A SYSTEMS ANALYSIS OF SELECTED AREAS IN THE MEDICAL RECORDS DEPARTMENT USPHS HOSPITAL, NEW ORLEANS, LOUISIANA

A Problem Solving Project Report

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UNITED STATES ARMY
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LIBRARY MEDICAL FIELD SERVICE SCHOOL

FOREWARD

The Public Health Service was the first Medical Service Agency of the United States Government, established by Act of Congress on July 16, 1798. It was first called the Marine Hospital Service, and had its origin in the British tradition of providing hospital facilities and medical relief for its merchant marine.

The United States first accepted the responsibility of providing medical care for its citizens in an unhealthy foreign port in 1802 when Congress appropriated the means necessary for the relief of "sick and disabled" seamen in New Orleans. A Marine Hospital was established, and Doctor William Bache, the grandson of Benjamin Franklin, became its first director. By the end of 1803 Louisiana became the property of the United States through the Louisiana Purchase.

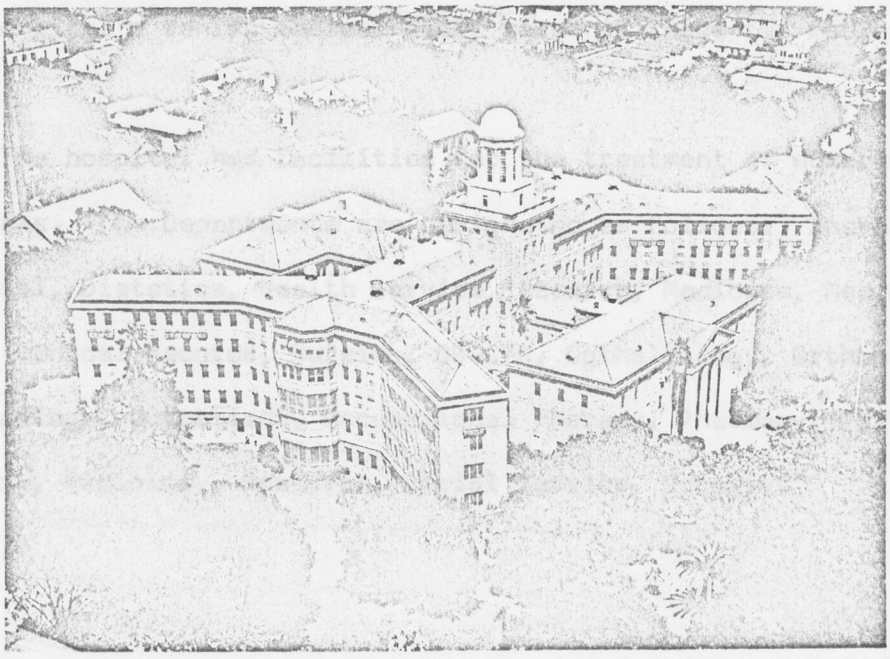
Because the first Marine Hospital was a "service rendered to men aboard their ships rather than an actual institution, patients were hospitalized at the Hospital of Charity." The first Marine Hospital building was completed in 1849. It was located on the McDonough Plantation just above the Jefferson Parish line. Because of flooding, it was abandoned after nine years and was eventually destroyed by the explosion of a store of confederate gun powder.

In 1855 a new site was purchased for a Marine Hospital, and a large cast iron structure was built, but it was never occupied by the hospital. Various groups used it, and it was sold to the city of New

Orleans and is now occupied by the Parish Prison.

At the beginning of the Civil War the hospital was in what is now known as Jackson Barracks. In 1861 when the Louisiana Militia occupied the barracks, the hospital patients were moved to Charity Hospital. From 1870 to 1885, hospital wards were rented from Hotel Dieu and Touro Infirmary.

The Surgeon General was authorized to acquire the present site in 1870, and work was begun in January, 1884, and was completed in April, 1885. Some improvements were made on the original frame buildings, but in 1929 all of these buildings were razed and construction on the present brick building started. The main hospital building was completed in 1931. A recreation hall and Seaman's Memorial Research Laboratory have been completed since that time.



UNITED STATES PUBLIC HEALTH SERVICE HOSPITAL
210 STATE STREET
NEW ORLEANS, LOUISIANA

The hospital provides care for United States and Foreign Seamen, for active and retired members of the Uniformed Services and their dependents, for Federal employees, and for special study patients.

The present United States Public Health Service Hospital operates as a 403 bed general hospital. All the treatment facilities are located in the five stories of the main hospital building. The hospital has been accredited by the Joint Commission on Accreditation of Hospitals, and it also has an established Intern and Resident training program.

The average daily census is 304 inpatients. During 1967 there were 137,000 visits to the outpatient clinics. The hospital employs approximately 637 with a full time medical staff of 94, including interns and residents. The hospital uses consultants from the teaching staff of Tulane and Louisiana State University Medical Schools. Many of the hospital's senior medical staff teach at these two medical schools.

The hospital has facilities for the treatment of numerous types of patients. The Departments are designated as follows: Anesthesiology, Dental, Dietetics, Health Service Research, Medicine, Medical Library, Medical Records, Nursing, OB-GYN, Opthalmology, Orthopedics, Otolaryngology, Outpatient, Occupational Therapy, Pharmacy, Pathology, Psychiatry, Radiology, Research, Social Service, Surgery.

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CHAPTER I

INTRODUCTION

Study Purpose

Through the medium of the medical record the health and welfare of a patient can be protected. "The medical record is a clear, concise, and accurate history of the patient's life and illness, written from the medical point of view."[1] Doctor John R. McGibony expands this simple explanation. It

> . . . is a document of facts which contains statements by trained observers of conditions found and results of treatment, and which indicates whether the efforts of its physicians, supplemented by hospital facilities, are in accordance with reasonable expectations of present day scientific medicine. Medical records provide material for analysis of the immediate results of hospital service, the reasons therefore, and the quality and quantity of work done.[2]

The central purpose of the medical record is to support quality patient care. It provides this support in many ways. The first is to provide the physician, and other professional groups contributing to the patient's care, with necessary past and present patient information. The information assists in the diagnosis and treatment of illnesses. The records, documented evidence, are of great value in determining the quality of care and treatment and provide the legal protection of all

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[1]Malcolm T. MacEachern, Hospital Organization and Management (3rd ed.; Chicago: Physicians' Record Company, 1957), p. 724.

[2]U.S., Department of Health, Education, and Welfare, Public Health Service, Hospital Medical Records, by John R. McGibony, M.D., (Washington, D.C.: Government Printing Office, 1963), p. 5.

concerned. Complete medical records containing sufficient information to justify the diagnosis, treatment, and results are essential because The Joint Commission on Accreditation of Hospitals relies heavily on medical records in evaluating the quality of care provided by the hospital.[3] Data and other information derived from the records are important in medical education and research; they also are administrative tools for use in planning and evaluating the hospital program.

There are several responsibilities involved in the planning for, preparation of, and completion of medical records. "The major responsibility for an adequate medical record rests with the attending physician . . . . regardless of the assistance given him . . . ."[4] The medical staff, primarily the medical records committee, of the hospital is responsible for the adoption and enforcement of rules and regulations governing the production and quality of medical records.[5] The hospital administrator must select a competent medical record librarian, define her duties and responsibilities, establish the policies which will govern the operation of the medical record department, and provide the necessary personnel and facilities.[6] "The primary operating responsibility of the medical record librarian is to organize and manage the department so that it can render the greatest possible service--and to provide this service with a minimum outlay of time, effort and

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[3] Hospital Accreditation References (Chicago: American Hospital Association, 1964), p. 104.

[4] Edna K. Huffman, Manual for Medical Record Librarians (Rev. 4th ed.; Chicago: Physicians' Record Company, 1955), p. 131.

[5] Guide to the Organization of a Hospital Medical Record Department (Chicago: American Hospital Association, 1962), p. 2.

[6] Ibid., p. 3.

expense."[7] This system must be responsive to the needs of the patient, the physician, and the administrative and other service elements of the hospital.

The divided responsibilities involved in handling, preparation, use, and control of medical records requires a sound working relationship between the medical record librarian, the physician, and the administrator. At the Public Health Service Hospital well defined relationships, controls, and procedures currently exist within and among concerned parties. The hospital has had continuous accreditation since April 1, 1955. Various reports and commendations speak well of the hospital, its directors, and the Medical Record Department. The directors are forward thinking and continuously open to studies and suggestions for improvements within their capabilities. Plans for construction of a new hospital in the next five years has curtailed additional construction and purchase of fixed equipment; yet, despite the crowded conditions, varied quality of assigned personnel, and increasing workload, the department and its leadership have produced competent results. Because of the importance of medical records in the hospital system of patient care, a fresh, objective macro-systems analysis was requested by the Administrator in hopes of improving an already effective system.

The author initially studied the total system and selected the areas which proved most productive for improvement within the perimeters given by the hospital's administrative officer. The study is arranged as follows: Chapter I, the introduction and study purpose; Chapter II, the statement of the problem listing the objectives, criteria, limitations imposed, research methodology used, and a summary review of the

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[7] Ibid., p. 4.

literature; Chapter III, the organization of the medical record department within the hospital and its internal structure; Chapter IV, the system used for patient admission; Chapter V, a discussion of the major areas of responsibility and processing of the medical record; Chapter VI, the dictation and stenographic systems used; and Chapter VII, the filing system used for medical records. Each of the micro-systems discussed contains a brief summary and conclusion making each chapter complete in itself. The final Chapters, VIII and IX, contain a total systems summary, conclusion, and the author's recommendations for system improvements.

CHAPTER II

THE PROBLEM

Statement of the Problem

The problem is to determine the methods for improving the medical record department, United States Public Health Service Hospital, New Orleans, Louisiana, that will produce the most significant improvement in efficiency and be most readily adaptable to implementation at minimum expense.

Objectives

The objective is to perform a system analysis and determine the means that will best:

1. Provide comprehensive supervision of the medical records activities.
2. Enhance the hospital admitting atmosphere and improve admitting service.
3. Improve the medical record completion time rate.
4. Improve stenographic service.
5. Improve medical record filing efficiency.

Criteria

The standards used for this study are the Commissioned Officer's Handbook for the United States Public Health Service Hospital, New Orleans, Louisiana, that contain the hospital's policies and procedures;

pertinent published Public Health Service Regulations or directives; standards set by the American Hospital Association for accreditation; standards determined by review of literature or experts consulted in the problem area. Specific standards are set for each chapter.

Limitations

The limitations set by the hospital administrator for this study are primarily short range. The short range limitations require that monetary expenditures not exceed $200.00 for each recommendation with no increase in space and no increase in personnel. Long range and costly recommendations were limited to discussion within the text and recommendations for further study.

Factors Bearing on the Problem

Factors having a bearing on the problem are:

1. The medical record department controls most clinical department stenographers and hospital admission activities.

2. Full and part time medical records personnel cover a 14 hour day (8:00 a.m. to 10:00 p.m.).

3. The number of outpatient visits have continued in an upward trend since 1960.

4. American seaman account for about 36 percent of the outpatient visits. Short periods in port require department priority be given these records, producing complete records at discharge.

5. The intern and resident training program causes delays in physician record completion time.

Assumptions

The following assumptions are made relative to the problem:

1. That the hospital mission will not change in the near future.

2. That the upward trend in the number of hospital admissions will continue.

3. That the building of a new hospital within the next five years as planned will materialize.

4. That the resident training program for Public Health Service Medical Records Librarians will continue in this hospital.

Definitions

Serial numbering system

The patient is assigned a new number on each admission regardless of the number of readmissions, and files for each admission are not consolidated.

Serial-Unit numbering system

The patient is assigned a new number on each admission, and all previous records are brought up under the latest number on each readmission.

Soundex system

A filing system which uses one letter and a three digit code system.

Terminal digit filing

A system which uses numerical filing rather than the straight numerical system. It is simple, speedy, accurate, and eliminates filing mistakes, as personnel need only remember the last two digits (primary terminal digits).

Unit numbering system

The patient receives a number on his first admission to the hospital and retains the number on all subsequent admissions to any

department of the hospital.

Research Methodology

Following the initial interview with the Chief of Administration and the Medical Record Librarian, a review of the literature was undertaken to gain familiarity with the general subject area.

