

A STUDY TO DETERMINE  
AN IMPROVED METHOD OF MAINTAINING  
A MEDICAL RECORD SYSTEM  
AT METHODIST HOSPITAL, DALLAS, TEXAS

APPROVED BY THE U.S. ARMY MEDICAL FIELD SERVICE SCHOOL:

A Problem Solving Thesis  
Submitted to the Faculty of  
Baylor University

In Partial Fulfillment of the  
Requirements for the Degree

APPROVED BY THE

Of

Master of Hospital Administration

By

Major Evan H. Cole, MSC

APPROVED BY THE GRADUATE COUNCIL:

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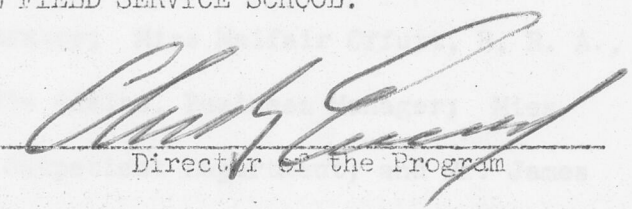
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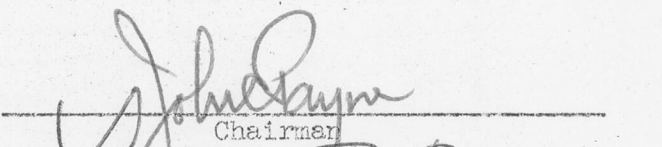
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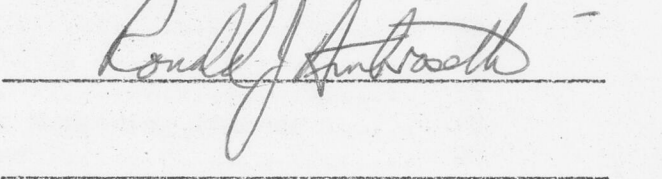
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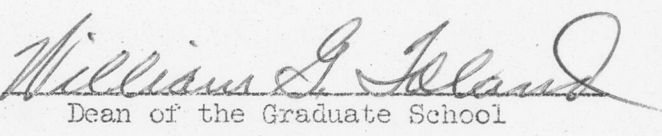
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ABSTRACT

A STUDY TO DETERMINE AN IMPROVED METHOD OF MAINTAINING  
A MEDICAL RECORD SYSTEM AT METHODIST HOSPITAL, DALLAS, TEXAS

A Problem Solving Thesis Submitted to the Faculty of Baylor University  
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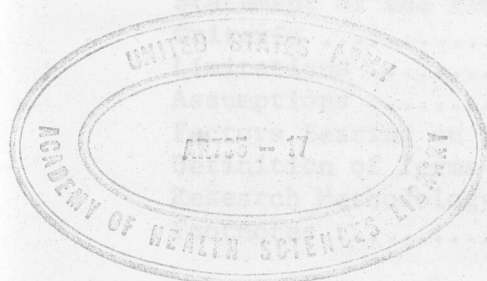
The problem was to determine the best method of maintaining a medical record system at Methodist Hospital, Dallas, Texas. The methods of research used were observations, surveys, questionnaires, and interviews. A review of health care professional journals, books and brochures was accomplished.

The major finding was that Methodist Hospital's decentralized medical record system with each department maintaining its own system of filing was not satisfactory. It was concluded and further recommended that a terminal digit unit filing system be initiated using the patient's social security account number as the record identification number for each department.

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II. REVIEW OF THE LITERATURE	12
General	12
Alphabetical Versus Numerical Filing	13
Sequential Versus Terminal Logic	15
The Serial, Unit and Serial-Unit Numbering Systems	18
The Patient Identification Number	20
Conclusion	24
Footnotes	25
III. DISCUSSION	28
The Present Medical Record Systems	28
The Inpatient Record System	28
The Outpatient Department Record System	29
The Radiology Record System	31
The Emergency Record System	33
Evaluation of the Present Record Systems	35
The Inpatient Medical Record	35
The Outpatient Record	36
The Radiology Record	38
The Emergency Record	39
Summary of Present Record Systems	40
Footnotes	41

## TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS . . . . .	iii
LIST OF TABLES . . . . .	vi
CHAPTER	
I. INTRODUCTION . . . . .	1
General Information . . . . .	1
Setting and History of Methodist Hospital . . . . .	2
Conditions Which Prompted the Study . . . . .	4
Statement of the Problem . . . . .	5
Criteria . . . . .	5
Limitations . . . . .	5
Assumptions . . . . .	6
Factors Bearing on the Problem . . . . .	6
Definition of Terms . . . . .	7
Research Methodology . . . . .	9
Footnotes . . . . .	11
II. REVIEW OF THE LITERATURE . . . . .	12
General . . . . .	12
Alphabetical Versus Numerical Filing . . . . .	13
Sequential Versus Terminal Digit . . . . .	15
The Serial, Unit and Serial-Unit Numbering Systems . . . . .	18
The Patient Identification Number . . . . .	20
Conclusion . . . . .	24
Footnotes . . . . .	25
III. DISCUSSION . . . . .	28
The Present Medical Record Systems . . . . .	28
The Inpatient Record System . . . . .	28
The Outpatient Department Record System . . . . .	29
The Radiology Record System . . . . .	31
The Emergency Record System . . . . .	33
Evaluation of the Present Records Systems . . . . .	35
The Inpatient Medical Record . . . . .	35
The Outpatient Record . . . . .	36
The Radiology Record . . . . .	38
The Emergency Record . . . . .	39
Summary of Present Record Systems . . . . .	40
Footnotes . . . . .	41

LIST OF TABLES

CHAPTER

IV.	ALTERNATIVE COURSES OF ACTION . . . . .	42
	The Serial-Unit Numbering System . . . . .	44
	The Terminal Digit Unit Filing System . . . . .	45
	The Terminal Digit Unit Filing System with the SSAN . . . . .	47
	Summary . . . . .	51
	Footnotes . . . . .	51
V.	CONCLUSIONS AND RECOMMENDATIONS . . . . .	52
	Conclusions . . . . .	52
	Recommendations . . . . .	53
	Footnotes . . . . .	54
APPENDIXES		
A.	A GRAPHIC REPRESENTATION OF NUMERICAL MEDICAL RECORD SYSTEMS . . . . .	55
B.	THE SURVEY QUESTIONNAIRE SUBMITTED TO HOSPITALS OF SIMILAR BED CAPACITY TO METHODIST HOSPITAL, DALLAS, TEXAS TO OBTAIN DATA ON MEDICAL RECORDS SYSTEMS . . . . .	57
C.	AN ANALYSIS OF QUESTIONNAIRE RESPONSES SUBMITTED TO HOSPITALS OF SIMILAR BED CAPACITY TO METHODIST HOSPITAL, DALLAS, TEXAS TO OBTAIN DATA ON MEDICAL RECORD SYSTEMS . . . . .	59
D.	A STUDY OF THE ACCESSIBILITY OF THE PATIENT'S SOCIAL SECURITY NUMBER UPON ADMISSION TO METHODIST HOSPITAL, DALLAS, TEXAS . . . . .	64
E.	AN ORGANIZATION CHART OF METHODIST HOSPITAL, DALLAS, TEXAS . . . . .	70
F.	CHART DEPICTING LOCATION OF DEPARTMENTS GENERATING MEDICAL RECORDS AT METHODIST HOSPITAL, DALLAS, TEXAS . . . . .	72
BIBLIOGRAPHY . . . . .		74

LIST OF TABLES

Table		Page
I.	Methodist Hospital Annual Statistical Report . . . . .	3
II.	1971 Inpatient Workload for Methodist Hospital . . . . .	30
III.	1971 Monthly Outpatient Clinic Visits, Methodist Hospital . . . . .	32
IV.	Radiology Service Annual Workload . . . . .	34
V.	Outpatient Record Retrieval Survey . . . . .	37

## CHAPTER I

### INTRODUCTION

#### General Information

The value of a good medical record to a hospital is indisputable, but unless the record is properly filed and easily accessible, the medical record can become an expensive nuisance. Failure to maintain an effective medical record system can result in denial of proper care to the patient, hindrance to medical education, blockage to medical research, inadequate legal protection, and poor administrative planning and control.

The most primitive medical records date back to 25,000 B. C. in the paleolithic caverns of Spain where polychrome murals depict Stone Age medical techniques of trephining and amputation of fingers.<sup>1</sup> Although these cavern murals are quite different from the medical records of today, the cave man who drew them succeeded in his quest to record the medical achievements of his time. Through the ages the general quality of the medical record has improved. Great efforts have been made to properly record the care and treatment rendered to patients, but unless today's medical record is available at the time when it is needed by the physician, the nurse, the researcher, the administrator, or the lawyer, the record is of less value than the ancient mural in the cave of Spain.

Setting and History of Methodist Hospital

In 1920, a group of Methodist officials, physicians and civic leaders from the Dallas suburban community of Oak Cliff convened to consider the establishment of a Methodist operated sanitarium. At this time, the population of Dallas totalled 158,000. A special committee was appointed by the Dallas County Medical staff to coordinate with Methodist and community leaders to establish a hospital west of the Trinity River. A hill site was selected in Oak Cliff, and in 1923, the first groundbreaking ceremonies began. Construction and fund raising difficulties delayed the completion of the 100-bed hospital for almost five years until Christmas Eve, 1927, when Dallas Methodist Hospital admitted its first patient who delivered a baby daughter on Christmas day. The cost of the site, facility and equipment totalled \$617,267. Early brochures described the facility as:

The 'Hospital on the Hill' ... towering like a castle majestically on the crest of a high promontory in the Eastern suburbs of Oak Cliff ... uncrowded, unjostled by other buildings, which are quite distant, yet the Institution is within quick and easy reach of the city.<sup>2</sup>

The hospital was plagued by financial crises until 1935. In 1941, sixty beds were added on the rear of the main structure at the cost of \$90,000. A laundry and \$514,100 School of Nursing were constructed in 1951; however, the last class of Methodist's three-year program for diploma nurses graduated in 1970, as the program was phased out to make way for a baccalaureate program through Dallas Baptist College. In 1953, the \$1,050,000 east wing was added to the facility to increase Methodist's bed capacity to 330 beds. A major expansion and remodeling program costing \$6.4 million during the period 1957-1960 brought Methodist to 420 beds

and eighty bassinets. A \$5.5 million construction project of 130 additional beds was completed in 1970, to include a heart catheterization laboratory, an eight-bed coronary care unit and a fifteen-bed intensive care unit. Future plans call for a small branch general hospital to be completed on a fourteen acre site, eight miles southwest of the main facility.<sup>3</sup>

Methodist Hospital has provided more than \$4.5 million of medical care to the medically indigent through its Golden Cross program, which was formed in 1921 to provide medical care for needy patients. The Golden Cross program was renamed the Golden Cross Foundation in 1953, and its original \$50,000 of assets has grown to a current market value exceeding \$288,000.<sup>4</sup>

In addition to the main hospital, the Methodist medical complex includes six other medical buildings located on a twenty acre complex dedicated toward education and research.

Methodist's net worth exceeds \$13 million. The active medical staff numbers almost 200 physicians. Table I reflects annual statistical inpatient workload figures for the fiscal years 1969-1971.

TABLE I

## METHODIST HOSPITAL ANNUAL STATISTICAL REPORT

	FY 1969	FY 1970	FY 1971
Total Inpatients	21,380	20,863	22,730
Total Hospital Days	136,947	137,696	146,176
Total ICU Days	2,563	2,885	3,031

Source: Hospital Records, Business Office, Methodist Hospital, Dallas, Texas.

Methodist Hospital prides itself as a church-owned institution and emphasizes: "a person-centered philosophy---concentrating even more on

ways to prevent illness and bring health to the patient—wherever it is needed."<sup>5</sup>

#### Conditions Which Prompted the Study

Methodist Hospital is apprehensive over regulatory guidance from the Joint Commission on Accreditation of Hospitals and Medicare. This guidance promotes the utilization of a unit numbering system for medical records. Although problems were anticipated during the recent Joint Commission Accreditation survey, no formal or informal criticism concerning record systems was issued to the hospital. The administrator is cognizant of the trend to file medical records under the terminal digit filing system. These trends have prompted him to consider the feasibility of using such a system at Methodist Hospital. Several members of the administrative staff appear to be polarized in their views concerning the validity of conversion. The administrator is aware of the numerous and diverse filing systems that presently exist at Methodist Hospital and critically questions the use of a single number to identify all records generated on a single patient. Simultaneously, the administrator is concerned over the potential impact of conversion activities in disrupting hospital operations. The administrator's main question is whether or not conversion to a standardized medical record filing system will be worth the time and the effort. There have been no previous studies concerning conversion to a standard medical record filing system for all medical records at Methodist Hospital. The administrator is vitally interested in a determination of the most efficient and effective manner of maintaining medical records at Methodist Hospital in accordance with current regulatory guidance.

### Statement of the Problem

The problem is to determine an improved method of maintaining a medical record system at Methodist Hospital, Dallas, Texas.

