June	2,227
July	2,298
August	2,338
September	2,167
October	2,333
November	1,917
December	1,749
Total for Year 1974	25,255

The ob/gyn was the most unique clinic in the study. Their system featured separation of the OB and GYN patients and utilized a different system for each. The OB patients were appointed by a mixed block-individual appointment system with half-hour intervals. The GYN patients, on the other hand, are appointed by the pure block appointment system. The clerical staff consisted of one clerk, and the staff as a whole was quite satisfied with their current operation and seemed to find little merit in altering the present system.

APPENDIX I

HOURS OF OPERATION

HOURS OF OPERATION

Clinic	Monday	Tues.	Wed.	Thurs.	Friday
General Medicine	8AM-4PM	8AM-4PM	8AM-4PM	8AM-4PM	8AM-4PM
Allergy	10:30AM-4PM (children)	8AM-4PM (adults)			
Diabetic			8AM-4PM		
General Surgery	8AM-4PM (male)	9AM-4PM (female)	12N -4PM (male)	1PM-4PM (female)	
Urology	8AM-4PM (Gen Urology)	8AM-4PM (Cysto)	8AM-4PM (Gen Urology)	8AM-4PM (Cysto)	8AM-4PM (Gen Urology)
ENT	8AM-4PM	8AM-4PM			8AM-4PM
Orthopedics	8AM-4PM				8AM-4PM
Pediatrics	8AM-4PM	8AM-4PM	8AM-4PM	8AM-4PM	8AM-4PM
Oral Surgery	10AM-4PM	10AM-4PM	12N -4PM	12N -4PM	10AM-3PM
Eye	8AM-4PM	8AM-4PM	8AM-4PM		
OB/GYN	8AM-4PM	8AM-4PM	8AM-4PM	8AM-4PM	8AM-4PM

APPENDIX J

ANALYSIS OF NO-SHOW AND WALK-IN RATES

ANALYSIS OF NO-SHOW AND WALK-IN RATES

This appendix offers workload data for three months: July, 1974; December, 1974; and February, 1975. These three months were considered as months which depicted an increased workload, a decreased workload, and an average workload, respectively.

July, 1974

Clinic	Apts. Sched.	Apts. Kept	Patients Seen	No-Shows	Walk-Ins	Per Cent No Shows	Per Cent Walk-ins
General Medicine	2,020	1,327	2,070	683	743	33.98	35.89
Allergy	277	232	273	45	41	16.25	15.02
Diabetic	352	247	252	105	5	29.83	1.9
General Surgery	850	615	889	235	274	27.65	30.82
Urology	474	326	605	148	279	31.22	46.11
E.N.T.	473	253	457	121	204	32.35	44.64
Ortho-pedics	749	514	882	235	368	31.38	41.72
Pedi-atrics	273	168	1,219	105	1,051	38.46	86.22
Oral Surgery	685	457	1,114	228	657	33.28	58.98
Eye	663	434	897	229	463	34.54	51.62
OB/GYN	2,179	1,696	2,288	483	592	22.17	25.87
TOTAL	8,886	6,269	10,946	2,617	4,677	29.45	42.73

DECEMBER, 1974

Clinic	Apts. Sched.	Apts. Kept	Patients Seen	No-Shows	Walk-Ins	Per Cent No Shows	Per Cent Walk-ins
General Medicine	1,324	870	1,458	454	588	34.29	40.33
Allergy	165	126	138	39	12	23.64	8.7
Diabetic	262	182	200	80	18	30.53	9.00
General Surgery	640	427	651	213	224	33.28	34.40
Urology	309	228	372	81	144	26.21	38.71
E.N.T.	261	193	385	68	192	26.05	49.87
Ortho-pedics	487	359	557	128	198	26.08	35.55
Pedi-atrics	325	224	1,340	101	1,116	31.07	83.28
Oral Surgery	559	350	690	209	340	37.20	49.20
Eye	585	373	669	212	291	36.55	44.16
OB/GYN	1,535	1,245	1,749	290	479	18.89	27.37
TOTAL	6,452	4,577	8,209	1,875	3,602	29.06	43.88

FEBRUARY, 1975

Clinic	Apts. Sched.	Apts. Kept	Patients Seen	No-Shows	Walk-Ins	Per Cent No Shows	Per Cent Walk-ins
General Medicine	2,085	1,442	1,608	643	166	30.83	10.32
Allergy	283	218	225	65	7	22.97	3.11
Diabetic	304	275	277	29	2	9.5	.7
General Surgery	926	672	884	254	212	37.80	23.98
Urology	320	215	463	105	248	32.81	53.56
E.N.T.	374	275	485	99	210	26.47	43.30
Ortho-pedics	547	399	636	148	237	27.06	37.26
Pedi-atrics	390	275	1,622	115	1,347	29.49	81.04
Oral Surgery	782	517	1,012	265	495	33.88	48.91
Eye	668	365	883	303	518	45.35	58.66
OB/GYN	1,844	1,450	2,169	394	719	21.36	33.14
TOTAL	8,593	6,160	10,474	2,433	4,314	28.31	41.18

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BIOGRAPHICAL SKETCH

Captain Henry M. Austin III [redacted], [redacted]. He was awarded a Bachelor of Science degree from Auburn University in 1967. He received his commission through the Reserve Officers Training Corps and entered active duty in September, 1967. He attended the Basic Officer and Battalion Surgeon's Assistance Courses at the United States Army Medical Field Service School, Fort Sam Houston, Texas. Upon completion of these courses, he was assigned to Fort Hood, Texas, as a platoon leader in D Company, 48th Medical Battalion, 2nd Armored Division.

A subsequent assignment was with the 4th Medical Battalion in the Republic of Vietnam. Upon his return to the United States, he was assigned to Martin Army Hospital, Fort Benning, Georgia, and from there he attended both the Officers' Advanced Course and the Patient Administration Course at Fort Sam Houston, Texas. He was then assigned to the U. S. Army Hospital, Fort Campbell, Kentucky.

Captain Austin was assigned to the Academy of Health Sciences in August, 1974, for the purpose of attending the United States Army-Baylor University Health Care Program. He is completing residency requirements for a Master's degree in Hospital Administration at Lyster Army Hospital, Fort Rucker, Alabama.