A systems analysis was performed of the medical record department operations. Random samples and timed operation studies were taken. Unstructured interviews were held with members of the hospital staff to determine satisfaction with medical records operations.

Correspondence was initiated and received from various governmental and corporate hospitals and the American Association of Medical Records Librarians regarding specific questions dealing with medical records operations and organization.

Interviews were conducted with noted guest lecturers and medical record librarians of some ten different military and civilian hospitals for a more complete understanding of medical record operations and functional organization.

Literature Review

A review of the literature reveals that the medical record departments in hospitals are continuing to have the same problems--congested working conditions, lack of filing space, delayed medical record completion, shortage of adequately trained personnel, and legal medical record problems.[1] The use of the medical record plays an important

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[1] J. Marshall Whisnant, Jr., "Reorganization Raises Output of Medical Transcription Department," Hospitals, XL (November 16, 1966), 103; "Chicago Hospital Humors Its Doctors into Keeping Their Medical Records up to Date," Modern Hospital, CII (February, 1964), 8.

role in the planning for the care of the patient, providing communication between medical personnel, and providing documented evidence of treatment.[2] The medical record preparation is often considered an administrative burden by the physician, yet the record displays the quality of care given and is considered a major factor in the loss of qualification for accreditation of hospitals.[3]

Public demands for good medical care at a reasonable price have forced hospitals to consolidate efforts and improve efficiency to keep costs down as much as possible.[4] In the last few years there have been produced mechanical devices to assist in centralization of dictating systems and stenographic efforts to produce more results per unit of effort required by the increased paper load.[5] Management's desire for continual improvement has increased clerical production, recognized the need for improved human relations, and through increased knowledge and efficiency, improved the most important area, patient care.[6] Filing

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[2]Hospital Accreditation References (Rev. 4th ed.; Chicago: American Hospital Association, 1964), p. 109.

[3]U.S., Department of Health, Education, and Welfare, Public Health Service, Hospital Medical Records, by John R. McGibony, M.D. (Washington, D.C.: Government Printing Office, 1963), p. 2; John D. Porterfield, Director, Joint Commission on Accreditation of Hospitals, private interview and lecture held at Medical Field Service School, Ft. Sam Houston, Texas, January 22, 1968.

[4]Jack L. Toussaint, "Central Dictation Systems Promotes Complete and Legible Medical Records," Hospitals, XL (January 1, 1966), 44.

[5]Janet S. Morrison, "How Tape Typing Speeds Medical Record Preparation," Medical Record News, October, 1966, p. 298.

[6]Organized Methods Improvement Programs in Hospitals (Chicago: American Hospital Association, 1958), p. 3; Morrison, "How Tape Typing Speeds Medical Record Preparation," p. 298; Pauline West, "Effective Personnel Management for a Medical Record Department," Canadian Association of Medical Record Libraries, III (May, 1964), 28; William L. Campfield, "Motivating the Professional Employee," Personnel Journal, XLIV (September, 1965), 425.

systems of both manual and automatic devices continue to be perfected and improve the accuracy and retrieval capabilities of the medical record.[7]

Basic fundamentals and operational techniques of medical records activities have been known for years, widely published, and practiced both by governmental and civilian hospitals. Yet periodicals are full of stories of only recent acceptance of the basic fundamentals. Many problems are only local, but improvements in hospital management and increasing accreditation standards are forcing hospital personnel to look more closely at the needs of the medical records activities. The medical record librarian is slowly being recognized as a key member of the medical care team.[8]

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[7]Peter A. Hill, "Filing and Finding--Priority Task," from "Work Study and the Clinical Record," The Medical Record, VII (February, 1966), 207; Ibid., p. 209; Stephen S. Henkin, " An Evaluation of Color Coding as a Solution for Misfiled Records," Hospital Management, XCVIII (August, 1964), 22; Edna K. Huffman, Manual for Medical Record Librarians (Rev. 4th ed.; Chicago: Physicians' Record Company, 1955), p. 181.

[8]Robin C. Buerki, M.D., Guest Lecturer, past Executive Director and presently a consultant to the Henry Ford Hospital, Detroit, Michigan, private interview held at Medical Field Service School, Ft. Sam Houston, Texas, April 18, 1968.

CHAPTER III

DEPARTMENTAL ORGANIZATION

Standard

The United States Public Health Service states that "the Medical Records Department should be under the supervision of a competent qualified person, preferably, a trained Medical Records Librarian who is responsible to the administrator."[1]

Discussion

This chapter contains a discussion of the organization within the United States Public Health Service Hospital and how improved effectiveness can be accomplished by (1) providing for more effective supervision, (2) providing a more efficient work flow distribution in critical areas, (3) maintaining the current system, or (4) providing a combination of the above.

The Public Health Service is an agency of the government, and as such, its operations and organizations are usually rigidly regulated. However, there is a maxim that "there is always a better method," and a most often used approach for methods improvement is plain "organized common sense."[2]

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[1]U.S., Department of Health, Education, and Welfare, Public Health Service, Hospital Medical Records, by John R. McGibony, M.D. (Washington, D. C.: Government Printing Office, 1963), p. 6.

[2]Organized Methods Improvement Programs in Hospitals (Chicago: American Hospital Association, 1958), p. 3.

"The hospital reflects the attitude of the administrator."[3] Such is the case with the medical director and echoed by the staff of the hospital, as has been noted by statistical data and commendations which have placed the hospital in a top Public Health Service Hospital grouping. Its accreditation has been continuous since April 1, 1955.

The medical record department of the hospital is organized as shown in Figure 1, with the medical records department coming under direct supervision of the director of the clinical division. A hospital functional chart is found in Appendix A. At the time of this writing, the USPHS type of medical records organizational set up is limited to only a few hospitals that possess an in-house physician staff such as governmental, foundation, and corporation hospitals.[4]

The army hospitals have for years placed their medical records activities under a registrar who comes under the direct supervision of the Chief of Administration. The United States Air Force, who up until this year followed generally the same medical records organization as the Public Health Service, has now placed the medical records activities under administrative supervision.[5] The Air Force's directive is an effort to standardize organization with like functional areas and results from a study of medical functions under the Management Engineering Program (MEP), a world-wide study. It also directs the title changes of various administrative positions to Hospital Administrator

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[3]Don Laurent, "Be a Little Restless," Southern Hospital, XXXII (March, 1964), 19.

[4]John D. Porterfield, Director, Joint Commission on Accreditation of Hospitals, private interview and lecture held at Medical Field Service School, Ft. Sam Houston, Texas, January 22, 1968.

[5]Department of the Air Force letter, Subject: Standard Medical Service Organization (Washington, D.C., November 9, 1967).

DEPARTMENT OF HEALTH, EDUCATION WELFARE
Public Health Service
Bureau of Health Services
Division of Direct Health Services

EXECUTIVE DIRECTION

Director — Medical Officer
Chief, Professional Services* — Medical Officer
Administrative Officer* — GS-670-14-RM3-4832

Supporting Staff:
1 Clerical

ADMINISTRATIVE BRANCH

Administrative Officer* — GS-670-14-RM3-4832
Admin. Assistant — Health Services Off.

Supporting Staff:
1 Clerical
1 Clerical (WAE)

BUILDINGS and GROUNDS SECTION

Chief — GS-1641-13-NE-591
Asst. Chief — GS-1641-11-NE-403

Supporting Staff:
1 Supervisory Engineer
8 Operating Engineer and Fireman
18 Craftsman
2 Laborer
1 Clerical

FINANCIAL MANAGEMENT SECTION

Chief — GS-504-12-RM3-552
Assistant Chief — GS-504-11- NE-553

Supporting Staff:
13 Clerical

GENERAL SERVICES SECTION

Chief — GS-342-12-RM3-4777
Asst. Chief — GS-342-11-RM3-179

Supporting Staff:
12 Clerical
4 Telephone Operator
1 Ambulance Driver
1 Laundry Foreman
1 Laundry Lead Foreman
(3 Part-time Extern)
4 Storekeeper
2 Truck Driver
1 Guard
13 Laundry Worker

HOUSEKEEPING SECTION

Chief — GS-673-10-NE-602

Supporting Staff:
5 Labor Lead Foreman
21 Janitor

PERSONNEL SECTION

Chief — GS-201-12-RM3-5210
Assistant Chief — GS-201-11- NE-292

Supporting Staff:
4 Clerical

MOBILE OUTPATIENT CLINIC

Chief — Medical Officer
2 Staff Members — Medical Officer
2 Staff Members — Dental Officer
Administrative Officer — GS-341-9-NE-186

Supporting Staff:
1 Head Nurse
1 Physical Therapist
1 Dental Hygienist
1 Janitor
2 Technician
1 Nurse Asst.
1 Dental Asst.
3 Clerical

SUBSIDIARY MEDICAL FACILITIES

Outpatient Offices - 14
Designated Physicians - 5
Designated Dentists - 1
Outpatient Clinic Canal Zone.

CLINICAL BRANCH

Chief Professional Services* — Medical Officer

Supporting Staff:
1 Clerical

CLINICAL DIVISION

Clinical Director* — Medical Officer

Supporting Staff:
1 Clerical

RESEARCH DIVISION

Chief Professional Services* — Medical Off.

TRAINING DIVISION

Chief — Scientist

Supporting Staff:
1 Clerical

HEALTH SCIENCES LIBRARY DEPARTMENT

Chief — GS-1410-9-NE-97

MEDICAL DEPARTMENT

Chief — Medical Officer
Deputy Chief — Medical Officer
3 Asst. Chief — Medical Officer
Research Associate — Medical Officer
2 Staff Member — Medical Officer

Supporting Staff:
6 Resident
6 Intern
4 Technologist
4 Clerical

NEUROLOGY SERVICE
Chief — Medical Off

PATHOLOGY DEPARTMENT

Chief — Medical Officer
Asst. Chief — Medical Officer
1 Staff Member — Medical Officer
Medical Technologist(Supv) — GS-644-11-NE-240
Medical Technologist(Supv) — GS-644- 9-NE-241
Medical Technologist(Supv) (Clinical Training) — GS-644- 9-NE-580
Medical Technologist(Supv) — GS-644- 9-NE-584

Supporting Staff:
3 Resident
11 Technician
2 Clerical
1 Chemist
14 Technologist

OBSTETRICS and GYNECOLOGY DEPARTMENT

Chief — Medical Officer
Deputy Chief — Medical Officer

Supporting Staff:
3 Resident
2 Intern
2 Clerical

RADIOLOGY DEPARTMENT

Chief — Medical Officer
2 Assistant Chief — Medical Officer

Supporting Staff:
5 Resident
5 Technician
4 Student Technician
3 Clerical

PEDIATRIC DEPARTMENT

Chief — Medical Officer
Asst. Chief — Medical Officer
Staff Member — Medical Officer

Supporting Staff:
2 Intern

PHARMACY DEPARTMENT

Chief — Pharmacist
Deputy Chief — Pharmacist
Assistant Chief — Pharmacist
4 Staff Member — Pharmacist

Supporting Staff:
6 Resident
2 Pharmacy Assistant
1 Clerical

PSYCHIATRY DEPARTMENT

Chief* — Medical Officer
2 Staff Member — Medical Officer

Supporting Staff:
1 Intern
1 Clerical

DENTAL DEPARTMENT

Chief — Dental Officer
Deputy Chief — Dental Officer
Assistant Chief — Dental Officer
Staff Member — Dental Officer

Supporting Staff:
6 Intern
1 Clerical
2 Dental Technician
5 Dental Assistant
1 Janitor

OPHTHALMOLOGY DEPARTMENT

Chief — Medical Officer
Deputy Chief — Medical Officer

Supporting Staff:
3 Resident
1 Intern
1 Clerical

PHYSICAL THERAPY DEPARTMENT

Chief — Therapist
Deputy Chief — Therapist
5 Staff Member — Therapist

Supporting Staff:
1 Therapist Assistant

SOCIAL SERVICE DEPARTMENT

Chief — Health Services Officer

Supporting Staff:
1 Social Worker
1 Social Serv. Repr.
1 Recreation Leader
1 Clerical