### Criteria

The proposed solution to the problem should result in a record system which would:

1. Improve the retrieval rate of medical records.
2. Adhere to current regulatory guidance.
3. Adapt itself to the present physical structure of the hospital without requiring additional major equipment or major renovation.
4. Be amenable to the present microfilm retirement process.

### Limitations

The following limitations must be recognized regarding this study:

1. Due to the extensive nature of the medical record activity, this study must limit itself only to those aspects of the medical record function that directly influence the problem of filing and retrieving the medical record. Although the overall adequacy and the completeness of the medical record are related problems, they are distinct. The heart of this study will be to determine the record system that will result in the patient's medical record being more accessible to the physician, the researcher, and others at the time the medical record is needed.
2. Discussion of the various medical record systems will not attempt to address specific conversion techniques to be utilized by Methodist Hospital if an alternative record system is approved.
3. The limited time factor spent on site at Methodist Hospital precluded optimum research in data collection efforts.

4. Certain hospital staff personnel hindered research efforts by supplying data of doubtful validity; a concern for change in daily work operations or job threst was the probable cause.

5. Discussion of record systems other than those presently utilized by Methodist Hospital will be based on a review of the literature, returned questionnaires from other hospitals, and personal experience of the writer; the reproduction of such an alternative record system so as to collect relevant data was not feasible or realistic.

#### Assumptions

The following are assumptions associated with the study:

1. There will be no extensive change in the organizational structure and goals of Methodist Hospital.
2. Methodist Hospital meets the Medicare participation requirement of a unit record in that medical documentation for inpatient treatment is included within the outpatient folder.

#### Factors Bearing on the Problem

Factors having a bearing on the problem were:

1. The standards of the Joint Commission on Accreditation of Hospitals establish the following requisite for a medical record system:

"Because all hospital-generated medical data, both inpatient and outpatient, must be easily retrievable whenever a patient receives subsequent hospital care, it is desirable that the unit records system be used."<sup>6</sup>

An inquiry was made to the Joint Commission on Accreditation of Hospitals concerning their use of the term "desirable" with the following response by Dr. Henry K. Speed, Assistant Director, Hospital Accreditation Program:

The 'it is desirable that the unit record system be used' does not make the unit system a mandatory procedure. Another system may be used where it more clearly serves the purpose of the patient, medical staff, and administration.<sup>7</sup>

2. The discussion of outpatient records will be concerned only with outpatient records generated by the Emergency Service, Radiology and the Golden Cross Outpatient Department. Although some patients are seen at other clinics within Methodist Hospital, these clinics are "leased" by the hospital to physicians and will not be discussed.

3. Medicare participation requirements establish the filing standard that "A unit record is maintained so that both in- and out-patient treatment are in one folder." An interview with a Medicare spokesman revealed that Medicare would not "push this point" and was primarily concerned with an approved Utilization Review Program and compliance with the standards as established by the Joint Commission on Accreditation of Hospitals.<sup>8</sup>

4. Centralization of all medical records in the same location is not feasible because of lack of space in the present plant structure.

5. The administrator imposed no monetary limitations, either in the utilization of specially hired personnel, overtime or purchase of special medical record jackets.

#### Definition of Terms

For the purpose of this study, the following definitions apply:

A Centralized Record System is an arrangement in which records are filed and controlled in a central location within the hospital.<sup>9</sup>

A Decentralized Record System is an arrangement in which records are filed and controlled by departments at different locations within the hospital.<sup>10</sup>

An Emergency Record is the completed Form ER 100 which is prepared for all patients treated in the emergency room.

A Guarantor is the individual responsible for the payment of medical charges, usually the adult next-of-kin.

Golden Cross Patients are those patients declared medically indigent and approved for participation in the Methodist Golden Cross program by the Methodist Hospital Golden Cross Program Directors.

An Inpatient is a patient who receives general or emergency diagnostic, therapeutic, or health services and is admitted to the hospital and occupies a bed or bassinot.

An Outguide is a folder or form of heavy paper construction and serves as a means of control regarding the location of any medical record which has been removed from the files. It should reflect both the date the medical record was removed and the location. The outguide should remain in the file until the chart is returned.

An Outpatient is a person who receives general or emergency diagnostic, therapeutic, or health services through Methodist's Emergency Service, Outpatient Department or Radiology Department and is not admitted to the hospital as an inpatient.

The Outpatient Department refers to Methodist Hospital's Golden Cross Clinic.

A Pediatric Patient is a minor patient who is dependent on a parental guarantor for payment of medical charges.

A Serial Numbering System is a record system whereby a new number is assigned to a patient each time he comes into the hospital and a new chart is prepared for each admission. Thus, if a patient is admitted

twenty times, he will have twenty numbers and twenty charts filed in twenty different places.<sup>11</sup>

A Serial- Unit Numbering System is a numbering system which gives every patient admitted an identification number in the chronological order of admission. A new patient, although a re-admission, receives a new number, and his previous chart is "upfiled" to the new admission number; thus, in retrieving or filing the chart, the newest number should always be utilized.<sup>12</sup>

A Terminal Digit Filing System is a filing system whereby records are filed by the last two digits of the identification number, be it a serial, unit, or serial-unit number. The number is broken into digit groups for reading from right to left. Colors are frequently used in conjunction with this system to facilitate accurate filing.<sup>13</sup>

A Unit Numbering System is a numbering system which gives a patient one permanent record number upon initial registration in either the in-patient or outpatient area of the hospital; all subsequent medical records generated on the patient will be identified by the original number.<sup>14</sup>

A Unit Record is a single chronological record covering all hospital and outpatient care.

#### Research Methodology

The following techniques were employed to delineate and investigate the problem:

1. A review of the current literature was accomplished to gain a broad base of knowledge concerning medical record systems.
2. Interviews were conducted with pertinent staff members at Methodist Hospital to ascertain the effectiveness of the current medical re-

cord filing systems. Additional interviews were held with registered record administrators from other hospitals to gain insight on medical record filing systems other than those at Methodist Hospital. Dallas Blue Cross representatives were interviewed to obtain specific guidance concerning Medicare requirements. Sales representatives were contacted and interviewed to consider and evaluate current available numbering and filing systems.

3. Inquiries were sent to the Joint Commission on Accreditation of Hospitals, the American Medical Records Association and the Social Security Administration to obtain key definitions, opinions, and specific regulatory guidance concerning maintenance and filing of medical records.

4. Data was collected to reflect the availability of the patient's social security account number upon admission to Methodist Hospital. Because current trends indicate that utilization of the patient's social security account number is becoming more prevalent as well as practical, intensive data collection was accomplished at the Emergency Service, the Outpatient Department, Radiology and the Admissions Office by reviewing the previous day's admission forms to determine the accessibility of the patient's social security account number at the time of admission.

5. Data concerning record retrieval find-rates was collected from Radiology, the Outpatient Department and the Admissions Office. Initial data collection was performed by hospital departmental personnel, but because of suspected invalid data from one of the departments, subsequent data collection was performed by the author.

6. Questionnaires were mailed to forty-five hospitals throughout

the country of similar bed capacity to Methodist to determine the various record systems utilized, the preferred record systems, and the experienced find-rates for medical records.

7. A final extensive review of the literature was accomplished in order to critically evaluate the various authors' claims regarding record systems, to analyze the literature's applicability to Methodist Hospital, and lastly to synthesize the various current trends in the field.

#### Footnotes

<sup>1</sup>Edna K. Huffman, Manual for Medical Record Librarians (4th ed.; Chicago: Physicians' Record Company, 1955), p. 1.

<sup>2</sup>Alice M. Dykeman, "Half a Century," Bulletin: Methodist Hospital of Dallas Medical Staff, December, 1969, pp. 120-21.

<sup>3</sup>Ibid., pp. 121-27.

<sup>4</sup>Ibid., pp. 125.

<sup>5</sup>Ibid., p. 127.

<sup>6</sup>Joint Commission on Accreditation of Hospitals, Accreditation Manual for Hospitals: 1970 (Chicago: Joint Commission on Accreditation of Hospitals, 1970), p.97.

<sup>7</sup>Letter from Dr. Henry K. Speed, Assistant Director, Hospital Accreditation Program, Joint Commission on Accreditation of Hospitals, April 11, 1972.

<sup>8</sup>Don Wheeler, private interview held at Methodist Hospital, Dallas, Texas, April 21, 1972.

<sup>9</sup>Huffman, Manual for Medical Record Librarians, p. 179.

<sup>10</sup>Ibid., p. 177.

<sup>11</sup>Betty Wood McNabb, Medical Record Procedures in Small Hospitals (3rd ed.; Austin, Texas: Steck-Warlick Company, 1970), p. 42.

<sup>12</sup>Ibid., p.43.

<sup>13</sup>Huffman, Manual for Medical Record Librarians, pp. 181-87.

<sup>14</sup>McNabb, Medical Record Procedures, p. 42.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### General

Five of the most important pieces of paperwork generated in the life of a human being are: the birth certificate, marriage certificate, military discharge, death certificate, and the medical record.<sup>1</sup> The medical record is a description of the patient's illness, the treatment administered and the results achieved; it serves the patient in his present illness and may be of further value should the patient become ill at some future time. Edna Huffman in her book Manual for Medical Record Librarians defines the medical record as: "a yardstick by which the quality of the work done by the physician and hospital personnel is measured..."<sup>2</sup> But it is also stressed by today's writers in medical record administration that to be of value, the medical record must be easily retrievable. The Joint Commission on Accreditation of Hospitals imposed the following standard: "The medical record department shall maintain a system of identification and filing to facilitate the prompt location of a patients medical record."<sup>3</sup>

The primary purpose of a medical record filing system is to facilitate complete and quick retrieval of pertinent information from the medical record whenever the necessity arises. The selection of a medical record filing system can be a complicated procedure as it necessitates several choices; Appendix A illustrates the alternatives and choices available in establishing a medical record filing system.

The two principal types of filing arrangements utilized in medical record departments are either alphabetical or numerical.<sup>4</sup> In an alphabetical file the records are filed in alphabetical order based upon the exact spelling of the patient's name. A numerical file requires consideration of three factors: 1) the choice between sequential or terminal digit filing; 2) the selection of the serial, unit, or serial-unit system; and 3) the selection of the record's identification number.

In a numerical sequential file system records are filed in sequential order according to the value of the record's identification number; literature often refers to sequential filing as the conventional or straight numeric method. The terminal digit filing system or reverse numerical filing system derived its name from the fact that records are first filed by the terminal or end digits of the record's identification number. Unlike the sequential file identification number, the terminal digit identification number is read from right to left in groups of two. The terminal digit system uses both numbers and colors for control.<sup>5</sup>

Once the decision is made to file sequentially or by terminal digit in a numerical filing system, a further decision must be made to file by either the serial, unit, or serial-unit system. The final decision entails the selection of the type number to be utilized for identification of the record; these numbers may be admission numbers, discharge numbers, diagnostic classification numbers, or patient identity numbers such as the social security account number.<sup>6</sup>

#### Alphabetical Versus Numerical Filing

In discussing the virtues of numerical filing against the alphabetical system, the current literature is almost void in comparison of

the two systems. The main reason for this void seems to be the immediate assumption that the benefits of the numerical system far outweigh those benefits of the alphabetical file. Edna Huffman curtly dismisses the alphabetical system by writing:

There are two filing arrangements generally used in medical records departments, viz., the alphabetical and the numerical. The latter is the only one with which we are concerned when considering the filing of the medical record.<sup>7</sup>

Dorothy Kurtz, the first medical record librarian to adapt medical records to a terminal digit filing system, advocates utilizing a numerical system over the alphabetical system since a number provides a convenient identification for everything pertaining to the patient. The numerical system provides the patient a sure and simple designation to insure that related material to the patient's record be promptly included in his record. Miss Kurtz says:

For this purpose the name alone is far from adequate. Not only are there often several people with the same name, but hasty copying in clinic or laboratory may distort it beyond recognition...In order to obtain the greatest advantage from this means of identification, the number should be assigned as soon as a record is begun and its use advocated as widely as possible.<sup>8</sup>

Miss Kurtz warns of the fallacy in assuming that the strictly alphabetical arrangement is the simplest, merely because it is the most familiar. She cautions against the inevitable dangers inherent with English spelling in a population which is adapting foreign names to English pronunciation.<sup>9</sup> The numbering system takes on additional value when it is extended to include the identification of other medical documents such as x-ray film and reports, financial account cards and other materials retained apart from the medical record.<sup>10</sup>

One author, Horace Cotton says that for medical record files with

less than 5,000 records, alphabetical filing is superior, but the numerical system should be utilized for more than 5,000 records. Mr. Cotton recommends the use of different pastel colored folders for each letter of the alphabet to control misfiling. He cites the main advantage of numerical filing to be speed: "You can find Number 7349 faster than you can fish out Ernznoksy."<sup>11</sup>