DIETETIC DEPARTMENT

Chief — Dietitian
Deputy Chief — Dietitian
1 Staff Dietitian — Dietitian
2 Staff Dietitian — GS-630-9-NE-441

Supporting Staff:
1 Dietitian
1 Meat Cutter
1 Storekeeper
7 Food Service Supervisor
34 Food Service Worker
13 Cook
1 Baker
3 Clerical

SURGICAL DEPARTMENT

Chief — Medical Officer
Deputy Chief — Medical Officer
Assistant Chief — Medical Officer

Supporting Staff:
8 Resident
6 Intern
2 Clerical

Urology Service
Chief — Medical Officer

Plastic Service
Chief — Medical Officer

Cancer Chemotherapy Service
Chief — Medical Officer

ANESTHESIOLOGY DEPARTMENT

Chief — Medical Officer
Nurse Anesthetist — GS-605-10-NE-526

Supporting Staff:
2 Nurse Anesthetist GS-605-10-NE-526
1 Nurse Anesthetist GS-605- 9-NE-576
1 Medical Aid (Inhalation Therapy)

ORTHOPEDIC DEPARTMENT

Chief — Medical Officer
Deputy Chief — Medical Officer

Supporting Staff:
5 Resident
1 Nursing Asst.
1 Clerical

NURSING DEPARTMENT

Chief — Nurse Officer
Deputy Chief — GS-610-12-NE-544
2 Nurse Supervisor — Nurse Officer
Nurse Supervisor(Educ) — GS-610-11-NE-598
Nurse Supervisor — GS-610-10-NE-115
Nurse Supervisor — GS-610-10-NE-118
Nurse Supervisor — GS-610-10-NE-318
Nurse Supervisor — GS-610-10-NE-467
Nurse Supervisor — GS-610- 9-NE-568

Supporting Staff:
10 Head Nurse
93 Nursing Asst.
6 Clinical Nurse (Pt)
11 Clerical
54 Clinical Nurse (Pt)
6 Nursing Asst. (Pt)

PREVENTIVE MEDICINE DEPARTMENT

Chief — Contract Physician

Supporting Staff: 1 Clerical

OCCUPATIONAL THERAPY DEPARTMENT

Chief — Therapist

CLINICAL RESEARCH DEPARTMENT

Chief — Medical Officer
Deputy Chief — Medical Officer
2 Asst. Chief — Medical Officer

Supporting Staff:
2 Chemist
2 Technician
1 Clerical
2 Staff Nurse
2 Dialysis Technician

HEALTH SERVICES RESEARCH DEPARTMENT

Chief — Health Services Officer
Deputy Chief — Pharmacist
Program Analyst — Health Services Officer

Supporting Staff:
1 Computer Specialist GS-334-13-RM3-325
1 Computer Programmer GS-334-11- NE-551
5 Clerical

OUTPATIENT DEPARTMENT

Chief — Medical Officer
5 Staff Member — Medical Officer

OTOLARYNGOLOGY DEPARTMENT

Chief — Medical Officer

MEDICAL RECORD DEPARTMENT

Chief — Health Services Officer
3 Assistant Chief — Health Services Officer

Supporting Staff: 20 Clerical

13

Figure 1.--Hospital Staffing Chart

Director, PHS Hospital — Date

Director, Division of Direct Health Services — Date

and Associate Administrators, both new terms to the military systems. All of these organizational changes are to be completed by 1968. The Navy places their inpatient medical records department in the patient affairs division which comes under the direct supervision of the administrative officer.

The Henry Ford Hospital, Detroit, Michigan, in 1967 had 1043 beds, 29,428 admissions, 4088 employees including a full time physician staff of 200, plus 300 interns and residents. The hospital medical records activities were under medical staff supervision until a few years ago when it was found that in order to meet accreditation standards it was necessary to place the medical records department under supervision of the administrative side of the hospital because "they were more conscious of criteria and requirements for accreditation."[6] This change has remained and record quality and completion rate have greatly improved. It must be understood that medical records are probably the major reason for hospitals failing to meet accreditation standards.[7]

The Kaiser Foundation Hospital System places the medical record department under trained administrators who they feel are better able to cope with various mechanical and personnel problems in day to day operations. The legal responsibilities regarding the medical record maintenance also requires complete administrative control of the record. One disadvantage of this system is that "the doctor loses a sense of

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[6]"Registered Hospitals in the United States," Hospitals, XLI (Guide Issue, Part 2, August, 1967), 131; Robin C. Buerki, M.D., Guest Lecturer, past Executive Director and presently a consultant to the Henry Ford Hospital, Detroit, Michigan, private interview held at Medical Field Service School, Ft. Sam Houston, Texas, April 18, 1968.

[7]Buerki and Porterfield, interviews.

responsibility for the record."[8]

Because of the lack of a full time physician staff, civilian hospitals have for years placed medical records under administrative control.[9] Public Health Service also states that the Medical Records Librarian (MRL) should be responsible to the administrator.[10] "She is directly responsible to the administrator of the hospital, and to him alone, for the performance of her department.[11] Questions might be asked of the medical record librarian as she has little voice in where her subsystem fits into the hospital organization.

> I would like to make clear that a medical record department should always be supervised by the administrative body of the institution, whether or not it is made up of physicians or non-physicians. . . . Medical record librarians need advice, direction, and suggestions from the medical staff on medical aspects of their work, but the authority, supervision and responsibility for the activities of the department must stem from administration. . . .[12]

At the present time the New Orleans Public Health Service Hospital Administrative Officer is providing many areas of support directly to the medical record department. These areas include personnel replacement, advice on medical records, correspondence, physical facilities, equipment purchase, custodial service, enforcement of hospital policies, all of which should, for the most part, be negotiated for by the Medical

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[8]John S. Soth, Administrative Assistant, Kaiser Foundation Hospitals, personal correspondence received by author, May 27, 1968.

[9]Raymond P. Sloan, Today's Hospital (New York: Harper & Row, 1966), p. 28.

[10]McGibony, Hospital Medical Records, p. 6.

[11]Edna K. Huffman, Manual for Medical Record Librarians (Rev. 4th ed.; Chicago: Physicians' Record Company, 1955), p. 469.

[12]Elizabeth Price, RRL, Director, Professional Service, American Association of Medical Record Librarians, personal correspondence received by author May 21, 1968.

Records Department Supervisor, the Chief of the Clinical Division.

The physical organization location meets suggested standards: (1) located near the admitting office, (2) within easy access to physician traffic, (3) accessibility for agents such as attorneys and insurance agents, (4) close to rest rooms and washing facilities.[13] The Medical Record Department Staffing Chart is shown in Figure 2. A functional listing can be found in Appendix B. Because of physical space available the department activities are somewhat divided up as noted in Figure 3. The organization presently has four registered medical record librarians. This has fluctuated from one to four over the past few years. The department acts as a residency training hospital for the Public Health Service Medical Records Librarian School at Baltimore, Maryland. Morale is high, and there is cooperation and a fine team spirit within the department. With few exceptions all personnel are well motivated and perform their jobs in a capable manner.

Work flow is slightly irregular due mainly to the location of existing office space, a portion of the hospital structure plus three trailers attached by closed corridors. One specific medical records process was observed and diagramed and the other only observed. The medical record processing after patient discharge is one of the major functions of the department. Figure 4 shows the work flow diagram of this process. The majority of the processing takes place within one small area. Line (1) of Figure 4 represents the record moving from the discharge clerk to a box on Table D in the record processing room; line (2) represents the record being picked up by a processing clerk who

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[13]Roger Mellem, "Planning the Medical Record Department," Hospitals, XXXVI (October 16, 1962), 40; Huffman, Manual for Medical Record Librarians, pp. 449-50.

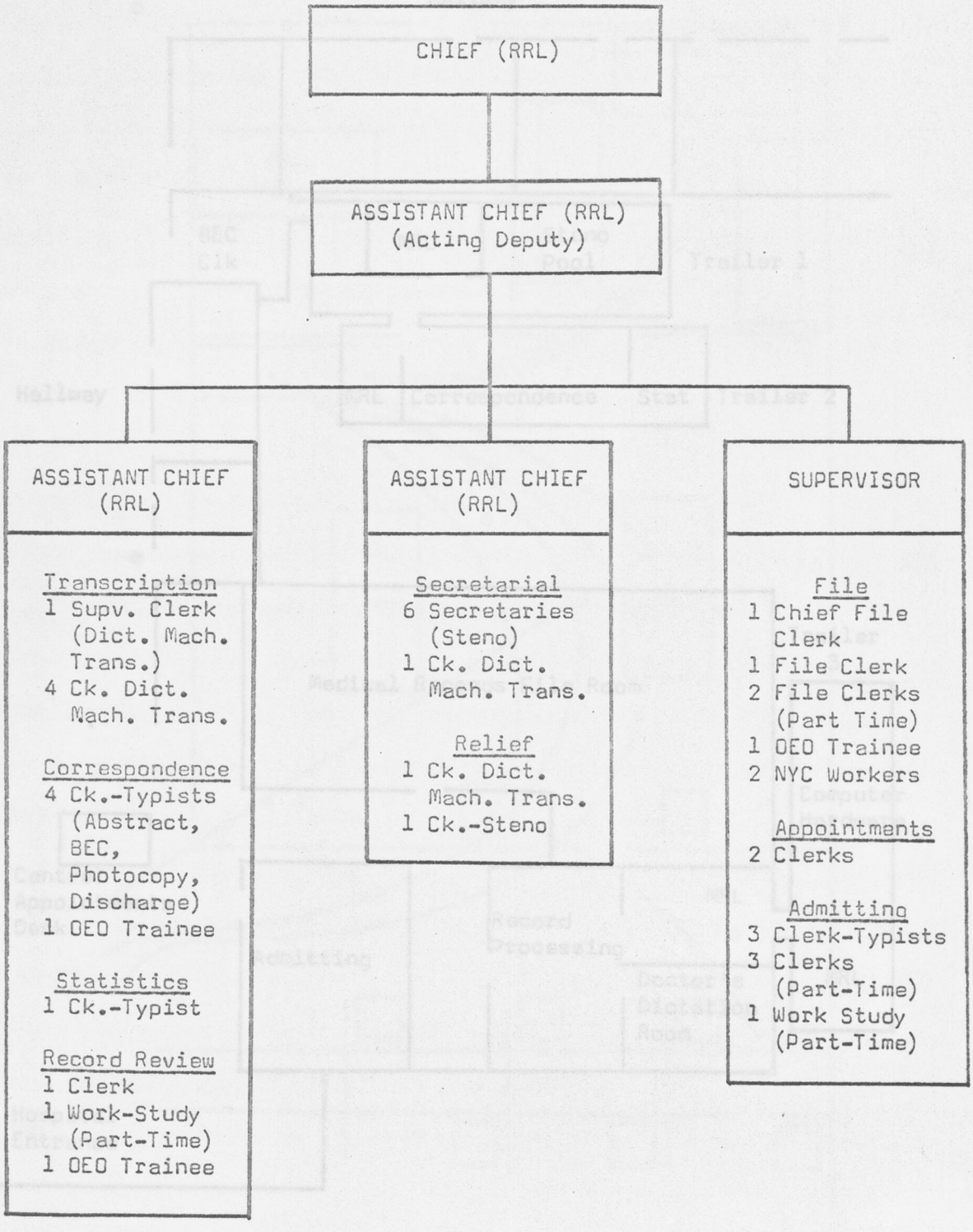

Figure 2.--Medical Record Department Staffing Chart

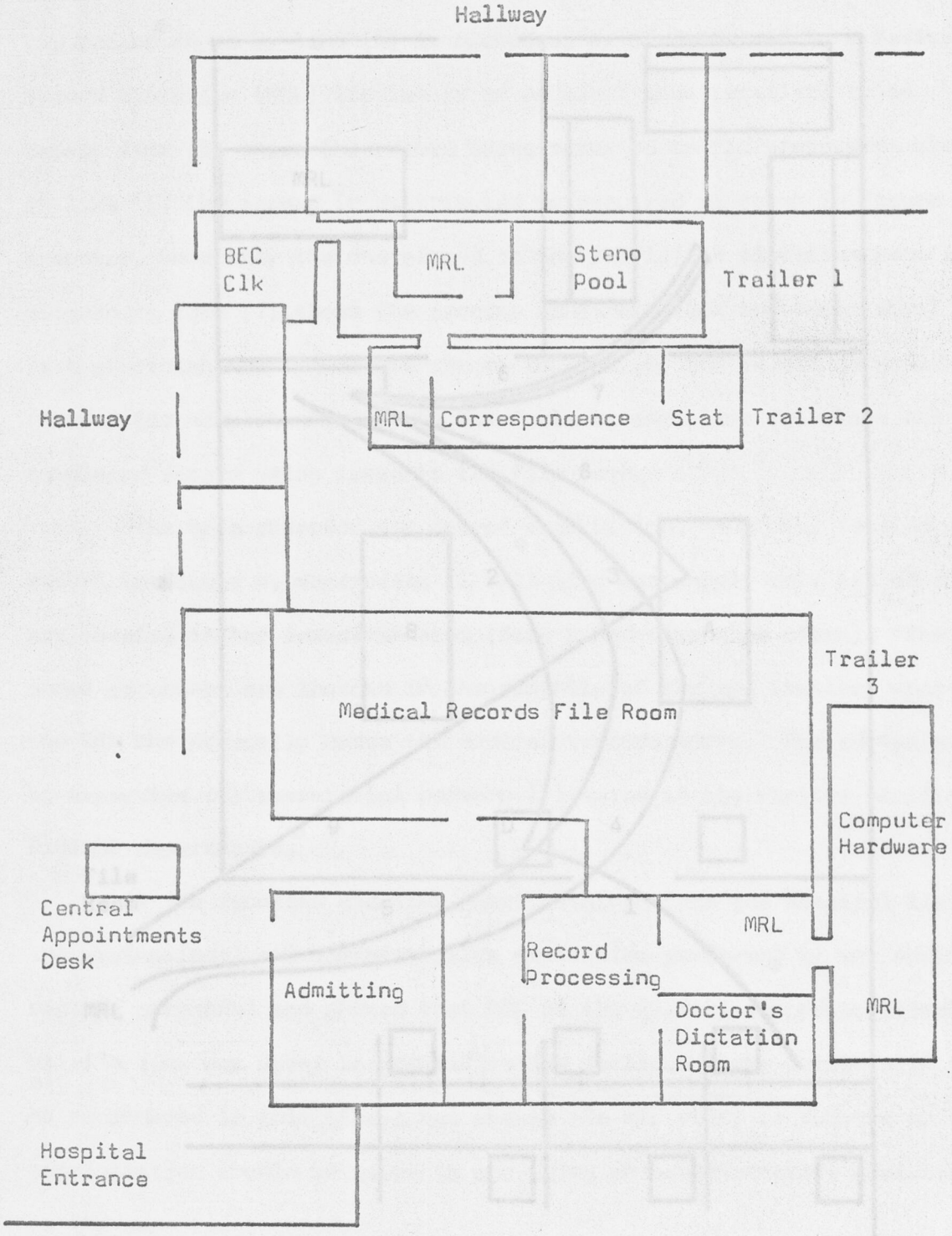

Figure 3.--Medical Record Department Floor Plan

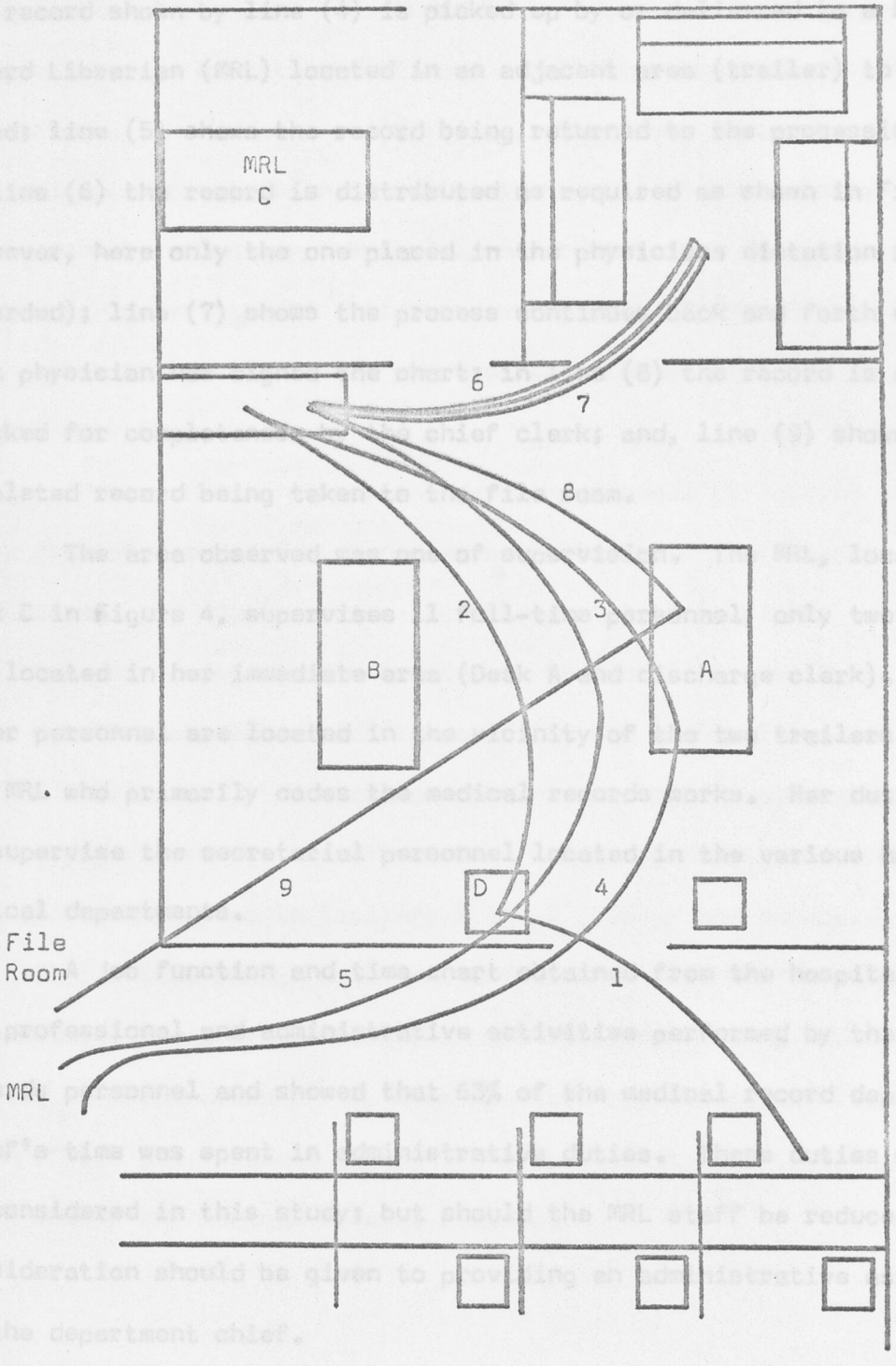

Figure 4.--Medical Record Processing Work Flow Chart (After Discharge)

arranges the charts in proper order; line (3) shows the record moving to the chief clerk's desk where a quantitative analysis is performed; the record shown by line (4) is picked up by or delivered to a Medical Record Librarian (MRL) located in an adjacent area (trailer) to be coded; line (5) shows the record being returned to the processing clerk; in line (6) the record is distributed as required as shown in Figure 7, (however, here only the one placed in the physicians dictation room is recorded); line (7) shows the process continues back and forth until the last physician has signed the chart; in line (8) the record is double-checked for completeness by the chief clerk; and, line (9) shows the completed record being taken to the file room.

The area observed was one of supervision. The MRL, located at Desk C in Figure 4, supervises 11 full-time personnel, only two of which are located in her immediate area (Desk A and discharge clerk). The other personnel are located in the vicinity of the two trailers where the MRL who primarily codes the medical records works. Her duties are to supervise the secretarial personnel located in the various hospital medical departments.

A job function and time chart obtained from the hospital listed the professional and administrative activities performed by the medical records personnel and showed that 63% of the medical record department chief's time was spent in administrative duties. These duties will not be considered in this study; but should the MRL staff be reduced by 50%, consideration should be given to providing an administrative assistant to the department chief.

Micro Summary and Conclusions

The medical record department within the scope of this chapter

is presently meeting all requirements to satisfy hospital accreditation standards. The question is, can it be done more efficiently through organizational changes? The trend both in governmental, corporate, and foundation type hospitals that have a full-time physician staff, is to consolidate like areas for efficiency. The trend is to place the medical records department under administration, a practice followed for many years by voluntary hospitals. Department organization provides for proper delegation of duties and assignment of responsibilities; however, from observations, the physical location of personnel impedes a smooth work flow.

Minor changes within the department would definitely improve the work flow of a major functional area of the department--medical records completion. By simply moving the person at Desk A, Figure 4, to Desk B's position and moving the MRL located in trailer 2, Figure 3, to MRL's Desk C, all processes would flow smoothly and would all be centered within one small area. The exchange of the above MRL's would also facilitate better supervision as the MRL at Desk C is responsible for supervising all of the employees in trailers 1 and 2 (70% of her supervisory responsibility). This change would not affect the other MRL as she supervises the medical secretaries located in the various hospital medical departments. A combination of improved hospital supervision by the administration office and internal relocation of personnel will increase effectiveness within the medical records department.

CHAPTER IV

ADMITTING SECTION

Standard

The specific objectives of the hospital are: (1) to admit patients promptly and in an orderly manner to the various services of the hospital; (2) to inspire a feeling of trust, confidence, and friendship on the part of the patient by admitting him efficiently and graciously; (3) to determine the eligibility, number, and types of patients to be admitted in accordance with policies and regulations determined by the hospital and the Public Health Service.[1]

Discussion

This chapter contains a discussion of the following admitting objectives: (1) improved efficiency in the admitting procedures, (2) improved hospital admitting atmosphere, or (3) a combination of the above. The discussion will provide for determining which of the above objectives will produce the most increased effectiveness in the admitting section.

The admitting office is often referred to as the nerve center of the hospital.[2] The atmosphere, personnel efficiency, functional

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[1]Grace Dewald, Acting Deputy Medical Record Librarian, USPHS Hospital, New Orleans, La., private interview held at USPHS Hospital, New Orleans, La., May 9, 1968.

[2]Manual of Admitting Practices and Procedures (Chicago: American Hospital Association, 1958), p. 1.

design, and pleasing environment immediately place the patient in a state of attitude, good or bad. Strange smells, strange sounds, and a fear of the unknown, may often be a traumatic ordeal to the apprehensive patient. The admitting office governs the flow of patients in accordance with the hospital policies and procedures and serves as a screening point through which all patients must pass.

The study hospital's admitting office is a small room about 16 by 18 feet located just inside the main entrance of the hospital with 24 chairs located in and occupying the main portion of the room leaving only a foot and a half aisle on one side and a three foot aisle on the other. The three foot aisle abuts against four interviewing booths on the east side of the room, where the final step of the patient in-processing takes place. There is a small partition between each of the four booths--three admitting (one currently occupied with computer equipment), and one discharge and preadmissions booth. The actions of and conversation between the admitting clerk and the patient are just three feet away and in clear view of all the waiting patients.

The admitting procedure is a two step process. Upon entry the patient picks up a number located on the wall in the front of the room and then is seated. As a patient's number is called, he walks to a window on the north side of the room. He presents identification which is checked for eligibility. His name is converted to a "soundex" numbering system and his index card, made from a previous visit, is checked for his record file number. If the individual had been admitted, his medical record file is pulled by a record file clerk. An admission slip is attached, and the record is taken to an admitting clerk. If the patient is picking up his record for a walk-in outpatient visit (some

47% of the outpatient visits),[3] he is given the record and instructed as to the location of the clinic. (See Appendix C for outpatient and inpatient workload.) The record is recovered from the clinic at the termination of the visit. Outpatient visitors who have no previous record and for those being admitted to the hospital proceed with step two. The admitting clerk usually takes the record in order of arrival. She calls the individual to one of the two admitting booths and fills out three records for those with medical records on file and seven for those who have no record. The patient is then directed to his proper destination after being given a patient handbook.