#### Sequential Versus Terminal Digit

In comparing the two numerical systems, the preponderance of authors reviewed prefer terminal digit filing over a sequential system. Terminal digit filing was initially and successfully utilized by insurance and other commercial companies prior to its adaptation to a medical record system by Dorothy Kurtz in the early 1950's. Edna Huffman describes the terminal digit system as a "simple, speedy, and accurate method which increased the filing capability of clerks approximately 30%." One of the terminal digit filing system's principal merits over a sequential system, according to Miss Huffman is the elimination of many filing mistakes due to the transposition of numbers, which is the most common error in a sequential system. Other advantages of terminal digit filing cited by Miss Huffman are: all sections of the file expand uniformly; heavy annual transfer of medical records to storage is eliminated; filing is evenly distributed among filing clerks; misfiles are reduced to a minimum; and it is well suited to the centralized unit system as it keeps all active charts in the current file. Miss Huffman claims that the terminal digit system is not as adaptable for storage filing as sequential filing.<sup>12</sup>

Authors praise the terminal digit system's demonstrated potential for reducing the possibility of misfiles by compelling file clerks to

concentrate on one or two digits at a time. The addition of a color coded scheme to the terminal digit system to enhance control makes it possible to quickly spot records which have been misfiled and enables determination of the approximate age of the record at a single glance.<sup>13</sup>

A. Litchard Dickinson cites additional advantages of the terminal digit filing system as: facilitation of guiding and file drawer maintenance; elimination of backshifting of records after transfer to inactive storage; and ease, speed and simplification in sorting records to file order.<sup>14</sup> F. Kenneth Ackerman Jr., assistant director of the 360 bed Geisinger Medical Center in Danville, Pennsylvania, cites the above experienced advantages of the terminal digit system as well as observing that the space needed to accommodate the active medical records remains relatively constant regardless of the ultimate expansion of the inactive storage files.<sup>15</sup>

On July 1, 1969, all major United States Army medical facilities underwent conversion of their medical records to a terminal digit system with color control, using the social security account number as the basic identification number. This entailed the conversion of some five million records during the first year. The rationale behind conversion was an effort to combat "the difficulty of maintaining outpatient medical records in a manner both meaningful and immediately available to the physician, whereby data could be filed and retrieved with ease and with minimal error."<sup>16</sup> Once the conversion was accomplished, the Army experienced record retrieval to be more accurate and more timely.<sup>17</sup>

The American Hospital Association publication Guide to the Organization of a Hospital Medical Record Department lauds terminal digit filing for its outstanding advantage for "hospitals of all sizes" in re-

ducing the possibility of misfiles. The sole criticism offered by the American Hospital Association was: "Since in a terminal digit system all filing divisions are assigned equal space, the occasional record of exceptional thickness can pose a problem."<sup>18</sup>

Other criticism of the terminal digit filing system includes its inability to produce consecutively numbered documents quickly and simply, and the fact that record transfer to inactive storage is more complicated and time-consuming than in a sequential numbering system.<sup>19</sup>

Betty McNabb, a prolific writer in medical record activities, cites no real advantages of terminal digit filing in her book Medical Record Procedures in Small Hospitals; she does strongly emphasize the need for "plenty of filing space" but renders no further rationale for this statement.<sup>20</sup>

Current literature is almost void of cited advantages of sequential numbering; the American Hospital Association does cite familiarity and collection of a large group of records with sequential numbers as the sequential numbering system's main advantages.<sup>21</sup>

A. Litchard Dickinson cites the following considerations as warranting consideration for conversion to the terminal digit filing system: 1) queuing problems in record retrieval such as file clerks waiting their turn at the files or operating personnel standing around awaiting records; 2) constant complaints from file clerks over inequitable work assignments; 3) high turnover of file personnel; 4) handwritten drawer labels, guide inserts or file folder labels; 5) continuous backshifting of the entire file; 6) difficulty in pre-file sorting of records to achieve file order; and 7) a greater percentage of misfiles than .2 of 1 per cent.<sup>22</sup>

### The Serial, Unit, and Serial-Unit Numbering Systems

If the determination is made to file numerically either sequentially or by terminal digit, one must further consider the three basic sub-systems: the serial system, the unit system and the serial-unit system.

In the serial numbering sub-system a new record is assigned for each admission regardless of the number of readmissions; the use of this system results in the filing of the patient's records in one or more places in the file, depending on the number of times he was admitted. This system's advantage is that filing takes less time as it is not necessary to look up and bring forward the records of previous admission. The disadvantages to the physician, the file clerk, and the patient are evident. When old records are requested on a patient by the physician, the file clerk may have to retrieve records from several different locations. When medical records are distributed in such a manner, more time is required in gathering them if the patient has previous admissions. Edna Huffman claims: "This makes the physician reluctant to request all the records, and in such cases the patient may not receive the service which the previous records entitle him to get."<sup>23</sup> The American Hospital Association reports that the serial numbering system, if at all possible, should be avoided in favor of the unit numbering system.<sup>24</sup> Betty McNabb is more succinct in her opinion of the serial system: "This is not a recommended modern method of filing for obvious reasons."<sup>25</sup>

The unit numbering sub-system entails the issuance of a permanent number to the patient on his first admission; this number is then used for all subsequent readmissions for that patient. Because this system was originally proposed in conjunction with the unit record system, the

name "unit numbering" was adopted; the manner in which the records are assembled and maintained and the manner of numbering them are two distinct matters. The American Hospital Association states that the value of the unit numbering system is the certainty of identification; the system is additionally valuable when it is extended to include the identification of radiology records, financial billings and other materials retained separately from the record.<sup>26</sup> Edna Huffman warns that employment of the unit numbering system necessitates not filling the file drawers or shelves to more than 75 per cent capacity as the record is continuous and additions will be made on each readmission. Another precaution of the unit numbering system is its poor adaptability to microfilming procedures and record retirement. A master summary sheet for each record is also recommended for the unit numbering system by Miss Huffman to reflect all previous admissions, discharges, and the "final diagnoses made and operations performed, if any, during each separate hospitalization."<sup>27</sup> Betty McNabb cites that the two distinct disadvantages of the unit numbering system are the need for a large filing area and the difficulty in retrieving an old number during the evening, weekends and holidays.<sup>28</sup>

The serial-unit sub-system provides the patient a new number on each admission, and all previous records are included under the updated identification number of the newest admission. The principal advantage of this system according to Miss Huffman is that file drawers or shelves may be filled to capacity as the records are complete when filed; she makes no mention of subsequent wasted space in the older numbered sections when an old number is retrieved, updated and filed in the current section. Miss Huffman advocates the utilization of an alphabetical patient index card system for cross reference purposes and a master summary sheet for

each medical record similar to that used in the unit system, except that all previous admission numbers should be included. Whenever an old record is retrieved for updating on a new admission, care must be taken when bringing charts forward to provide a way of finding each record in the event a previous number is all that is available. Miss Huffman recommends leaving a marker of some type in the file to indicate the location of the chart whenever the record is taken out and moved forward; an outguide or empty folder would suffice.<sup>29</sup> Betty McNabb writes that the serial-unit system is recommended for hospitals "which have no clinic affiliations and in which old charts must be filed in basement, attic, trailer, across the street, or in a distant warehouse."<sup>30</sup>

#### The Patient Identification Number

The final decision in establishing any type of numerical filing system is the selection of the type number to be utilized as the patient record identification number.

The two most common numbering errors in a numerical filing system are the issuance of the same number to different patients and duplicate records for one patient. To preclude the issuance of the same number to different patients, a central control point to issue numbers is a necessity. Duplicate records for the same patient are usually caused by a patient who either by intent or confusion will deny having received previous care. This problem can be alleviated by thorough questioning during the admission process and by maintaining a "central name index, where every patient has a card, no matter when or how he entered the institution."<sup>31</sup>

There are four kinds of numbers used by hospitals as patient record identification numbers: admission numbers, discharge numbers, diagnostic classification code numbers, and social security account numbers.

Filing by diagnosis number or by discharge number is considered obsolete.<sup>32</sup>

Until the advent of the social security account number in 1943, utilization of the admission number was the preferred method for filing all documents concerning a patient. Miss Huffman writes:

The system of filing patients' records in almost universal use today is that of filing records under admission numbers. Use of admission numbers for filing makes it easy to trace missing or 'lost' records. The admission number is carried in the patients' register, the number index, and on the ledger sheet in the business office ... Because the use of admission numbers safeguards medical records against becoming 'lost' in the files, it has become the accepted system for filing medical records.<sup>33</sup>

Use of the social security account number as the identification number for medical records is gaining both support and popularity. Max L. Brabson, administrator of the Americus and Sumpter County Hospital, Americus, Georgia, writes:

Discussion with accountants, medical records librarians, electronic data processing technicians, hospital administrators, and other persons close to the problem revealed a general consensus that in the foreseeable future the majority of functions requiring personal numerical identification would rely upon Social Security numbers.<sup>34</sup>

Mrs. Marie Carpenter, chief medical record librarian at Lakeside General Hospital, Detroit, Michigan, reflects that our society is becoming increasingly dependent upon the individual's social security number as the chief means of identification. Trends in the business world strengthen her beliefs: the United States Army's Serial number was converted to the social security account number in 1967; banking institutions utilize the social security account number in their checking and savings accounts; Blue Cross, Blue Shield and other insurance companies have converted to the social security account number; the Veterans Administration Hospitals converted to the social security account number for numbering medical re-

cords on January 1, 1966; colleges and universities began utilizing the social security account number in 1962; and Medicare has used the social security account number since 1966.<sup>35</sup> The use of the number as a motor vehicle operator's license number in all states is not far off; Massachusetts has already converted.<sup>36</sup> On March 2, 1972, the Senate Finance Committee voted to require that each child in the United States be issued a social security account number upon entering the first grade.<sup>37</sup>

Consideration for using the social security account number has been spurred by an increasing number of request forms reflecting the patient's social security account number from: Blue Cross policies when the contract holder is the patient; all requests from Veterans Administration Hospitals; State and Federal Departments of Labor; and several third party insurance groups.<sup>38</sup> Dr. Ernest A. Bragg reflected that the civilian populace would soon mimic the armed forces and carry their social security numbers with them and commit the number to memory. Dr. Bragg cites the following advantages of the social security account number for case record filing as: 1) the search for an old number would be eliminated; 2) a central number assignment office would not be required; and 3) a single number would identify the same patient everywhere for all time. Dr. Bragg states: "In full potential this system could cut the records handling costs of American hospitals by many millions of dollars each year."<sup>39</sup>

Max Brabson extols the advantages of using the social security account number as eliminating the problems posed by patients with the same name or by patients with frequently changing names. In addition, by using the individual's social security number, the hospital is assured

that a sequence of numbers will not "run out" and re-numbering would not occur. Mr. Brabson writes that the social security number facilitates identification of patients when combining emergency room, inpatient and outpatient charts.<sup>40</sup>

The major disadvantages concerning utilization of the social security account number are that a substantial number of individuals have not been assigned social security numbers, and of those assigned social security numbers it is estimated that at least 2 per cent have more than one number.<sup>41</sup> Mr. Roy L. Swift, an information officer for the Social Security Administration, states:

The Social Security Administration issues social security account numbers only for its own program purposes and for approved purposes under the executive order. However, individuals have always been free to provide banks, schools, and other business organizations with their own social security account number without restriction as to purpose. In such cases, the SSA cannot provide service or assistance.<sup>42</sup>

The literature reveals that most hospitals operating with the social security number utilize a pseudo-number for those patients not having a social security account number. Mrs. Marie Carpenter observes that the Lakeside General Hospital in Detroit experienced that approximately 9 per cent of its admissions did not have a social security number. Mrs. Carpenter lauds the system as feasible, simple, and expeditious.<sup>43</sup> Richard Davis reflects that 80 per cent of adult admissions in his hospital have a social security number available; the remaining 20 per cent were assigned a nine-digit pseudo-number beginning with "800" and posed no problem. Mr. Davis does point out that those hospitals utilizing the services of the Commission on Professional and

Hospital Activities, Inc. (CPHA), will have to modify the identification number, as the CPHA Professional Activities Studies (PAS) "map" has but six digits available for this purpose.<sup>44</sup>

An American Hospital Association staff consultant advises that all hospitals contemplating conversion to the social security record numbering system should conduct a feasibility study on the availability of the number for all patients; this study should include the determination of the availability of the social security number at the time of the admission, the number of patients who do not possess social security numbers, and any problems involved in the issuance of temporary numbers.<sup>45</sup>

One of the best arguments for the use of the social security number for the patient record identification is given by Miss Elizabeth Price, staff member of Medical World News:

It is logical to assume that our future health information banks may provide for and recommend the use of the social security number for patient identification, and were you to make such a change now in your present system, it would lessen the complications of joining a data-sharing program later.<sup>46</sup>

#### Conclusion

In 1918, the American College of Surgeons adopted the following specification in their minimum standards for hospitals:

That accurate and complete medical records be written for all patients and filed in an accessible manner in the hospital...<sup>47</sup>

In 1971, the Joint Commission on Accreditation of Hospitals reiterated this same principle: "The medical record department shall maintain a system of identification and filing to facilitate the prompt location of a patient's medical record."<sup>48</sup>

The medical record is of utmost significance to the patient, the

hospital, the physician, and for research and teaching: "patients forget and records remember."<sup>49</sup>

#### Footnotes

<sup>1</sup>Betty Wood McNabb, Medical Record Procedures in Small Hospitals (3rd ed.; Austin, Texas: Steck-Warlick Company, 1970), p. 2.