The numbering system attempts to provide impartiality for the normal walk-in outpatient and admissions. There are for step two certain established priorities of which the patient is not aware. A true emergency will be taken to medical care immediately, and the processing will be accomplished later. During the step two phase, admissions receive first priority, appointments second, and walk-ins last.

The admitting office receives about 275 walk-in type patient visits per day making a total of about 500 patients seen each day. An average of 58 patient register numbers are assigned each day. There are an average of 25 admissions and dispositions per day with a range of 7 on weekends to 60 dispositions on Friday and a similar number of admissions on Monday.

During the period of the study the most crowded conditions existed within the admitting office between 10:00 a.m. and 2:00 p.m. daily. Monday and Tuesday were the busiest, followed by Wednesday,

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[3]John J. Danielson, "Scheduling of Outpatient Visits at the USPHS Hospital, New Orleans, Louisiana," unpublished Master's Project Report, Baylor University, August, 1968, p. 14.

Friday, and Thursday. The crowded periods during the busiest days sometimes found about 36 patients waiting for service with only 24 chairs. Timed observations showed that step one of processing ranged from thirty seconds to seven minutes with a mean of three minutes. The clerk performing step one did an outstanding job and was very capable in the performance of his duties. Interviews with the admitting clerks indicated a new patient should take 10-15 minutes while a re-admitted patient should take only 5-10 minutes. Timed observations showed consistently that the time taken was the maximum stated as a minimum. During the busiest periods, patients waited 5-10 minutes before being processed by step one and 60-120 minutes before step two. Only about one in three completing step one required step two processing. A great deal of time was wasted by admitting clerks, because of unfamiliarity with various processes and policies, asking superiors or researching a procedures manual. Idle time between patient processings was frequent. Part of the delay was the fact that no record is kept by the admitting office of the current bed status resulting often in the admission of a patient to a full ward.

The hospital has attempted to improve the decor of the admitting room by placing wood panelling up to 8 feet around the patient room area. Because of the crowded conditions the walls are subject to abuse by the patients resulting in the deterioration of the panelling finish. The seats are old, gray metal chairs with black leatherette covering, bolted closely together, an extreme contrast to the colorful seats in the general clinic area. The ceiling and upper three feet of wall space and walls behind the admitting clerks are painted in "hospital" green.

> Were the whole interior of an airliner painted hospital green, confinement at 30,000 feet would be a nightmare. The fact is, however, that every detail of a jet's interior is designed to produce positive reactions through color, materials, vistas, and space. The passenger is made to feel special. We need to do as much for hospital patients.[4]

In hospital design three approaches to design most often are used: (1) Physical needs--space furnishings, equipment arrangements, and communications system; (2) Environmental needs--"atmosphere", color schemes, lighting effects, furniture scale, personality materials; (3) Inventory, budget, time schedules and maintenance facilities. The effects of positive environment on patients and staff are not easily measured, "but we know that the qualities are privacy, dignity, and security and that the goals are to treat people with humanity and give them the pleasure of delight."[5] Color and harmony will give both interest and warmth to both the patient and staff.[6]

Color speaks a universal language. Red, orange, and red-orange are exciting colors; greenish-blues are more compelling than ultra marine or purplish hues. The tranquil effect is produced by predominantly the yellow-green region of the spectrum. Patient rooms should be subdued, yet, nursing stations, stair wells, and waiting rooms, should have strong or lift colors. Wise use of color makes a hospital staff work more efficiently.[7]

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[4]James Falick and James Thomas, "Interesting Interiors Equal Happier Hospitals," Modern Hospital, CVIII (February, 1967), 101.

[5]Ibid., p. 103.

[6]Jane Barton, "Good Design Adds Patient Comfort and Employee Efficiency," Modern Hospital, CVIII (February, 1967), 99.

[7]Mrs. Willard K. Tew, editor, "The Magic of Color in Decorating Hospital Areas," Southern Hospitals, XXXI (February, 1963), 65-6.

> Pastel colors are fine because they are pleasant and unobtrusive. However, they are often monotonous in some areas without the relief of accents or changes of pace. This relief can come in the use of an occasional bold color, pictures, posters, paneling scenic wall papers, murals, plastics, burlap, silk, chalk board, draperies, or other fabric. Many materials are available which, by the way they are installed or fabricated, can produce pleasant changes of pace.[8]

Micro Summary and Conclusions

The admitting room poses a number of problems. It is too small for the proper processing of some 6,200 admissions, 6,200 discharges, and 137,000 outpatients each year. Admitting clerks show lack of supervision, proper training and job knowledge requirements, resulting in a queing problem during heavy periods of patient traffic. The lack of a bed accountability system accounts for additional confusion. The admitting room provides a barren, colorless, unattractive atmosphere, and it is characterized by both confusion and inefficiency during busy periods. No attempts have been made to screen patient's private interviews from the crowded waiting room.

A combination of improved efficiency and admitting room atmosphere are needed to increase staff effectiveness and morale, improve patient confidence, and render more dignified treatment. Closer supervision is needed by a designated MRL accompanied by a specific training program and evaluation system. A complete knowledge of admitting procedures, eligibility requirements, and required typing skills are needed by all admission clerks. A hospital bed accounting system is needed within the admitting section. A continuous current bed status will prevent occurences of admitting patients to fully occupied wards

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[8]Roger Mellem, "Planning the Medical Record Department," Hospitals, XXXVI (October 16, 1962), 41-42.

and will allow for proper male and female segregation. Excellent communication must be established between nursing service, housekeeping, and the admitting office to provide the above needs. The computer admitting booth could be arranged to allow for both regular and computer (in an experimental stage) admissions. This would allow for a relief admitting clerk to assist in patient admissions during peak loads, thus reducing the queing problem which would be minimal if all of the above conclusions are adopted for implementation.

A portable colored privacy screen is needed to provide privacy for patient admissions. Brightly colored chairs available within various hospital conference rooms could be put to excellent use in the admitting office. Placing the privacy screen three feet from the admission interview booths and a rearrangement of chairs will allow for both increased patient leg room and aisle space in the seating area. The privacy screen need only screen the seated patients from the admitting clerks. A more lifting color decor should be used on the walls, ceilings, and windows as suggested in the discussion. Present hospital capabilities can accomplish all labor requirements, and regulations do not preclude using a more lifting color decor.

CHAPTER V

MEDICAL RECORD COMPLETION

Standards

The specific standards set are as follows: (1) "It is the ward surgeon's responsibility to complete the medical record for discharge and have a narrative summary dictated within 48 hours."[1] (2) "Current records should be completed insofar as possible within 24-48 hours. After discharge, records should be completed insofar as possible within 10-15 days."[2] (3) "Development and movement of medical records should be handled expeditiously from point of admission until after discharge."[3] (4) The desired medical record completion time period is 7 days, and the acceptable is 15 days for completion of all actions.[4]

Discussion

"Medical records are an important tool in the practice of

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[1]Commissioned Officer's Handbook (New Orleans: U.S. Public Health Service Hospital, New Orleans, Louisiana, 1967), p. 17, 32, 49.

[2]Hospital Accreditation References (Rev. 4th ed.; Chicago: American Hospital Association, 1964), p. 107.

[3]U.S., Department of Health, Education, and Welfare, Public Health Service, Hospital Medical Records, by John R. McGibony, M.D. (Washington, D.C.: Government Printing Office, 1963), p. 6.

[4]Iola Arnold, Chief, Medical Records Department, USPHS Hospital, New Orleans, La., private interview held at USPHS Hospital, New Orleans, La., May 14, 1968.

medicine." They serve basically four functions: (1) to serve as a basis for planning the patient's care; (2) to serve as a basis for review, study, and evaluation of medical care given the patient; (3) to allow for communication between physicians and other professional groups; and (4) to furnish as documentary evidence the course of the patient's illness and his treatment.[5]

> To the harried physician the medical record, at times, may appear typically symbolic of administrative red tape, of complicated forms, with the inevitable pink, blue and green carbon copies. At other times he fully realizes and appreciates that only through the medium of medical records can the present and future health and welfare of the patient be protected; that research and improved medical education be fostered; that his own status and growth be enhanced.[6]

This chapter contains a discussion of the medical record completion time rate and indicates actual operating standards and their conflicts with published standards. The significance of variance will be determined and areas where improvement can be made will be isolated. Areas warranting a separate analysis will be discussed in a separate chapter. Others will be discussed in this chapter.

Specific areas of consideration studied in this systems analysis were (1) the dictation system, including physical facilities; (2) the stenographic system; and (3) personnel management techniques, including a personnel notification system.

A statistical analysis was made of 536 discharged patient medical records found in the records processing room and physicians dictation room in various degrees of completion. A 30% sample of these records divulged records with delays in completion ranging from 3 days

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[5]Hospital Accreditation References, p. 109.

[6]McGibony, Hospital Medical Records, p. 2.

to 209 days after the patient had been discharged, with a mean of 31 days and a median of 25 days.

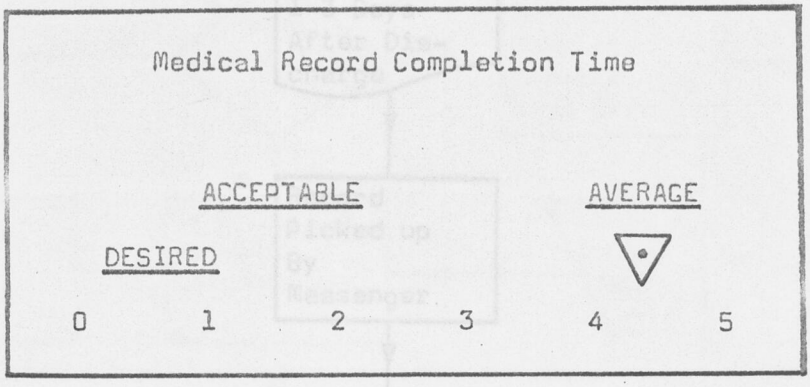

Figure 5.--Medical Record Completion Time

These figures compared with the established criteria show only 9% had possibilities of completion in the desired category of 7 days, and only 30% had possibilities of completion in the acceptable category of 15 days.. Fifty-nine percent had already exceeded the limits of acceptability.

A systems analysis was made of the medical record after the patient was discharged to see where improvements could be implemented. Figures 6 and 7 display graphically the normal major processes and delays in the present system.

The medical record department is usually notified of patient discharges in one of three ways: (1) the record shows up in the medical records processing office; (2) the patient may come into the office as some need discharge documents; and (3) the receipt of the beds and patient report, which is at least one day old, indicating a patient has been discharged. These are at variance with current policies that

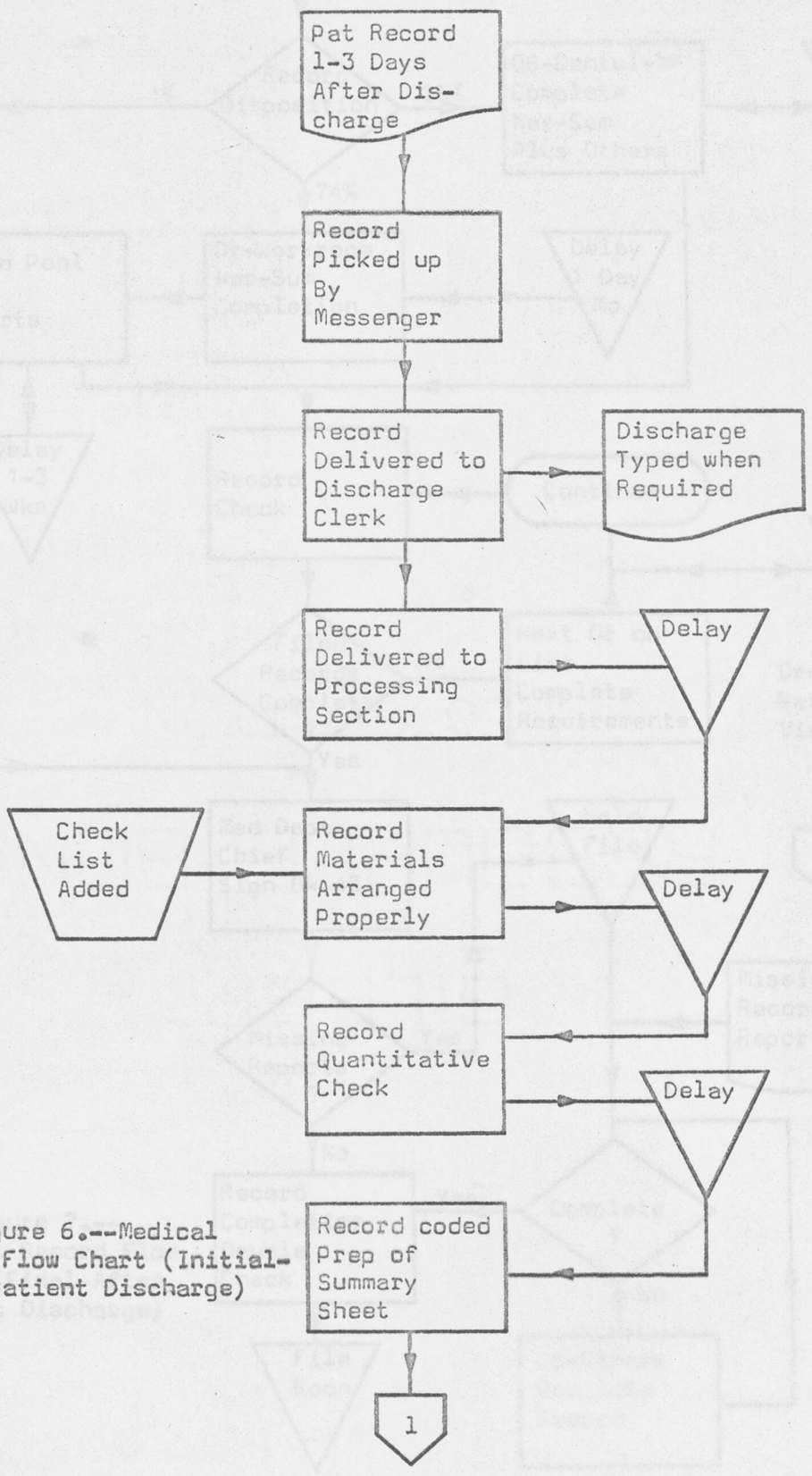

Figure 6.--Medical Record Flow Chart (Initial-After Patient Discharge)

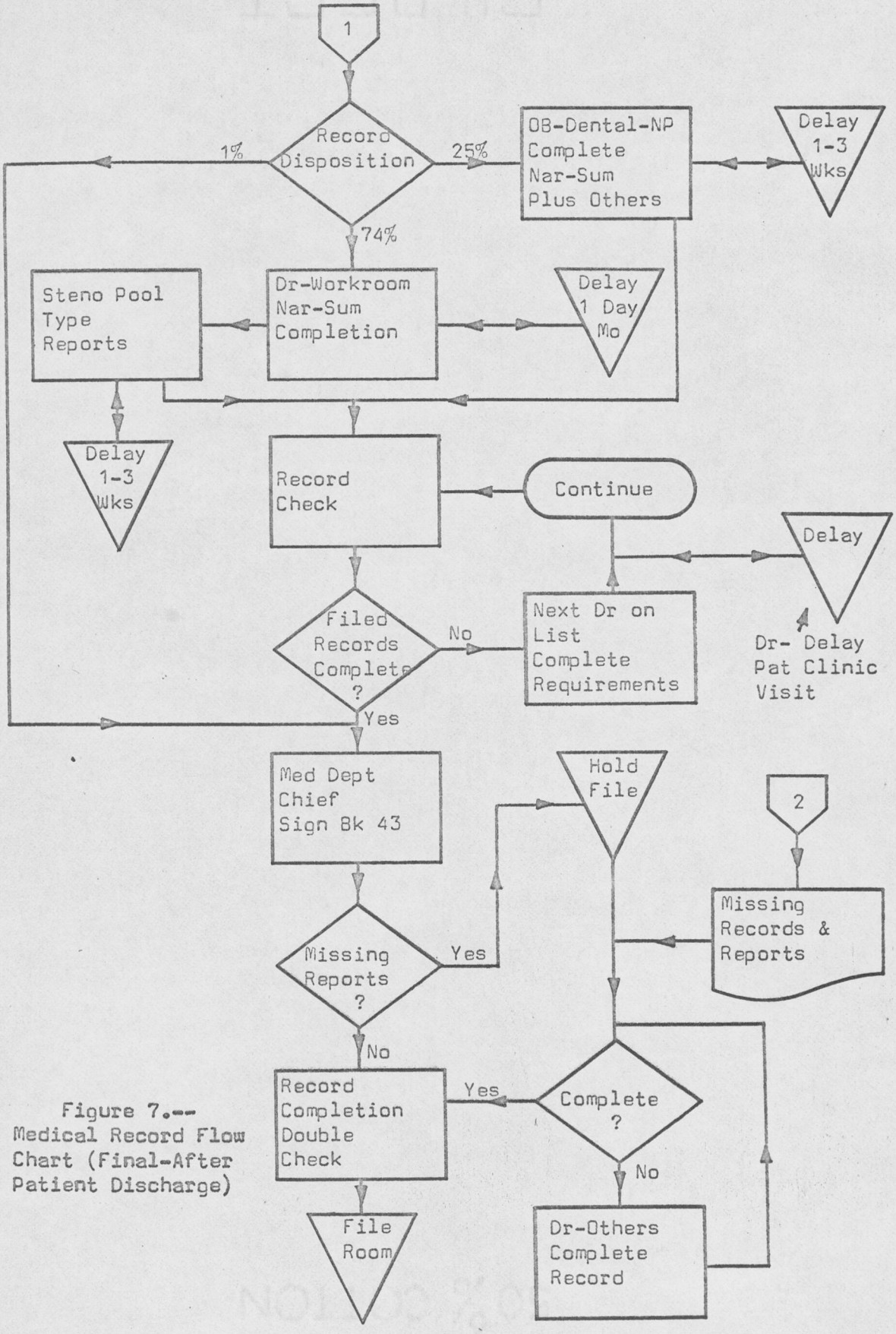

Figure 7.-- Medical Record Flow Chart (Final-After Patient Discharge)

require prior arrangements be made before patient discharge.[7] The exception to the variance may be United States active duty Navy personnel. When the discharge is known, a search begins for the patient's medical record.

About 70% of the time the record is received one day after discharge; 30% exceed one day. Observations of department personnel indicated that about one man day per day was lost looking for records of discharged patients or misplaced records. In some cases records would come down from OB, Dental, or NP, with a completed narrative summary, but this represents only 1% of the total records. The delays indicated in Figure 6 are the result of present work load or other pressing duties. During slack periods there may be no delays. Once the records have received their quantitative check and have been coded, they are ready for the physicians to complete their narrative summaries. Figure 7 shows 25% being returned to OB, NP, and Dental departments as they have stenographic personnel assigned from the medical records department. Seventy-four percent are placed in the physician's dictating room. The room is bare except for three tables and chairs, homemade record shelves, and three dictaphones. This room is an improvement over the hallway used during the initial phase of this study and is the result of the author's earlier recommendations. Dictating equipment, as here, is enclosed in a cubical but should also be both attractive and comfortable.[8] The records remain in the room until the physicians complete them.

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[7] Commissioned Officer's Handbook, p. 11.

[8] Guide to the Organization of a Hospital Medical Record Department (Chicago: American Hospital Association, 1962), p. 10; Roger Mellem, "Planning the Medical Record Department," Hospitals, XXXVI (October 16, 1962), 38.

A physician's list with the number of records due for completion is provided the chief of each service every Monday. Action, if any, is usually taken by the department chief. Some are interested and others are annoyed by the weekly lists.[9] Once the narrative summaries are dictated, they are taken to the steno pool, and the records are placed in a temporary file pending return of the typed narrative summary. When emergencies arise, summaries may be typed the same day.

The average record takes at least seven days to be typed. The narrative summary is placed in the record, returned to the physician's box to be signed by him, and then placed in the box of the next physician on the check list by the processing clerk. This process continues until all physicians have completed their requirements, and it is then signed by the medical department chief or his designated representative. It was observed that every record had at least three physicians reviewing some or all of the record. This compounds the delay as all three doctors may be delayed in their individual efforts. At this point the record is temporarily held for any missing reports not received during this part of the processing. A double check is made to insure completeness, and the record is sent to the file room. Each time the record is sent to a new location, an index card is annotated to ensure that the record can be located at all times.

Table 1 indicates the minimum record delays in the present system. The maximum in this study, about 300 days, will not be discussed, even though significant, as it is of no consequence to this study.

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[9]Arnold, interview.

TABLE 1

NORMAL RECORD DELAYS

Type	Minimum Time in Days
1. Delivery after discharge	1
2. Discharge clerk	0
3. Arrangement of record items	1
4. Administrative composite delays	1
5. Nar-sum dictation	1
6. Steno pool - typing	7
7. Additional doctor requirements	2
8. One clinic patient appointment	3
9. Missing reports	0
	16

An explanation of item 4 above is required. This is a consolidation of all delays in every step of the process whether indicated or not on the flow chart. Two checks were made of how long records sat on various desks, etc., and both accumulated times exceeded 8 hours (1 day), and represented some nine different opportunities for delay. In this study items 5, 6, and 7 are by far the most significant because in reality, they usually exceed these minimums. Table 1 indicates that normally it would be impossible to meet even acceptable record completion time standards.

It must be remembered that:

> The major responsibility for the medical record rests with the attending physician, and regardless of the assistance given him in the compilation of the record by hospital personnel, he assumes

> final responsibility for its completion and accuracy even though the task may have been performed by an intern or resident assigned to the service.[10]

The stenographic service in the case of this study is also a deterent to effectiveness of the system. Because of the magnitude of these two problems they will be discussed separately in Chapter VI.

The remaining area left for discussion is the personnel management techniques used. Certain areas already discussed in this study indicate that there is at best, a poor communication system between nursing service and the physician for patient discharge notification and between medical record steno service and the physician for typing work completion. Observations of the present work flow process for the completion processing of the medical record after patient discharge contains wasted personnel motions in transportation of records. The use of part time trainees as substitutes for full time personnel rather than parallel training duties disrupts the process flow, as the trainees do not work every day, and their work schedule is not dependable.

The medical record department is a service element and as such should provide service uninterrupted by delays. The physician is not always a conformist, as he tries to serve two masters, one the goals of the profession and the other, the organization to which he belongs. These professionals by nature accept rigorous standards of personal conduct and responsibility. Successful organizations assure opportunity to develop ingenuity and maximize abilities. Two patterns which will harmonize the organization needs with professional goals are a responsive

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[10]Edna K. Huffman, Manual for Medical Record Librarians (Rev. 4th ed.; Chicago: Physicians' Record Company, 1955), 469.

organizational apparatus and certain imperatives for the supervisors of professionals.[11] Supervisors of physicians activities must be capable of motivating them to achieve excellence in both professional and administrative duties.

The use of humor has reduced back logs in medical records by 35 to 40%.[12] Doctors are busy men, but "don't irk them," as even the grouchiest doctors have a sense of humor. "Humans don't like to be told, men not by women and physicians not by medical records librarians."[13] The study hospital had upon request some seven different cartoon notification slips which were used from time to time to encourage physicians to complete their records.

Suggestions made to assist in medical records completion are: (1) to have a hospital policy; (2) to enforce the policy; (3) to provide some type of notification of incomplete records; (4) to provide a good working area for the physician; and (5) to provide a medical records librarian who is honest and accurate, mixes well, is properly educated in her duties, maintains a pleasing personality, is willing to serve at all times, and is persistent.[14]

Micro Summary and Conclusions

The standards dictated by the hospital and accreditation

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[11]William L. Campfield, "Motivating the Professional Employee," Personnel Journal, XLIV (September, 1965), 425.

[12]"Chicago Hospital Humors Its Doctors into Keeping their Medical Records up to Date," Modern Hospital, CII (February, 1964), 8.

[13]Maifair Offutt, "Cartoons and Incomplete Records," Texas Hospitals, August, 1961, p. 17.