<sup>2</sup>Edna K. Huffman, Manual for Medical Record Librarians (4th ed.; Chicago: Physicians' Record Company, 1955), p. 31.

<sup>3</sup>Joint Commission on Accreditation of Hospitals, Accreditation Manual for Hospitals: 1970 (Chicago: Joint Commission on Accreditation of Hospitals, 1970), p. 97.

<sup>4</sup>Huffman, Manual for Medical Record Librarians, p. 167.

<sup>5</sup>A. Litchard Dickinson, "Terminal Digit Filing: How It Works, When You Should Use It," Information and Records Management, December-January, 1968/69, p. 22.

<sup>6</sup>Huffman, Manual for Medical Record Librarians, pp. 167-69.

<sup>7</sup>Ibid., p. 167.

<sup>8</sup>Dorothy L. Kurtz, Unit Medical Records (New York: Columbia University Press, 1943), pp. 34-35.

<sup>9</sup>Ibid., pp. 64-65.

<sup>10</sup>Mary L. Converse, "Numbering Medical Records," Hospitals, XLII (March 1, 1968), 24.

<sup>11</sup>Horace Cotton, "The Best Way to File Medical Records," Medical Economics, XCVI (November 20, 1961), 104-05.

<sup>12</sup>Huffman, Manual for Medical Record Librarians, pp. 181-86.

<sup>13</sup>Ernest A. Bragg Jr., "Social Security Numbers in Record Filing," Journal of the American Medical Association, CLXLIII (July 19, 1965), 250.

<sup>14</sup>Dickinson, "Terminal Digit Filing," p. 22.

<sup>15</sup>F. Kenneth Ackerman Jr., "Converting to Terminal Digit Filing of Medical Records," Hospitals, XLII (November 1, 1968), 70.

<sup>16</sup>George J. Foegen, "Army Medical Facilities Adopt Color-Coded Digit Filing," Information and Records Management, III (October/November, 1969), 23-25.

<sup>17</sup>Colonel Boyd E. Cooksley, Chief of Patient Administration and Biostatistics Branch, Office of the Surgeon General, Department of the Army, Washington, D.C., private interview held on October 25, 1972.

<sup>18</sup>American Hospital Association, Guide to the Organization of a Hospital Medical Record Department (Chicago: American Hospital Association, 1972), p. 16.

<sup>19</sup>Dickinson, "Terminal Digit Filing," p. 49.

<sup>20</sup>McNabb, Medical Record Procedures, p. 44.

<sup>21</sup>American Hospital Association, Guide, p. 15.

<sup>22</sup>Dickinson, "Terminal Digit Filing," p. 49.

<sup>23</sup>Huffman, Manual for Medical Record Librarians, p. 171.

<sup>24</sup>American Hospital Association, Guide, p. 15.

<sup>25</sup>McNabb, Medical Record Procedures, p. 44.

<sup>26</sup>American Hospital Association, Guide, p. 13.

<sup>27</sup>Huffman, Manual for Medical Record Librarians, pp. 174-76.

<sup>28</sup>McNabb, Medical Record Procedures, pp. 42-43.

<sup>29</sup>Huffman, Manual for Medical Record Librarians, pp. 171-74.

<sup>30</sup>McNabb, Medical Record Procedures, p. 43.

<sup>31</sup>Kurtz, Unit Medical Records, pp. 35-36.

<sup>32</sup>Huffman, Manual for Medical Record Librarians, p. 169.

<sup>33</sup>Ibid., p. 169.

<sup>34</sup>Max L. Brabson, "Social Security Numbers Identify Patients," Southern Hospitals, XXXVI (December, 1968), 14.

<sup>35</sup>Richard Davis, "The Use of the Social Security Number as the Unit Record Number," paper presented at the annual meeting of the American Association of Medical Librarians, Los Angeles, California, October, 1967, p. 1.

<sup>36</sup>Marie Carpenter, "Medical Record Librarian Discusses Our 'Number' Society," Michigan Hospital, V (January, 1969), 12.

<sup>37</sup>"Social Security Begins at 6, Committee Says," Dallas Morning News, Mar. 3, 1972, p. 1.

- 38 Davis, "Use of the Social Security Number," p. 2.
- 39 Bragg, "Social Security Numbers," 150.
- 40 Brabson, "Social Security Numbers Identify Patients," 14.
- 41 Lois Bowden, "Social Security Numbers for Patient Identification," Hospitals, XLVI (April 1, 1972), 15.
- 42 Roy L. Swift, "The Social Security Number as an All-Purpose Identification," Hospitals, XLI (November 16, 1967), 62.
- 43 Carpenter, "Medical Record Librarian Discusses Our 'Number' Society," 12.
- 44 Davis, "Use of the Social Security Number," p. 3.
- 45 Bowden, "Social Security Numbers for Patient Identification," 14-16.
- 46 Elizabeth Price, "The Question Box," Medical Record News, XXXIX (June, 1968), 5.
- 47 Huffman, Manual for Medical Record Librarians, p. 111.
- 48 Joint Commission on Accreditation of Hospitals, Accreditation Manual, p. 97.
- 49 Huffman, Manual for Medical Record Librarians, p. 107.

## CHAPTER III

### DISCUSSION

#### The Present Medical Record Systems

Methodist Hospital presently utilizes a decentralized medical record filing system in that the separate departments such as Medical Records, Radiology, Emergency and Outpatient maintain their own independent files within their departmental areas. With the exception of the emergency admission record, which will be discussed later, there is no standardization of departmental files. When the departmental record becomes inactive, it is "retired" to the inactive files located in the basement of the Annex, a separate building that was formerly the Nurses' Residence. The inactive files are maintained, retrieved, and if necessary, refilled by a medical records runner who is under the supervision of the Medical Records Department.

#### The Inpatient Record System

Upon the patient's discharge, the inpatient medical record becomes the sole responsibility of the Director of Medical Records. At present, both the director and her assistant are Registered Record Administrators; the remainder of the medical record staff includes an Accredited Record Technician, five medical secretaries located in the various professional departments, a medical records runner and approximately eight medical record clerks and secretaries.

The Medical Records Department is located on the ground floor of the main hospital. Inpatient medical records are presently filed under

the serial unit filing system. When the patient is admitted, an admission index card and record jacket folder are prepared by the Admissions Office and forwarded to the Medical Records Department. The index card is added to the alphabetical index file, and if the patient has been previously admitted, his previous records are retrieved and the previous index card is changed to reflect the new admission number. Upon the patient's discharge, medical records generated by the various medical departments are forwarded to the Medical Records Department for inclusion in the record jacket for final processing. Due to the limited space in the Medical Records Department, once a chart has been edited, audited and coded, the completed record is taken to the Annex for inclusion in the inpatient records file. This file contains approximately 48,000 charts.

At present, about 3,000 charts are maintained in the Medical Records Department; these charts reflect patients presently hospitalized and discharged patients whose charts are awaiting to be processed. Once an inpatient record remains inactive for two years and three months, the record is microfilmed and destroyed. Table II reflects the monthly hospital inpatient workload from January 1, 1971 to December 31, 1971.

#### The Outpatient Department Record System

The Outpatient Department serves a restricted population of approximately 2,500 medically indigent patients from Dallas County. To secure eligibility to participate in the Golden Cross program a patient must initially be interviewed by a staff social worker and subsequently approved by the Golden Cross staff directors. The patient is then free

TABLE II

## 1971 INPATIENT WORKLOAD FOR METHODIST HOSPITAL

MONTH	MONTHLY ADMISSIONS	MONTHLY DISPOSITIONS	PER CENT OCCUPANCY
January	1,970	1,870	82.28
February	1,806	1,828	86.21
March	1,985	1,946	83.86
April	1,899	1,905	83.32
May	1,817	1,880	77.50
June	1,897	1,857	77.17
July	1,957	2,004	76.62
August	2,032	1,956	76.88
September	1,845	1,815	79.82
October	1,848	1,937	76.48
November	1,859	1,844	80.68
December	1,625	1,699	67.34
TOTAL	22,540	22,541	

Source: Hospital Records, Business Office, Methodist Hospital, Dallas, Texas.

to telephone the clinic, state his medical problem and secure an appointment. The clinic is staffed by surgical residents, and availability of funds dictate the size of the enrolled patient population. A sliding scale fee is imposed on the patient based upon the patient or the patient guarantor's ability to pay.

Outpatient records are filed alphabetically by year. Records for 1970-1972 are maintained at the Outpatient Department, which is located on the first floor-basement. These records number about 4,700 and are filed both on open shelves and within filing cabinets. Three years of inactive records are maintained at the Annex. These inactive charts approximate 2,300 records and are filed alphabetically by year on open shelving. Unless the patient is subsequently seen and the record updated, the outpatient record is destroyed five years after the last outpatient visit.

In the event a Golden Cross patient is admitted to the hospital as an inpatient, the Medical Records Department automatically sends a copy of the patient's history, physical, discharge summary and operative record to the Outpatient Department for inclusion in the patient's outpatient chart.

Table III reflects the monthly outpatient workload for calendar year 1971.

#### The Radiology Record System

A radiology record is composed of three essential elements: the record jacket, x-ray films, and the radiological report. A serial-unit system is utilized for the radiology files. There is no correlation

1971 MONTHLY OUTPATIENT CLINIC VISITS, METHODIST HOSPITAL

MONTH	OUTPATIENT VISITS
January	900
February	758
March	975
April	998
May	937
June	961
July	1,039
August	1,176
September	1,122
October	1,040
November	1,094
December	1,102
TOTAL	12,102

Source: Hospital Records, Outpatient Department, Methodist Hospital, Dallas, Texas.

between the patient identification number utilized by Radiology and the patient identification number issued by the Admissions Office for inpatients. Radiology records are retained for five years before destruction. If a patient is seen prior to the five year cutoff, the record is updated and identified by a new number.

A pediatric patient, for the purpose of the Department of Radiology is any patient under the age of eighteen years. The retention procedure for pediatric radiology records consists of retaining the record until the patient attains the age of twenty-three years. Radiology records for the current year and the year prior are filed within the Department of Radiology, which is located on the same ground floor as the Medical Records Department. The inactive radiology records for 1967-1970 are maintained in the Annex. There are approximately 25,000 radiology records filed within the department and 46,000 retained in the Annex.

Table IV reflects yearly departmental statistical workload figures for the period 1967-1970.

#### The Emergency Record System

The Emergency Service is operated on a "leased" basis; however, all care rendered by the Emergency Service is administratively processed by admission clerks from the Business Office. A multi-copy form is completed on each patient to reflect: patient administrative data, patient insurance data, nurses' notes and the physician's report. If the patient is admitted to the hospital as an inpatient, a copy of the form is forwarded to the Medical Records Department for inclusion in the inpatient medical record. The original copy of each emergency record, regardless of whether the patient is admitted as an inpatient or not, is maintained

TABLE IV  
RADIOLOGY SERVICE ANNUAL WORKLOAD

YEAR*	DIAGNOSES PERFORMED	NUCLEAR MEDICINE **	COBALT **
1967	36,000	707	2,225
1968	42,320	986	2,681
1969	42,780	997	3,011
1970	45,563	1,576	3,216

Source: Hospital Records, Department of Radiology, Methodist Hospital, Dallas, Texas.

\* Monthly figures are available.

\*\* Separate procedures which are not reflected under "Diagnoses Performed".

in a sequentially numbered log book for the current month. At the month's end, a new log book is generated, and the old log book is forwarded to the Medical Records Department for retention. The two most current log books are retained within the Medical Records Department and represent approximately 3,330 separate emergency cases.

After two months, the emergency log book is forwarded to the Annex where it is retained another twenty-two months; at this time, the record is two years old and is destroyed without being microfilmed. Approximately 35,000 emergency records are presently maintained in the Annex.

#### Evaluation of the Present Records System

##### The Inpatient Medical Record

A survey was conducted to determine the record retrieval rate for inpatient records filed in the Annex. During the period April 11, 1972 through May 4, 1972, a total of 212 inpatient records were requested from the Annex; a total of 204 or 96 per cent were successfully retrieved by the records runner. This figure of 96 per cent was the highest find-rate for any of the various departments within Methodist Hospital. One author in the current literature establishes a 97 per cent rate as a standard. According to the results of a questionnaire sent to various hospitals of similar bed capacity, those hospitals using a numerical system reported a retrieval rate of 97 per cent.

Miss Maifair Offutt, the Registered Records Administrator for Methodist Hospital, stated that she felt the current system utilized for the inpatient medical record was satisfactory. Miss Offutt expressed her belief that no significant problems existed with current record retriev-

al rates. She did indicate that the high attrition rate of job turn-over for the records runner position did create hardships on her and the Medical Records staff. During the past year, the records runner position had been occupied by four different persons.<sup>1</sup>

#### The Outpatient Record

During the period April 11, 1972 to April 20, 1972, a similar survey was conducted for record retrieval among the alphabetical files within the Outpatient Department. Out of 421 records requested, all 421 were claimed to have been found by Outpatient Clinic file personnel. This writer was quite skeptical over the results of this survey for two main reasons: 1) a retrieval rate of 100 per cent for an alphabetical system is quite unlikely; and 2) a discussion was overheard by the writer concerning the inability of the Outpatient Clinic file personnel to retrieve a patient's record for the physician.

For the above reasons, a subsequent survey was conducted solely by the author. Thirty patient names were selected from the interview list of the social worker for each year from 1966 to 1968; this represented a total of ninety names or ninety different charts. A thorough search for these charts was accomplished in the Outpatient Department files and the results are reflected in Table V.

Table V does not reflect the fact that several alphabetically misfiled records (other than those designated for retrieval) were observed during the search. In addition, five of the records to be retrieved were located in misfiled positions. It is felt that the author's background in military and civilian medical record systems is extensive enough to

preclude the claim of inexperience in conducting such a survey. To further substantiate the preliminary results of the author's outpatient record retrieval experience, the record runner was requested to record his actual retrieval find rate for a two week period in April 1972. This rate was reported to be 20 per cent.

TABLE V  
OUTPATIENT RECORD RETRIEVAL SURVEY

	December* 1966	December 1967	December 1968
Number of Records to be Retrieved	30	30	30
Number of Records Actually Retrieved	18	24	26
Retrieval Rate	60%	80%	87%

Source: Survey by Author, Outpatient Department, Methodist Hospital, Dallas, Texas.

\* The Month of December was selected randomly.

Responses to the questionnaire in Appendix B from other hospitals of similar bed capacity to Methodist reflected higher retrieval rates than those rates experienced in the survey. Three hospitals responded to the questionnaire that they utilized an alphabetical filing system for their medical records. These same hospitals reported the following record retrieval find-rates: 90 per cent, 99 per cent, and an alleged 100 per cent.

An interview with Miss Mary Mansfield R. N., Director of the Out-

patient Clinic reflected her dissatisfaction with the present filing system. Miss Mansfield indicated that several record filing problems existed within the main clinic; the most critical problem was the utilization of closed shelf filing cabinets which Miss Mansfield believed impeded timely record retrieval. Miss Mansfield described the record files maintained at the Annex as a "mess". According to the Director, the Outpatient Clinic was experiencing an approximate 50 per cent find-rate of records maintained in the Annex. Utilization of the records runner for record retrieval at the Annex would often necessitate "double-checks" by Outpatient Clinic file personnel to attempt to locate alleged "lost" records.<sup>2</sup>

From the author's observations, one of the greatest barriers to timely record retrieval in the Outpatient Clinic was the lack of a central reference index file for the patient population of the Clinic. The file clerk must rely on the patient's ability to cite the last year of treatment at the Outpatient Clinic; if the patient cannot do so, a search must be made through each year's files until the patient's record is located.

#### The Radiology Record

A record retrieval survey was conducted for the Radiology Department during the period April 11, 1972 to May 4, 1972. To preclude disruption of the operations, this survey was limited to radiology records retrieved from the Annex by the records runner. During this period, 205 records were requested. The records runner was able to retrieve 192 or 93.6 per cent of the records requested. Again this rate falls below the

"claimed" retrieval rate of those hospitals queried who maintained a serial unit record system.

An interview with Mr. James McPherson, Chief Technician of the Radiology Department, revealed similar dissatisfaction with the retrieval capability of the records runner. Frequent "checks" were made on a daily basis for records which the records runner claimed were not accessible. Mr. McPherson indicated dissatisfaction with the present radiology record system's retrieval rate and disclosed that a departmental study was under way to initiate a color-coded filing system to enhance record retrieval.<sup>3</sup>

#### The Emergency Record

Time limitations precluded detailed studies concerning the emergency record; however, it is felt that the present system, although cumbersome at times, meets present accreditation standards. The principal disadvantage of the emergency record system concerns the inquiries received by the Medical Records Department on emergency cases when the date of admission is unknown. Unless the patient was admitted as an inpatient and a copy of the emergency record is available in the patient's inpatient chart, retrieval of specific data is a most difficult task. This retrieval is complicated by the usual lack of specific information from the requestor as to the exact time and date the patient was treated in the Emergency Room. In that emergency records are filed chronologically and approximately 1,700 patients are treated in the Emergency Room monthly, lack of a patient alphabetical cross index file and scanty information concerning time of treatment can create a severe hardship on the Medical Records Department in retrieving the emergency record.

Another criticism of the emergency medical record system is that the inpatient record copy of the emergency admission form is the fourth copy of the form and poses a problem in legibility. According to the registered records administrator in the Medical Records Department this copy would probably not be acceptable if taken to court.<sup>4</sup>

#### Summary of Present Records Systems

A review of the current literature revealed a reluctance on the part of the authors to establish an acceptable find-rate standard. Three authors did establish a 97 per cent rate as a standard.<sup>5</sup> As previously cited, the surveys conducted at Methodist Hospital did not achieve the 97 per cent standard. In addition, the present decentralized system of maintaining medical records at Methodist Hospital does not appear to be successful when compared to the alleged find-rates of other hospitals of similar bed capacity in the questionnaire responses. Interviews were conducted with the heads of medical record departments from Children's Medical Center, Dallas, Texas and Santa Rosa Medical Center, San Antonio, Texas to determine their find-rates. The Clinic Supervisor at Santa Rosa claimed a successful retrieval rate of 99 per cent.<sup>6</sup> The Director of Medical Records at Children's Medical Center stated their retrieval rate exceeded 98 per cent.<sup>7</sup>

The varying degrees of record retrieval rates at Methodist Hospital as identified in the surveys indicate a definite weakness in Methodist Hospital's medical record system. These same rates reflected poorly when compared to the questionnaire responses and alleged find-rates cited by other hospitals during interviews.

Footnotes

<sup>1</sup>Mayfair Offutt, R. R. A., Chief, Medical Records Department, Methodist Hospital, Dallas, Texas, private interview held on March 2, 1972.

<sup>2</sup>Mary Mansfield, R. N., Director, Outpatient Clinic, Methodist Hospital, Dallas, Texas, private interview held on February 29, 1972.

<sup>3</sup>James McPherson, R. T., Chief Technician, Radiology Department, Methodist Hospital, Dallas, Texas, private interview held on March 1, 1972.

<sup>4</sup>Maifair Offutt, private interview held on March 2, 1972.

<sup>5</sup>Gilbert Kahn, Theodore Yerian, and Jeffrey R. Stewart, Jr., Progressive Filing and Records Management (New York: Gregg Publishing Division, McGraw-Hill Book Co., Inc., 1962), p. 213.

<sup>6</sup>Sister Mary Aidan, Clinic Supervisor, Santa Rosa Medical Center, San Antonio, Texas, private interview held on May 3, 1972.

<sup>7</sup>Naomi Gonzales, R. R. A., Chief, Medical Records Department, Children's Medical Center, Dallas, Texas, private interview held on April 18, 1972.

administration and Business Office believe that a standard number will not only assist in better retrieval of all patient data, but will facilitate the billing operation as well. Another disadvantage of the present decentralized system is that if a centralized system is ever adopted, conversion to a single unit record will be a herculean task due to the different systems of record identification. Although there are no immediate plans for developing a centralized record system, the administrator discussed the possibility of such a change in the future. For the purpose of this study, however, it was requested that the study be confined to the present physical plant structure with its decentralized characteristics.

The selection of a standard alphabetical system would be a most inadvisable choice according to current literature. Not one author reviewed in the current literature advocates the use of the alphabetical system.

## CHAPTER IV

### ALTERNATIVE COURSES OF ACTION

In discussing the various alternative methods for maintaining the medical record files for Methodist Hospital, several systems are not acceptable or are not advisable based upon guidance from the current literature.

The present system utilized at Methodist is not standardized since four different systems are being utilized; a Golden Cross patient who is admitted as an inpatient to the hospital through the Emergency Service can have as many as four separate records generated on his case, and each record will be identified by a different identification number. The administration and Business Office believe that a standard number will not only assist in better retrieval of all patient data, but will facilitate the billing operations as well. Another disadvantage of the present decentralized system is that if a centralized system is ever adopted, conversion to a single unit record will be a herculean task due to the different systems of record identification. Although there are no immediate plans for developing a centralized record system, the administrator discussed the possibility of such a change in the future. For the purpose of this study, however, it was requested that the study be confined to the present physical plant structure with its decentralized characteristics.

The selection of a standard alphabetical system would be a most inadvisable choice according to current literature. Not one author reviewed in the current literature advocates the use of the alphabetical system.

The questionnaire survey revealed that the poorest retrieval rates were experienced under the alphabetical system. Even within the alphabetical system utilized at Methodist's Outpatient Department, the experienced retrieval rate for inactive records was far inferior to retrieval rates for other hospital departments.

A sequential serial filing system is also considered a poor choice; this is based upon a review of the literature and the difficulties experienced with the retrieval of emergency records which are filed under a serial system. Another major disadvantage in this system is the prodigious space requirement as older inactive records would have to be retained in the current files.

The sequential unit numbering system, according to current literature, is declining in popularity due to the constant reshuffling of files and the system's requirement for a large filing space. Of the forty-two hospitals responding to the questionnaire, only one hospital claimed to be utilizing the sequential unit numbering system. This hospital admitted the dependency upon a "Master File Folder" to identify the patient and the frequent use of the microfilmed record. A standard unit numbering system for all departments would require an intricate and almost impossible program in coordinating the same patient number among the different departments; issuance of numbers to various departments would become so perplexing as to not warrant further consideration of the sequential unit numbering system.

The three most logical choices for a medical record system at Methodist Hospital are: 1) the sequential serial-unit system for all departments, 2) the terminal digit unit system based upon a departmen-

tal admission number, and 3) the terminal digit unit system based on the patient or the guarantor's social security account number. This decision is based on the review of the current literature, results received from the questionnaires, and a sample of record retrieval rates already discussed.

#### The Serial-Unit Numbering System

As previously described, the serial-unit numbering system assigns a patient a new number on each admission, and all previous records are brought up under the latest number on each readmission. This procedure does provide a unit record even though a unit number is not used.<sup>1</sup> The advantages of the serial-unit numbering system for Methodist Hospital are:

1. Retirement procedures are simplified. The oldest records are located together at one end of the files section.
2. The serial-unit numbering system is readily adaptable to present microfilm retirement procedures.
3. This recommended system is already in effect for radiology and inpatient medical records; the Outpatient Department would be the only section immediately affected.
4. The system is simple and easily taught to the novice.
5. The cost and time for conversion would be minimal.
6. The serial-unit numbering system is recommended for hospitals retaining older charts in distant locations such as in Methodist's Annex.<sup>2</sup>

The disadvantages of the serial-unit numbering system for Methodist Hospital are:

1. This type system does not provide a single standard identification number for the patient.
2. Future conversion to a more preferable centralized system would

be difficult.

3. As records are updated and placed among the current files, old file space becomes wasted; this also leads to constant reshuffling of shelf space.

4. The system does not facilitate billing procedures in that the same patient can be identified by more than one number from other departments.

5. The system necessitates the continued use of a central control office for the issuance and control of numbers. Costly pre-numbered forms are essential under this system. Numerical sequences often run out, and renumbering has to be accomplished.

6. An alphabetical card index is a requisite for use as a cross reference; the Outpatient Department would be the only department affected.

7. As older records are pulled for renewal, it is necessary to mark the new record identification number on the outguide. This is a time-consuming process.

8. This system necessitates constant use of the patient register or card index file.

#### The Terminal Digit Unit Filing System

The advantages of the terminal digit unit filing system utilizing the patient's admission number are:

1. There would be an expected increase of 30 per cent in the filing capability of clerks.<sup>3</sup>

2. Misfiles are greatly reduced; a color-coded scheme further enhances the system's accuracy. By compelling the file clerk to concentrate on one or two digits at a time, this system lessens the likelihood of

misfiles through the use of colored folders and marginal colored bands.

3. The terminal digit system spreads the records evenly throughout the entire file.

4. A terminal digit filing system eliminates "back-shifting" of records after transfer to inactive storage. With terminal digit filing the records come out as evenly as they went in; this precludes the "back-shifting", re-labeling of file drawers and "re-guiding".

5. File guides are permanent.

6. Sorting of records to file order is made easier, simpler and faster.

7. The fileroom workload will be evenly spread throughout the file if more than one person is filing as the terminal digit system automatically separates and equalizes the work.

The terminal digit filing system using the patient's admission number is disadvantageous to Methodist Hospital for the following reasons:

1. This system does not provide a standard identification number for each patient throughout the different departments.

2. This system represents a new concept to learn and will necessitate training programs.

3. Record retrieval on weekends, holidays and during evening hours will be difficult unless accomplished by a person trained in the system.

4. Record retirement requires a special color-coding system.

5. Although feasible, the terminal digit system is less adaptable to microfilm procedures than the serial-unit system.

6. Future conversion to a centralized system would be difficult.

7. The terminal digit system necessitates an alphabetical card index file for cross reference.

8. The Outpatient Department, Medical Records Department, and Radiology must all undergo conversion; this would cause a degree of disruption and call for additional manhours during the conversion phase.

9. The requisite color-coded terminal digit record jackets would pose an additional expense.

10. Utilization of the patient's admission number would again necessitate the continued use of a central control office for the issuance and control of numbers.