[14]Adaline C. Hayden and Bacon Library Staff, Medical Record Administration (Chicago: The American Hospital Association, 1948), p. 122.

standards provide for both a desired completion period of 7 days and an acceptable completion period of 15 days. A statistical study indicated an average completion time of 31 days, twice the period of acceptability. A systems analysis revealed that the current system cannot normally produce even acceptable standards. Therefore, action must be taken to reduce delays in order to produce first, desired or second, acceptable results. The two major areas of delay are the physician and the stenographic service. These two areas are discussed in more detail in Chapter VI. The other problems fall basically into the realm of management techniques, providing a proper communications system, streamlining work flow processes, and motivation.

The "minimum time in days" lost in the processing of medical records can be reduced to desired standards by a combination of actions. (Reference is made to Table 1.) Item one, "delivery after discharge," can be eliminated if proper prior notification is made to all concerned as required by hospital policies and action is taken to dictate necessary work at this time. Items three and four, "arrangement of record items" and "administrative composite delays," can be reduced by 50%, if all trainees used are given paralleling duties rather than replacing full time employees (as their work schedule is not dependable) and if the work flow process is streamlined. (See Chapter III.) Item five, "narrative summary dictation," will have been completed under item one. Item six, "steno pool typing," should be allowed at least two days. This can be accomplished if the steno services are centralized, training is initiated, and proper supervision is continued as discussed in Chapter VI. Step seven, "additional doctors requirements," allowing each physician a day to check his records after having been

properly notified, should take 2-4 days depending on the number of physicians. Item eight, "one clinic patient appointment," is usually required from two to four weeks after a patient is discharged. If the above seven items have been completed as recommended, the clinic visit will take place long after the record has been completed and filed. The medical record is now down to five days with two additional physicians having to process the record.

If the patient's clinic appointment does take place in the first week, the delay time can be reduced from three to two days by establishing a staggered personnel work shift in the file room. This provides for the initial collection and processing of clinic visit records after normal duty hours two days prior to visit. This reduces the days away from the file and the physicians dictating room by one day. With this modification the medical record can still be completed in the desired time of seven days even with a required clinic visit.

CHAPTER VI

DICTATION AND STENOGRAPHY

Standards

The standards set for this dual subject chapter are: (1) "Narrative summaries of discharged patients should be completed within 48 hours. All officers are urged to expedite all stages of the processing of these charts, including review and signing of transcribed charts."[1] (2) It is desired that all discharged patient records be completed within one week but, should delay occur, records are acceptable within two weeks.[2] (3) "It is the responsibility of the hospital not only to provide the necessary diagnostic and therapeutic facilities to expedite the work of the physician in caring for the patient, but also to facilitate his record-keeping responsibilities by providing well-qualified medical record librarians, medical record technicians, medical and surgical stenographers, and/or some form of mechanical dictating equipment."[3]

Discussion

This chapter contains a discussion of a centralized, decentralized, and modified dictation and stenography system and of which will

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[1] Commissioned Officer's Handbook (New Orleans: U.S. Public Health Service Hospital, New Orleans, Louisiana, 1967), p. 49.

[2] Iola Arnold, Chief, Medical Records Department, USPHS Hospital, New Orleans, Louisiana, private interview held at USPHS Hospital, New Orleans, Louisiana, May 14, 1968.

[3] Edna K. Huffman, Manual for Medical Record Librarians (Rev. 4th ed.; Chicago: Physicians' Record Company, 1955), pp. 155-56.

best serve to provide a satisfactory records completion time rate.

The modified decentralized dictation system is presently used within the hospital. Twenty-four dictaphones and fifteen transcribing machines find use in every major and minor hospital medical service (10 different locations). Property records do not indicate the types available. However, twenty of the twenty-four were located and were found to be McGraw-Edison models all using an embossing disk, costing about 8 cents per disk and with a recording time of 15 minutes per side. Dental, OB-GYN, and Neuro-Psychiatry (NP) Departments encourage the dictation of narrative summaries and operative reports be done within their specific areas. Patient records from these departments are delivered to the medical records department upon discharge of the patient and are then returned for completion of the dictation and typing (about 25% of the total patient records). About 1% of the records delivered are complete, and most of these come from the Neuro-Psychiatry Department. About 74% are placed in the physicians dictation room, put in individual boxes which are clustered by medical department and marked for each physician. This is a plain room with three tables, chairs, and dictating units with homemade shelves on each table. Physicians at their leisure dictate and place completed dictation in a central basket which is emptied almost immediately except on weekends. Observations showed about three physicians used these facilities during normal duty hours and two during the evening hours. Most of the records are usually dictated and checked on a weekend tour of duty. Eighty records were completed on the two-day weekend during the observation period. Even with the completion of these 80 records there were 66 physicians who had from 3 to 20 records waiting for completion. At this writing there

were 43 physicians plus 18 interns and 33 residents. About 12 of the physicians holding various staff and research duties were not involved with patient records, therefore 80% of the physicians had patient records waiting for completion. Upon completion of typing, the records with unsigned work are placed back in physicians boxes for their review. No physician notification is made upon completion of typed material.

The dictation system used within the hospital is a modified system with 74% of the records being dictated within the physicians dictation room in the medical records department and 26% dictated outside the medical records department. The equipment used, the individual recording units, lend themselves to decentralized dictation. The 26% dictation which is done within the OB-GYN, NP, and Dental departments allows for more personal contact between the physician and the transcriptionist. The transcriptionist is also able to cope with minor preferences of the physician and it produces more harmony. The three dictating units, or 13%, in the physicians dictating room produces 74% of the dictating work load, a more efficient use of this centralized equipment. The stenographic pool is located in an adjacent area and allows for coordination between physician, transcriptionist, and record supervisory personnel.

A completely centralized system would allow the physician to dictate from almost any location, usually by special telephone, either from within or outside the hospital. This system allows the physician to spend more of his valuable time in patient care. Dictation is usually more prompt, more accurate, and leads to improved quality. This type system cannot be considered as a short range objective within

this problem because twelve such needed telephones with three recording and transcribing machines with voice operated relays would cost over $3,000.[4]

The stenographic system and capabilities are discussed next. They are divided into two categories--medical secretaries and a steno pool. (See Figure 2.) The secretarial pool consists of six secretaries, one dictation machine transcription clerk with a relief of one dictation machine transcription clerk and stenographer. These individuals serve as medical secretaries to the Surgical, Medical, Orthopedic, OB-GYN, NP, and EENT departments. They perform normal secretarial duties to include receptionist duties for outpatients and may type some operative reports and narrative summaries. Second, the transcription section, steno pool; has one supervisor and four dictation machine transcriptionists. This section provides what might be called a modified central steno pool, however, one clerk works in the department of surgery typing narrative summaries and one works as a part time telephone switchboard operator at night--11 p.m. to 7 a.m.--and types operative reports and narrative summaries when time allows. A modified system like this often finds more than one physician waiting on one stenographer to take or transcribe dictation.

Past records indicate a steno typing delay of from one to three weeks. A survey of three days typing of narrative summaries from date of dictation to date of typing was an average of seven days. The typing delay alone precludes the medical records from being completed within the desired length of time, one week. This same delay also applies to

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[4]Jack L. Toussaint, "Central Dictation Systems Promotes Complete and Legible Medical Records," Hospitals, XL (January 1, 1966), 44.

the OB-GYN, NP, and Dental departments who complete some 25% of the patient records. Emergency records are given priority but the average completion rate does not fall below one week.

Various approaches have been taken within the health care system to solve back-logged records. Increased use of mechanical equipment, incentive programs, training programs, centralization of personnel, and increased supervision, all have to some degree improved or solved back-logged medical record department problems. The use of IBM's magnetic tape selectronic typewriter (MT/ST) allows the more skilled typists to record on tapes their dictation, allowing for the less skilled and one without medical terminology training, to work an evening shift, feeding the tapes into the MT/ST which types error free, 180 words per minute. This approach in one case saved initially $15,000 a year, increasing individual production up to 75%, increased morale, reduced errors, reduced turnover, and increased record quality.[5] This approach is initially expensive, the cost of one unit being $7,500.00 to $10,000.00 or a rental of $175.00 to $240.00 per month. This cannot be considered a solution in this study but certainly could be considered for the future as the initial cost may be written off by its own savings as indicated above.

There seems to be a hospital trend toward central steno pools to overcome the increasing volume of professional paper work. Centralizing stenographic duties is more economical, resulting from more efficiency and lower production costs. Supervision can be improved, the control of personnel, increased work production, a reduction of

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[5]Janet S. Morrison, "How Tape Typing Speeds Medical Record Preparation," Medical Record News, October, 1966, p. 298.

equipment required to operate the system, and a reduction in the number of personnel required to operate the system.[6] Supervisors requiring five to fifteen minute speed tests may improve typing speed by twenty percent; the elimination of paragraph indention and use of the block type margins will improve speed; pre-recorded material used for testing will sharpen a new stenographer.[7]

The establishment of a standard, rather than an incentive program (difficult within the Civil Service), with a six month review and update of job description, plus a pay increase, provides for a more satisfied employee with increased incentive and morale. A ladder of employment and promotion can assist in setting standards. One approach devised and proven successful is found in Figure 8.

Medical stenographers should have an "expert" knowledge of medical and surgical terminology, a basic knowledge of anatomy and physiology and be adaptable to working with varied types of people under tension.[8] Repeated reference to medical terminology dictionaries and questions by certain typists, indicated a need for further training. The only formal training given by the hospital's medical record department is a periodic course in medical terminology. It is an optional course; however, certain types of clerical staff are encouraged to attend.

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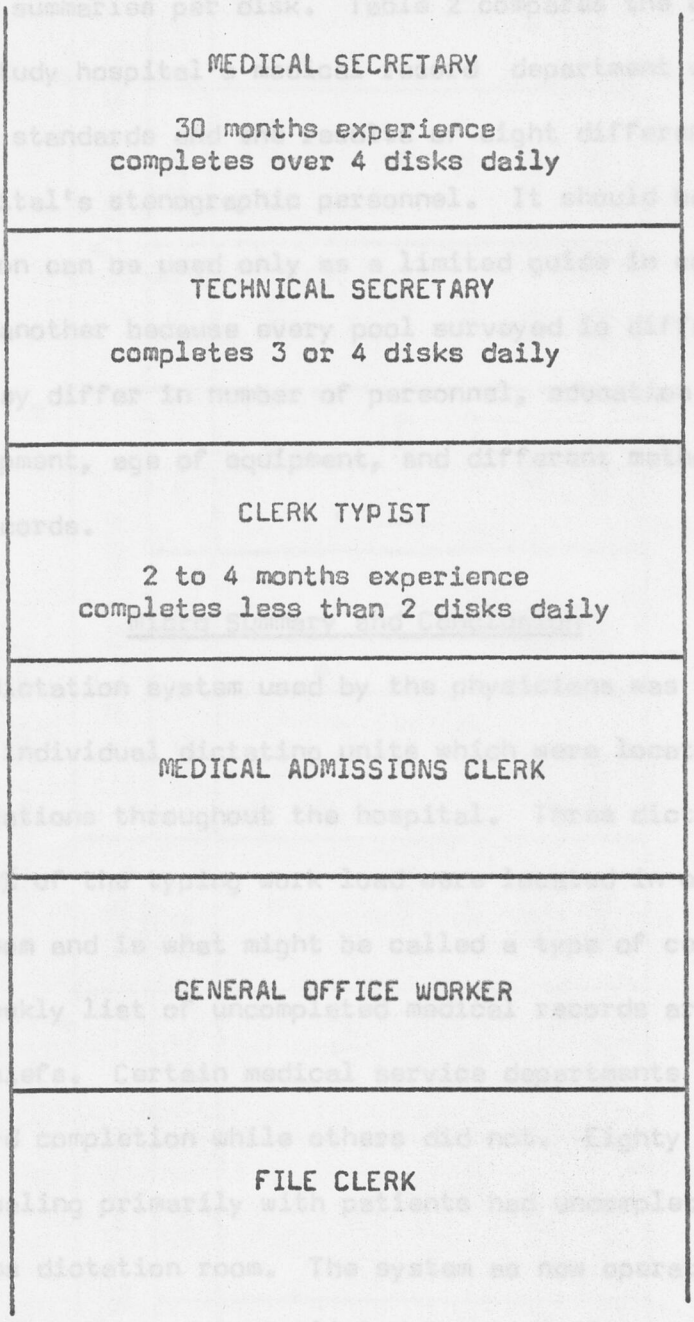
[6]John A. Dowless, "A Study of the Dictating and Transcribing System at Brooke General Hospital," unpublished Master's Project Report, Baylor University, August, 1966, pp. 19-23; Elizabeth Price, RRL, Director, Professional Service, American Association of Medical Record Librarians, personal correspondence received by author May 21, 1968.