11. Billing procedures would again be hindered by the lack of a single identification number for a patient.

12. The terminal digit system has an inherent inability to produce consecutively numbered documents quickly and simply; transfer of records to inactive storage will be more time-consuming than in the serial-unit system.

13. This system necessitates constant use of the patient register or card index file.

14. The color-coded terminal digit system can be a detriment to employees who are color-blind.

15. Altering the established work routine of those personnel who work with medical records will pose a real challenge.

#### The Terminal Digit Unit Filing System

##### Utilizing the Patient's Social Security Account Number

The advantages to Methodist Hospital of utilizing the terminal digit unit filing system keyed to the patient or guarantor's social security account number are as follows:

1. This system provides a standard number under which all records

belonging to a patient can be identified.

2. Future conversion to a centralized system and to the combination of both inpatient and outpatient records will be greatly facilitated.

3. The terminal digit system will increase the filing capacity of the file clerks.

4. Misfiles under the terminal digit system are greatly reduced.

5. The terminal digit system spreads the records evenly throughout the system.

6. After transfer of records to inactive storage, "back-shifting" will be eliminated.

7. File guides are permanent.

8. Sorting of records to file order is made easier, simpler and faster.

9. The file room workload will be evenly spread throughout the entire file if more than one person is filing, as the terminal digit system separates and equalizes the work.

10. A greater record retrieval capability exists when answering record requests from such agencies as Blue Cross and other third party insurance companies, Veterans Administration hospitals, and state and federal agencies. All of these activities are becoming increasingly dependent on the social security number as an identification number.

11. Accreditation standards of the Joint Commission on Accreditation of Hospitals will be more closely followed.

12. The patient would be identified by a permanent and exact identification number.

13. The record retrieval process is expedited because use of the pa-

tient register or card file may be eliminated if the patient knows his social security number.

14. Computer billing procedures would be facilitated by the use of a single identification number for the patient.

15. As reflected in the review of the literature, the trend is toward the use of the social security number as an all-purpose identification number; the possibility does exist that someday in the future, all medical records may be required to be identified by the patient's social security number for federal data bank information.

16. The requisite central control office for issuance of numbers would have its task alleviated in that only pseudo-numbers would have to be issued.

The disadvantages to Methodist Hospital of the terminal digit unit filing system utilizing the patient's social security account number are:

1. Record retrieval on weekends, holidays and during evening hours will be difficult unless accomplished by an individual trained in the system.

2. The terminal digit system represents a new concept to learn and will necessitate training programs.

3. Record retirement requires a special color-coding system.

4. The terminal digit system is less adaptable to microfilm procedures than the serial-unit system.

5. This system requires all departments to maintain an alphabetical patient register or card index file.

6. The Outpatient Department, Medical Records Department and Radiology must all undergo conversion; this would cause a degree of disruption

of activities and require additional manhours for the conversion process.

7. The requisite color-coded terminal digit record jacket would pose an additional expense.

8. Many patients do not have a social security number or have it accessible during the admission process. A special study (see Appendix C) was conducted to determine the accessibility of the patient's social security number during the admission process. This study revealed that Methodist Hospital should not be confronted with any overwhelming problem in securing the social security number for the majority of admissions. The development of an appropriate pseudo-numbering system for patients not having a social security number should not cause any great problems.

9. The terminal digit system has an inherent inability to produce consecutively numbered documents quickly and simply. Transfer of records to inactive storage will be more time-consuming than with the serial-unit system.

10. Some patients may have more than one social security account number; precautions must be taken against preparing dual records.

11. A color-blind individual will experience difficulty in working with a color-coded terminal digit system.

12. The general public must be indoctrinated on the need to present their social security number during the admission process to facilitate use of the system.

13. Altering the established working procedures of hospital employees will pose a challenge.

Summary

A comparison of the three alternatives reveals that conversion to the serial-unit system for all activities would create less turmoil than selecting one of the terminal digit filing systems. The main question is the degree of improvement in record retrieval for all departments; the Medical Records Department and Radiology are already on a serial-unit system, and only the Outpatient Department would be affected. The surveys discussed in Chapter III reflected inpatient medical records retrieval to be 96 per cent effective; retrieval for inactive records for Radiology was measured at 93.6 per cent. Obviously, these percentage "find-rates" could be improved under either of the terminal digit systems advocated as alternative courses of action. The selection of the terminal digit system utilizing the patient's social security number is the most radical deviation from the present system, yet the literature and the sample of questionnaires reveal that several hospitals are seriously considering conversion to this system. The study in Appendix D reveals that Methodist Hospital should experience no major difficulties in securing the guarantor's social security number. The terminal digit system utilizing the social security number would probably cause the greatest problems during the conversion stage, yet on its completion, the benefits of such a system should be the most rewarding.

Footnotes

<sup>1</sup>Edna K. Huffman, Manual for Medical Record Librarians (4th ed.; Chicago: Physicians' Record Company, 1955), p. 172.

<sup>2</sup>Betty Wood McNabb, Medical Record Procedures in Small Hospitals (3rd ed.; Austin, Texas: Steck-Warlick Company, 1970), p. 43.

<sup>3</sup>Huffman, Manual for Medical Record Librarians, p. 181.

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

#### Conclusions

Edna Huffman in the Manual for Medical Record Librarians says:

The real test of the over-all efficiency of the medical record department — the test by which the physicians and hospital personnel gauge the department — is the promptness with which requests for medical records are filled.<sup>1</sup>

In that no universally accepted or established standard for record retrieval exists, the principal method of gauging the effectiveness of the medical record system at Methodist Hospital was the performance of record retrieval surveys and the comparison of these findings with the alleged rates of medical record systems at other medical facilities. When such a comparison was accomplished, the medical record system at Methodist Hospital reflected poorly.

Although it was not feasible for the author to personally conduct find-rate surveys for the various numerical medical record systems, the questionnaire in Appendix B was developed to establish an indication of the most effective medical record system among hospitals of similar bed capacity. The results of the questionnaire as shown in Appendix C reflect the effectiveness and desirability of the terminal digit filing system over other numerical filing systems. The study in Appendix D indicates that the utilization of the social security number as the identification key for a terminal digit filing system is both feasible and practical.

The terminal digit filing system has proven its effectiveness for medical record retrieval and increased efficiency for file clerks. Sev-

eral authors in the current literature claim that the terminal digit filing system using the patient's social security number as the identification number has the potential to cut the records handling cost of American hospitals by many millions of dollars each year.<sup>2</sup> The United States Army experienced an appreciable savings in manpower after the initiation of terminal digit filing with color control, but the principal reason for conversion was to provide records that could be retrieved with a minimum of time and effort.<sup>3</sup>

It is sincerely believed by the writer that the daily high volume benefits of the proposed terminal digit filing system will merit its selection as proper and beneficial to Methodist Hospital. The adoption of the terminal digit filing system should definitely improve the retrieval rate of medical records and thereby enhance conformance with the Joint Commission's standards for medical record services. Conversion to the terminal digit filing system is adaptable to the present physical structure of the hospital and would require no additional major equipment or major renovation. The terminal digit filing system would be amenable to Methodist Hospital's microfilm retirement process.

#### Recommendations

Based on the conclusions presented in this study, the following recommendations are made:

1. Convert the Medical Records Department, Outpatient Clinic and Radiology Department record files to a terminal digit unit filing system utilizing the patient or guarantor's social security number.
2. Develop a pseudo-numbering system as described in Appendix D whereby the guarantor's social security number is utilized for those

patients not having a social security number.

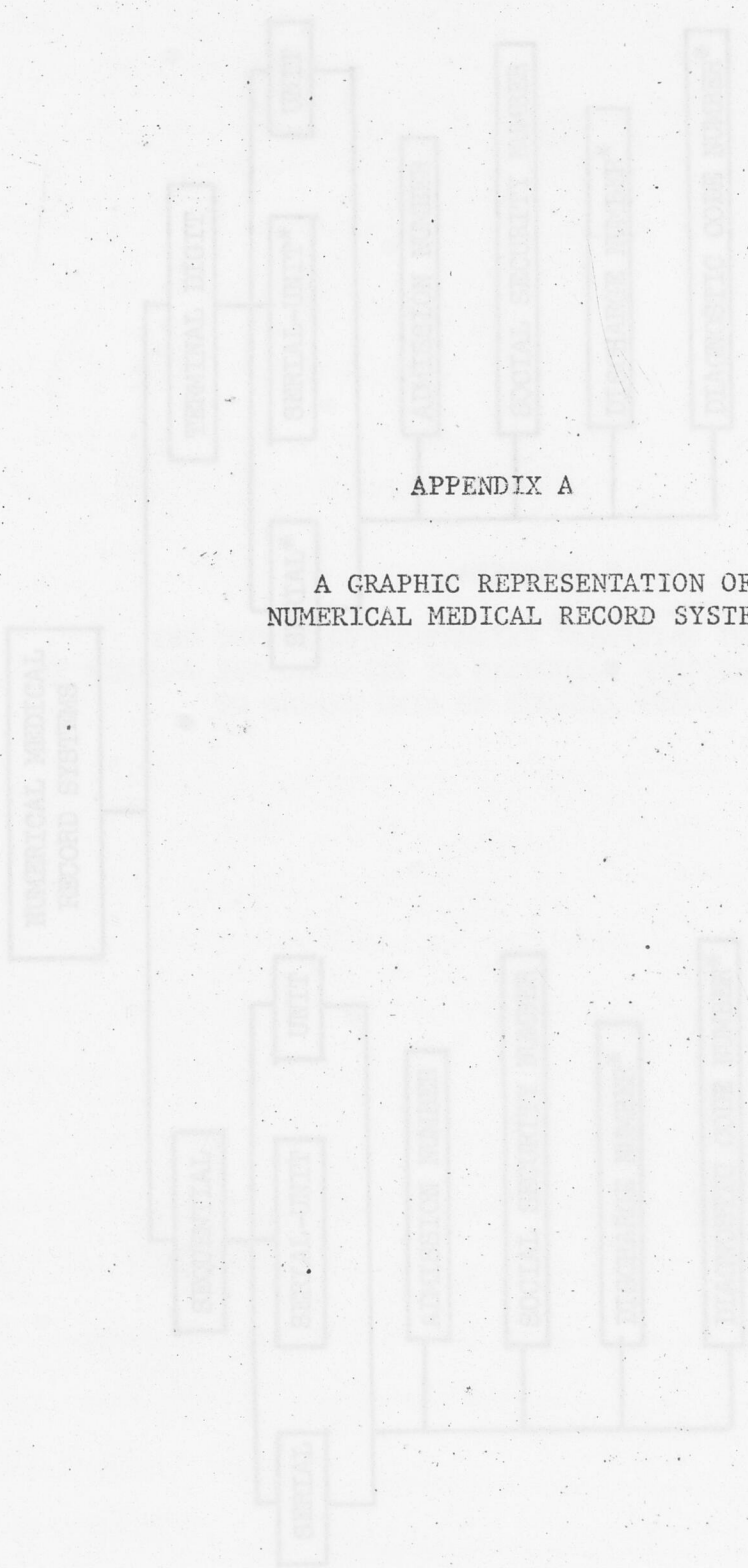
3. Initiate a study prior to conversion to determine the most effective color-coded terminal digit system for Methodist Hospital; local sales representatives should be contacted as a large variety of terminal digit color-coded systems are available.

#### Footnotes

<sup>1</sup>Edna K. Huffman, Manual for Medical Record Librarians (4th ed.; Chicago: Physicians' Record Company, 1955), p. 188.

<sup>2</sup>Earnest A. Bragg Jr., "Social Security Numbers in Record Filing," Journal of the American Medical Association, CLXLIII (July 19, 1965), 250.

<sup>3</sup>George J. Foegen, "Army Medical Facilities Adopt Color-Coded Filing," Information and Records Management, III (October/November, 1969), 25.



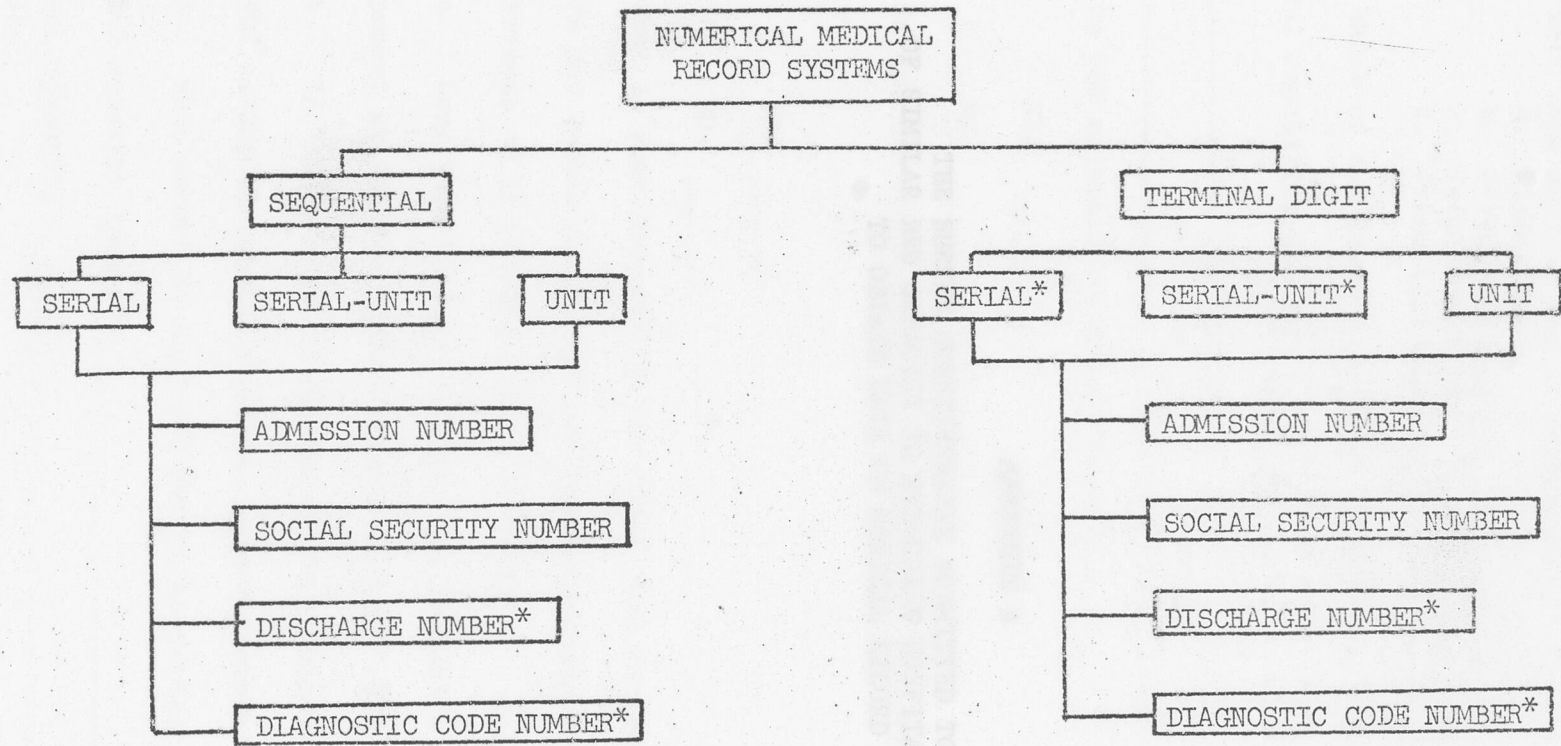
APPENDIX A

A GRAPHIC REPRESENTATION OF NUMERICAL MEDICAL RECORD SYSTEMS

\* Rarely Used

Source: Mine K. Huffman, Manual for Medical Record Librarians (4th ed.; Chicago: Physicians Record Company, 1955), pp. 207-18.

NUMERICAL MEDICAL RECORD SYSTEMS



\* Rarely Used

Source: Edna K. Huffman, Manual for Medical Record Librarians (4th ed.; Chicago: Physicians' Record Company, 1955), pp. 207-18.

FROM: Major E. B. Cole  
137 Ingram Dr.  
Ft. Sam Houston, Texas  
78234

1. What type medical record filing system do you presently utilize?  
a. Alphabetical  
b. Straight Numerical  
c. Terminal Digit  
d. Other (explain) \_\_\_\_\_

2. Which of the above systems provides greater record retrieval capability and why? \_\_\_\_\_  
\_\_\_\_\_

3. Do you maintain outpatient records?

YES \_\_\_\_\_

NO \_\_\_\_\_

APPENDIX B

THE SURVEY QUESTIONNAIRE SUBMITTED TO HOSPITALS  
OF SIMILAR BED CAPACITY TO METHODIST HOSPITAL, DALLAS, TEXAS  
TO OBTAIN DATA ON MEDICAL RECORD SYSTEMS

records?

YES \_\_\_\_\_

NO \_\_\_\_\_

5. What is your approximate percentage of time for medical records (how often are you unable to provide the patient's medical record to the physician because of it being misplaced or lost) (please use X figure)

6. a. Does your hospital utilize the patient's social security number as the key number for the record? YES \_\_\_\_\_ NO \_\_\_\_\_

b. If "YES", what is the approximate percentage of patients NOT having an available social security number? \_\_\_\_\_

c. What number is utilized for those patients not having a social security number? \_\_\_\_\_

ADDITIONAL COMMENTS: \_\_\_\_\_

(if any)

FROM: Major E. H. Cole  
137 Ingram Dr.  
Ft. Sam Houston, Texas  
78234

- 1. What type medical record filing system do you presently utilize?
  - a. Alphabetical \_\_\_\_\_
  - b. Straight Numerical \_\_\_\_\_
  - c. Terminal Digit \_\_\_\_\_
  - d. Other (explain) \_\_\_\_\_

2. Which of the above systems do you believe provides greater record retrieval capability and why? \_\_\_\_\_

3. Do you maintain outpatient records?

YES \_\_\_\_\_

NO \_\_\_\_\_

4. If so, are the outpatient records combined with your inpatient records?

YES \_\_\_\_\_

NO \_\_\_\_\_

5. What is your approximate "no-find" rate for medical records (how often are you unable to provide the previous medical record to the physician because of it being misfiled or lost? (please use % figure)

6. a. Does your hospital utilize the patient's social security number as the key number to your system? YES \_\_\_\_\_ NO \_\_\_\_\_

b. If "YES", what is the approximate percentage of patients NOT having an available social security number? \_\_\_\_\_

c. What number is utilized for those patients not having a social security number? \_\_\_\_\_

ADDITIONAL COMMENTS: \_\_\_\_\_  
(if any)

## AN ANALYSIS OF QUESTIONNAIRE RESPONSES

A total of forty-four questionnaires were sent to various hospitals of similar bed capacity to Methodist Hospital. A total of forty-two responses or 95 per cent reply was received. The following responses to the various questions were received:

Question 1. (Type of medical record filing system utilized)

- a. Alphabetical - 6
- b. Straight Numerical - 13
- c. Terminal Digit - 17
- d. Other - 13

### APPENDIX C

## AN ANALYSIS OF QUESTIONNAIRE RESPONSES SUBMITTED TO HOSPITALS OF SIMILAR BED CAPACITY TO METHODIST HOSPITAL, DALLAS, TEXAS TO OBTAIN DATA ON MEDICAL RECORD SYSTEMS

Question 2. (System offering greatest record retrieval capability)

- a. Terminal Digit - 17
- b. Serial-Unit - 8
- c. Unit - 1
- d. Serial - 4
- e. Alphabetical - 2

Question 3. (Maintenance of outpatient records)

- a. Yes - 33
- b. No - 9

Question 4. (Combination of outpatient with inpatient records)

- a. Yes - 17
- b. No - 16

Question 5. (Approximate "no-find" rate for current system)

- a. Serial-Unit System:

## AN ANALYSIS OF QUESTIONNAIRE RESPONSES

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Question 1. (Type of medical record filing system utilized)

- a. Alphabetical - 6
- b. Straight Numerical - 13
- c. Terminal Digit - 17
- d. Other - 13
  - 1) Serial-Unit - 11
  - 2) Unit - 2

Question 2. (System offering greatest record retrieval capability)

- a. Terminal Digit - 27
- b. Serial-Unit - 8
- c. Unit - 1
- d. Serial - 4
- e. Alphabetical - 2

Question 3. (Maintenance of outpatient records)

- a. Yes - 33
- b. No - 9

Question 4. (Combination of outpatient with inpatient records)

- a. Yes - 17
- b. No - 16

Question 5. (Approximate "no-find" rate for current system)

- a. Serial Unit System:

1) Less than 1 per cent - 6

2) Zero per cent - 2

b. Terminal Digit System:

1) Less than 2 per cent - 2

2) Less than 1 per cent - 7

3) Less than 0.1 per cent - 5

4) Zero per cent - 4

c. Unit System:

Less than 1 per cent - 1

d. Alphabetical System:

1) 10 per cent - 1

2) 1 per cent - 2

3) Zero per cent - 1

e. Straight Numeric System:

1) Less than 3 per cent - 1

2) Less than 2 per cent - 1

3) 1 per cent - 1

4) Less than 1 per cent - 6

5) Zero per cent - 1

Question 6. (Utilization of the social security number as the key to identification in the filing system; the percentage of patients not having a social security number; and the number used in lieu of the missing social security number)

a. Three hospitals reported the use of the social security number.

b. These three responses were:

1) Hospital 1 - 40 per cent did not have a social security number. A pseudo nine digit number is utilized and is based on a sequential series.

2) Hospital 2 - 20 per cent did not have a social security number. A pseudo nine digit number is utilized and is "supplied by computer".

3) Hospital 3 - 10 per cent did not have a social security number. A pseudo nine digit number is utilized and is based on the patient's initials and date of birth.

An analysis of these responses reflects the popularity of the terminal digit filing system. Although only 43 per cent of the responding hospitals indicated they utilized the terminal digit filing system, 64 per cent stated they felt the terminal digit filing system offered the greatest record retrieval capability.

Questions #3 and #4 were placed in the questionnaire to establish the frequency of utilization of the unit record system. 52 per cent of those hospitals maintaining both inpatient and outpatient records reported the use of a unit record.

Question #5 was an attempt by the author to establish a record retrieval rate for the different filing systems utilized by other hospitals of similar bed capacity to Methodist Hospital. The responses from the different hospitals varied in the manner in which their find-rates were reported. Some hospitals reported "less-than" percentage figures, while other hospitals reflected straight percentage statistics. In that the reporting techniques varied and are open to question, the author believes that a meaningful comparison of these figures would be open to conjecture. It should be pointed out, however, that four of the eight hospitals which

alleged a perfect retrieval rate were utilizing the terminal digit system.

Question #6 revealed that only three hospitals were utilizing the patient's social security number as the key to record identification. However, thirteen hospitals expressed an interest in the use of the social security number and two of these hospitals indicated they were presently conducting a study concerning the feasibility of using the social security number.

Although the author believes question #5 to be unsuccessful in reflecting specific data, it is felt that the questionnaire did generate useful information. The questionnaire emphatically pointed out a trend favorable to the terminal digit system as twenty-seven hospitals indicated they believed the terminal digit system to be the most efficient medical record filing system. The comments volunteered by several hospitals reflected a high degree of interest in the use of the social security number as the means of identifying a patient's medical record. One indication of the questionnaire's success was that thirty-one hospitals requested that the results of the survey be forwarded to them.

A STUDY OF THE ACCESSIBILITY OF THE PATIENT'S SOCIAL SECURITY NUMBER UPON ADMISSION TO METHODIST HOSPITAL

General

As discussed in Chapter II in the review of the literature, several authors advocate the use of the patient's social security number as the record identification number. The main apprehension in converting to such a system is the questionable accessibility of the patient's social security number at the time of admission. Studies conducted at other hospitals reflect that excluding Medicare, approximately 86 to 88 per cent of admissions possessed a social security number; one hospital

APPENDIX D

A STUDY OF THE ACCESSIBILITY  
OF THE PATIENT'S SOCIAL SECURITY NUMBER  
UPON ADMISSION TO METHODIST HOSPITAL,  
DALLAS, TEXAS

The one fact that is certain is that the accessibility of the patient's social security number during the admission process; a patient may possess a social security number, but that does not mean he will have this number memorized or have his card with him upon request.

A questionnaire was sent to forty-four hospitals of similar bed capacity to Methodist Hospital to ascertain the frequency in utilization of the patient's social security number as an identification number for the medical record. Out of forty-two responses, only three hospitals claimed to use the social security number as the key to record identification. The responses to the question of the approximate percentage of patients not having a social security number on admission were: 10 per cent; 20 per cent and 25 per cent. All three of these hospitals use a pseudo-number for those patients not having a social security number. Thirty-one of the forty-two hospitals requested results of the questionnaire and revealed they were interested in such a system.

A study was conducted by this writer to ascertain the accessibility

## A STUDY OF THE ACCESSIBILITY OF THE PATIENTS' SOCIAL SECURITY NUMBER UPON ADMISSION TO METHODIST HOSPITAL

### General

As discussed in Chapter II in the review of the literature, several authors advocate the use of the patient's social security number as the record identification number. The main apprehension in converting to such a system is the questionable accessibility of the patient's social security number at the time of admission. Studies conducted at other hospitals reflect that excluding newborns, approximately 80 to 85 per cent of admissions possessed a social security number; one hospital claimed that 91 per cent of admissions had a social security number. The one fact that the literature failed to reveal was the accessibility of the patient's social security number during the admission process; a patient may possess a social security number, but that does not mean he will have this number memorized or have his card with him upon request.

A questionnaire was sent to forty-four hospitals of similar bed capacity to Methodist Hospital to ascertain the frequency in utilization of the patient's social security number as an identification number for the medical record. Out of forty-two responses, only three hospitals claimed to use the social security number as the key to record identification. The responses to the question of the approximate percentage of patients not having a social security number on admission were: 10 per cent; 20 per cent and 40 per cent. All three of these hospitals use a pseudo-number for those patients not having a social security number. Thirty-one of the forty-two hospitals requested results of the questionnaire and revealed they were interested in such a system.

A study was conducted by this writer to ascertain the accessibility

of the patient's social security number during the admissions process at Methodist Hospital. This study involved reviewing the inpatient admission forms, the radiology billing forms, the Outpatient Department interview forms, and the emergency admission forms; each of these forms provided a space for both the patient and the guarantor's social security number. One important consideration is that although there is a requirement to complete the social security number blanks, there is no follow-up action taken to secure this number.

#### The Inpatient

A review of one month's inpatient admission forms covering the period March 21, 1972 to April 20, 1972 was conducted; during this period a total of 1,865 patients were admitted and 59.7 per cent possessed a social security number. Discounting the 179 newborns and 299 dependent children admitted during this period, 80.2 per cent of those adult patients admitted possessed a social security account number at the time of admission. Significantly, 1,714 of the 1,865 patients admitted during this period or 92.0 per cent of the total had either their own social security number or the social security number of the guarantor during the time of admission. Of the 151 patients or 8 per cent not having their own or the guarantor's social security number, 85 or 56.3 per cent of these patients were admitted on the weekend or during hours other than between 7:00 A.M. and 5:00 P.M. Of the remaining 66 patients admitted during normal hours of operation, 22 or 33.3 per cent were admitted through Emergency Service under presumed "rushed" conditions; their diagnoses varied and were generally conditions such as traumatic amputations, acid ingestions and acute myocardial infarctions.

### The Outpatient

Accessibility of the patient's social security number at the Outpatient Department is facilitated by the requisite of the preliminary interview by the social worker. During the period April 1 to April 20, 1972 of the ninety-nine patients interviewed, eighty-eight patients or 89 per cent presented their social security number; those patients not having a social security number but having their guarantor's social security number brought the total availability percentage to 92 per cent. During March, 1972 121 of the 129 patients interviewed or 94 per cent had their own social security number; 96 per cent had either their own or their guarantor's social security number.

### The Radiology Department

Lack of sufficient time and data precluded a detailed study of the accessibility of the outpatient's social security number for Radiology Service; in addition, there was a noted lack of emphasis in the Admissions Office to complete the patient form in regard to securing the social security number. The space for the patient or the guarantor's social security number was left blank in several forms. Of the eighty-two radiology outpatient forms reviewed for the period March 21, 1972 to April 12, 1972, only fifty patients or 61 per cent had their social security number available during the interview. Fifty-five patients had either their own social security number or their guarantor's social security number with them.

### The Emergency Patient

During the period March 21 to March 27, 1972 and April 12 to April

18, 1972 a total of 724 outpatient emergency admissions were experienced. A review of these forms revealed that out of the 414 adult patients, 70 per cent had access to their social security number, but of the total 724 patients, only 291 patients or 40 per cent had their own social security number. 533 patients or 74 per cent had either their own social security number or their guarantor's social security number.

#### Conclusion

It was noted that in the Outpatient Department where emphasis is given to securing the patient's social security number, the highest percentage of accessibility was achieved. It is believed that similar emphasis in the other departments can enhance the accessibility of the patient's social security number.

The Business Manager quoted that 93 per cent of all admissions were covered by third party insurance companies. Current literature and interviews with insurance companies revealed that the patient's social security number is secured during the initiation of the policy. An interview with Mr. Don Wheeler, Blue Cross hospital liaison representative, revealed that the patient's social security number is a requisite of the Blue Cross; if the patient does not have a valid social security account number, the patient cannot receive Medicare. Blue Cross does assist the patient in securing a valid social security number. Because insurance companies who provide third party coverage are contracted by Methodist Hospital to verify coverage, these insurance companies could conceivably provide an excellent source for securing the patient's social security number.

In conclusion, it is believed the accessibility of the social security number should pose no serious difficulties to the admission clerks. Public education would certainly facilitate efforts. A pseudo-numbering system can be developed to cover those patients not having social security numbers. This writer believes the best pseudo-number for those patients such as dependent children and wives not having a social security number is to utilize their guarantor's social security number. The armed services utilize a similar system and simply add a numeric prefix to the sponsor's social security number to identify the relationship of the dependent to the sponsor. For those patients who do not have a social security number or a guarantor's social security number, a pseudo-social security number can be created; most authors advocate using the "800-00-0000" series. An absolute requisite to a system using the social security number as the identification key is a cross reference alphabetical index file for verification of numbers, if necessary.

ORGANIZATION - METHODIST HOSPITAL OF DALLAS

May, 1972

SOUTH TEXAS CONFERENCE OF THE UNITED METHODIST CHURCH

BOARD OF TRUSTEES

EXECUTIVE DIRECTOR

ADMINISTRATOR

ASSISTANT ADMINISTRATOR

(Mr. Lutzer)

Laboratory

Medicine

Physical Medicine

Emergency Room

Therapy

Business Office

Outpatient Department

Chaplain

ASSISTANT ADMINISTRATOR

(Mr. Thompson)

Nursing Service

Dietary

Patient Services

Cardiopulmonary

ASSISTANT ADMINISTRATOR

(Mr. Trowbridge)

Medical Records

Maternity

Operating Room

Anesthesia

Laundry

Bookkeeping

Central Services

Communications

Security

Building Control

Photography

Child Care Program

APPENDIX E

AN ORGANIZATIONAL CHART OF  
METHODIST HOSPITAL, DALLAS, TEXAS

Secret Office of the Administrator, Methodist Hospital,  
Dallas, Texas.

ORGANIZATION - METHODIST HOSPITAL OF DALLAS  
May, 1972

NORTH TEXAS CONFERENCE OF THE UNITED METHODIST CHURCH

BOARD OF TRUSTEES

EXECUTIVE DIRECTOR

ADMINISTRATOR

ASSISTANT ADMINISTRATOR  
(Mr. Luker)

Laboratory

Radiology

Physical Medicine

Emergency Room

Pharmacy

Business Office

Outpatient Department

Chaplain

ASSISTANT ADMINISTRATOR  
(Mr. Thompson)

Nursing Service

Dietary

Patient Services

Cardiopulmonary

ASSISTANT ADMINISTRATOR  
(Mr. Trowbridge)

Medical Records

Maintenance

Operating Room

Anesthesia

Laundry

Housekeeping

Central Service

Communications

Security

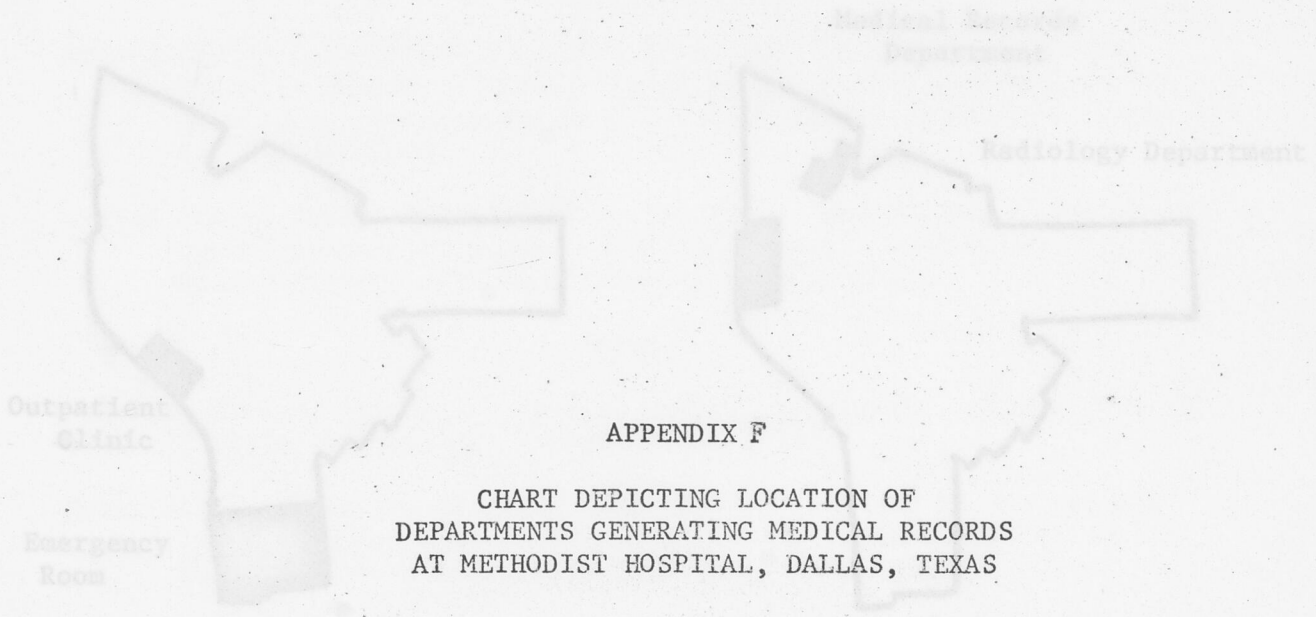
Building Control

Photography

Child Care Program

Source: Office of the Administrator, Methodist Hospital,  
Dallas, Texas.

DEPARTMENTS GENERATING MEDICAL RECORDS  
AT METHODIST HOSPITAL, DALLAS, TEXAS



APPENDIX F

CHART DEPICTING LOCATION OF  
DEPARTMENTS GENERATING MEDICAL RECORDS  
AT METHODIST HOSPITAL, DALLAS, TEXAS

FIRST FLOOR BASEMENT

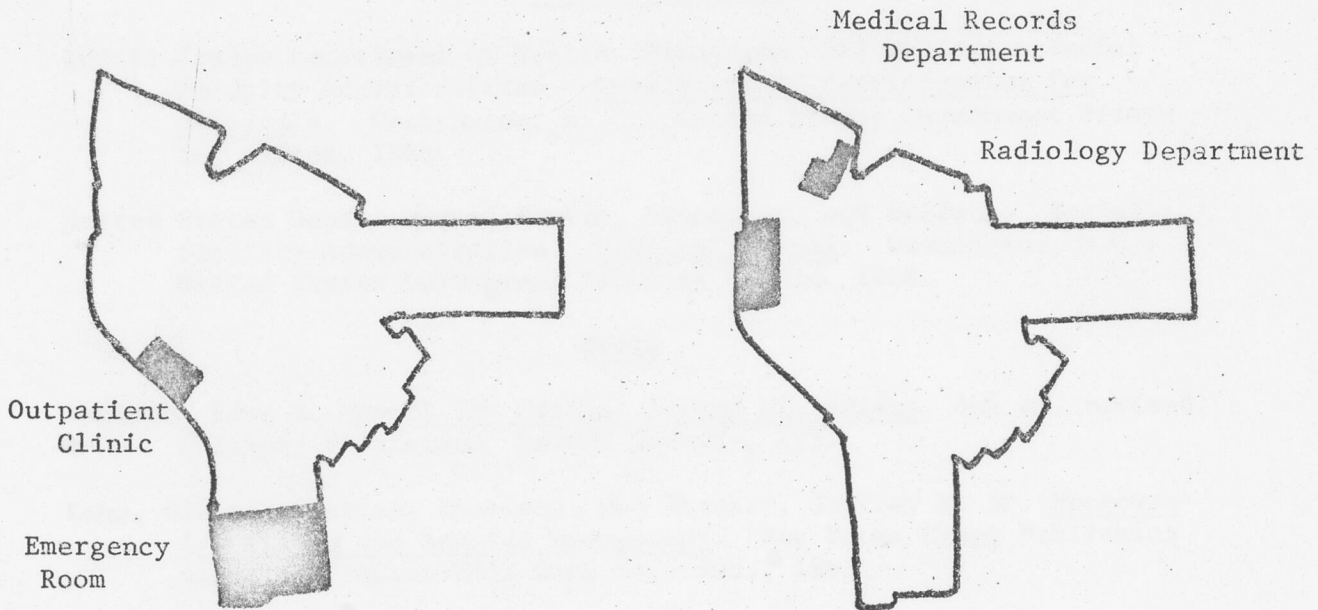
GROUND FLOOR



FIRST FLOOR

Source: Office of the Administrator, Methodist Hospital, Dallas, Texas.

DEPARTMENTS GENERATING MEDICAL RECORDS  
AT METHODIST HOSPITAL, DALLAS, TEXAS



FIRST FLOOR BASEMENT

GROUND FLOOR



FIRST FLOOR

Source: Office of the Administrator, Methodist Hospital, Dallas, Texas.

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## BIOGRAPHICAL SKETCH

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He graduated from Pomona College in 1961 with a Bachelor of Arts degree in English Literature. Following graduation, he was commissioned a second lieutenant in the Army Medical Service Corps. He entered active duty that same year.

Major Cole is a Regular Army Officer. He has completed the Medical Service Corps Officer Orientation Course and the Medical Service Officer Career Course and is presently enrolled in the U. S. Army-Baylor University Program in Health Care Administration pursuing the degree of Master of Hospital Administration.

Major Cole's military career has included assignments as company commander, 561st Medical Ambulance Company, Fort Ord, California; detachment commander, 566th Medical Detachment, Landstuhl, Germany; senior medical advisor, 1st Area Logistical Command, DaNang, Republic of Viet Nam; assistant chief of patient administration division, Fitzsimons General Hospital, Denver, Colorado; and instructor, Medical Field Service School, Fort Sam Houston, Texas.

Major Cole is married and has two children, a son and a daughter.