[7]J. Marshall Whisnant, Jr., "Reorganization Raises Output of Medical Transcription Department," Hospitals, XL (November 16, 1966), 103; Peter A. Hill, "Take a Letter," from "Work Study and the Clinical Record," The Medical Record, VII (August, 1966), 276.

[8]Huffman, Manual for Medical Record Librarians, p. 128.



Source: Marshall J. Whisnant, Jr., "Reorganization Raises Output of Medical Transcription Department," Hospitals, XL (November 16, 1966), 103.

Figure 8.--Ladder Approach

Data gathered from 100 dictation disks shows that there were 2.6 narrative summaries per disk. Table 2 compares the central steno pool of the study hospital's medical record department with other United States standards and the results of eight different military and civilian hospital's stenographic personnel. It should be remembered this comparison can be used only as a limited guide in comparing one pool against another because every pool surveyed is different in many respects. They differ in number of personnel, education and training, types of equipment, age of equipment, and different methods of keeping production records.

Micro Summary and Conclusion

The dictation system used by the physicians was a decentralized system using individual dictating units which were located in some ten different locations throughout the hospital. Three dictation units used to produce 74% of the typing work load were located in one small unattractive room and is what might be called a type of centralized system. A weekly list of uncompleted medical records are furnished department chiefs. Certain medical service departments stress promptness in record completion while others did not. Eighty percent of the physicians dealing primarily with patients had uncompleted records in the physicians dictation room. The system as now operated is incapable of producing the standards established for medical record completion rate.

The stenographic service is also a modified system, yet so decentralized that it is difficult to provide proper supervision, training, or smooth out peaks and valleys in the work load. There appears to be no skill standards as some individuals do two or three times the

TABLE 2

STENOGRAPHIC PRODUCTION
(Individual Per Day)

	US STANDARDS			USPHS HOSP. N.O.	MILITARY HOSP.			CIVILIAN HOSP.		
	Co. A	Co. B	Co. C		High	Mid	Low	High	Mid	Low
No. of Personnel				3	11	7	4	12	5.5	3
Belts*			7.1		4.4					
Disks*	14	12		2.1	5.5	4.1	2.9	7.1	5.2	3.7
Pages	41.7	33.6	20	14.1	18.2	12.1	8.3	20	14.9	10.3
Lines	1668	1344	800	565	728	488	334	800	597	414
Words	16,680	13,440	8000	5648	7280	4885	3338	8000	5976	4144

*Potential adjusted - not actual

Source: Donald T. M. Wall, "A Study of the Central Transcribing Pool, USAF Hospital, Lackland," Unpublished Master's Project Report, Baylor University, August, 1963.

productive work as others and yet hold the same pay ratings. Formal training is limited to a medical terminology course. The steno pool operating efficiency was incapable of providing the services needed to complete medical records in the required time.

The centralized dictation system will best provide the effectiveness needed to meet set standards. However, problem limitations preclude its use for adoption. The current system can produce desired results if: (1) proper command emphasis is directed to published policies and responsibilities, (2) proper notification of departments is made when physician's narrative summaries and operative reports have been typed, (3) sufficient dictating equipment is maintained and replaced as prescribed by hospital policies, and (4) an improvement in decor is furnished the physician's dictation room.

The centralized stenographic system will produce the most efficiency, economy in personnel and equipment, and improved control and supervision of personnel. Improved supervision and the establishment of a stenographic training program and re-evaluation of personnel capabilities in accordance with a new set of standards is necessary. A reduction in grade will not be immediately necessary if, after standards are set, an adequate time period is given for personnel to meet the set standards. A consolidation of the better typing equipment will preclude any possibility of delay by old or faulty equipment. Should the medical record department be placed under the direct supervision of the Director of Administration, the transfer of all possible medical secretaries from medical departments should be accomplished, placing them in the centralized steno unit. Relief of the medical record department of the responsibility of supervising the remaining

secretaries and placing them under supervision of respective department heads should also be directed. Medical records terminology training should be continued and made a prerequisite for certain job titles.

CHAPTER VII

MEDICAL RECORD FILING

Standards

The standards are as follows: (1) "A unit record, terminal digit system of keeping medical records is followed. This system combines all available inpatient and outpatient records of a patient into one folder which is filed under a terminal digit number."[1] (2) "A system of identification and filing to insure the rapid location of a patient's record should be maintained. The unit number system is suggested; however, a serial number system or modification of this is acceptable."[2]

Discussion

The problem is to analyze the medical records filing system and to determine a more efficient method of operations within the medical records file room. This chapter contains a discussion of methods to (1) provide a more effective filing system, (2) provide for a minimum of misfiles, (3) increase filing space, and (4) improve efficiency within the file room.

The record filing room operating area is well lighted and shaped like the side view of a set of stairs. The length is 60 feet,

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[1] Commissioned Officer's Handbook (New Orleans: U.S. Public Health Service Hospital, New Orleans, Louisiana, 1967), p. 48.

[2] Hospital Accreditation References (Rev 4th ed.; Chicago: American Hospital Association, 1964), p. 107.

the wide and 28 feet, and the narrow end 12 feet with one intermediate step in between. This area is occupied by a chain conveyor used to transport the medical records to a few hospital clinic areas. There are two full time file clerks, two part-time, and from two to three trainees presently assigned to the file room. The file room has 2,397 feet of open shelf files. There are fifteen 12 foot shelves, ten 9 foot shelves, and four 6 foot shelves. There are 15 feet of files that have 7 shelves, and the balance has 8 shelves. Maximum use has been made of existing floor space even to reducing the aisle from the recommended 36 inches and 30 inches to 28 inches which is recommended for use of inactive files.[3] There are 3,798 inches or 13.2% of the total shelf space left for expansion. There are about 100,000 records on file--about four records per inch.

The personnel are assigned no particular areas of responsibility within the file room but share duties and work at tasks which are in demand at the moment. Sections of responsibility are usually recommended. The terminal digit system lends itself well to the assignment of responsibility and equals the work load.[4] A day's activity would consist of delivering about 500 records already basketed from the previous day, to various clinics within the hospital which will be used for clinic visits on the following day. The personnel begin to pull some 500 records for outpatient visits for the next day's

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[3]Roger Mellem, "Planning the Medical Record Department," Hospitals, XXXVI (October 16, 1962), 39; Edna K. Huffman, Manual for Medical Record Librarians (Rev. 4th ed.; Chicago: Physicians' Record Company, 1955), p. 451.

[4]Peter A. Hill, "Filing and Finding--Priority Task," from "Work Study and the Clinical Record," The Medical Record, VII (February, 1966), 207; Huffman, Manual for Medical Record Librarians, p. 181.

delivery, checking to see if the individual is still eligible, and begin filing records which are coming in from the completed clinic visits of that day. Because of the filing work load, records returned from clinic appointments are not checked for proper documentation by physicians or for compliance to physicians requests. Only if requests are placed on the outside of the record jacket are they checked and complied with. Non-compliance with physicians requests written inside the folder have caused problems in the past. A pickup of records from various clinics throughout the hospital is made at least every hour. Pickups are made at two central clinic points on the first floor more often, because of the large number of separate clinics in the vicinity. An elevator pick-up is made at each of the five floors. The individual picks up records which are located by the freight elevator in a covered distribution box.

Various timed observations were made of the elevator record pick-up to determine maximum efficiency. One individual was observed, going up to 5th floor and walking down the stairs, checking on each floor--a total of six minutes. One individual was observed taking the elevator to each floor, getting off, checking the box, catching the next elevator up, and so on--total time, 10 minutes. The writer was timed walking at a normal pace and using the elevator only. His total time was 7.5 minutes and while using a combination of elevator and stairs, his total time was 4.3 minutes. Timed observations show that file room personnel took 36% longer. All timed observations were taken at the same time of day under the same conditions.(during slack periods with minimum delays involved).

The file clerks also assist in providing some 250-300 records

a day for walk-in patients. From the above description it is obvious that these people are busy continually throughout the day.

A records area located in an adjacent building is used for record overflow. The room contains 1,274 feet of open style wooden and metal shelving. Presently 350 feet are designated for use of surplus records. These are active records which usually are over three inches thick, where the bulk of the record that is not normally used, is removed and placed in the surplus area. Five hundred seventy-seven feet are currently filled with records and 140 feet are filled with medical records department supplies. At the present rate the remaining footage would allow for 1,472 records to be filed. Standard management practices in using the unit record filing system requires 25% vacant shelf space to allow for expansion of files.[5] The main records room presently has over 14,000 records oversubscribed to the standard recommended, leaving only 13.2% shelf space available for expansion.

The desires of the hospital medical director is to maintain on file in the hospital ten years of records as recommended by the hospital accreditation agency.[6] There were slightly over six years of records in the main file room with one year in the adjacent storage area. Records from 1922 to 1960 are microfilmed and filed in an adjacent area.

Filing and storage space are a problem in almost every hospital in the country. The use of microfilm has helped to some extent as the

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[5]Huffman, Manual for Medical Record Librarians, p. 171.

[6]Iola Arnold, Chief, Medical Records Department, USPHS Hospital, New Orleans, La., private interview held at USPHS Hospital, New Orleans, La., May 14, 1968; Hospital Accreditation References, p. 108.

older records are usually microfilmed and stored. The more current records, those less than 10 years old, are maintained for physician reference. The increased outpatient hospital services have greatly increased the number of records in a 10-year period. Until a few years ago little had been done to assist in this problem. One solution has been to microfilm patient records upon their completion after the patient is discharged.

One company[7] utilized a transparent polyester carrier, microthin jacket 4 inches by 6 inches, which holds up to 70 letter size documents, or about 90 jackets per inch. A single 10 drawer card file cabinet holds more than 3,240,000 letter size documents. The original letter-size records would require 270 standard four drawer file cabinets. Duplicate documents can be made of single pages by contact printing without removal from the jacket. This system provides for (1) maximum security and control of confidential records, (2) record retrieval in seconds and paper facsimiles within a few more seconds, (3) a 98% savings in floor space required by conventional filing, (4) low cost reproduction, (5) easy to operate equipment, (6) accessibility to millions of records within arms reach, and (7) eliminating conventional filing equipment and materials. A saving in reduced search and travel-to-file time for records retrieval, savings in valuable floor space, and savings in conventional file materials will pay for purchase of such a microfilming system in a few years.

The conventional alphabetical filing system has proven both ineffective and time consuming in large operations. The numerical

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[7]"Recordak" Microfilm Systems, Eastman Kodak Company, Business Systems Market Division, Rochester, New York, 14650.

system has proven most successful. The use of numbering by admission, discharge, diagnosis, classification, etc., all have been used but the admission numbering is preferred.[8] The serial numbering system assigns a patient a new number for each visit. The patient has records filed in different locations, the advantage being less filing time, as it is not necessary to look up other file numbers and bring forward records of previous admissions. A definite disadvantage is the time involved in gathering all records should the physician wish them. The serial unit system assigns a new number for each admission and all records are brought up under the latest number for each readmission. The unit numbering system gives only one number, and for each readmission, physician notes and other paper work are added to the original file. The main disadvantage is when the patients index card is lost. For this system, as was noted before, only a 75% shelf fill is recommended as folders will grow fatter.[9]

Under the present unit record terminal digit filing system only seven of the eight shelves are used. The top shelf, number eight, contains certain designated numbers (the oldest). This provides an easy way of transferring the oldest records to the storage area. When a record is used, the patient is given another number, contents pulled from the old file, the old folder is placed on the top row, and the patient's index card noted. This allows for maintaining record sequencing for microfilming, so there exists both a unit and a serial system within this department. If the old record is not used by a given period, it is moved to the storage area.

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[8]Huffman, Manual for Medical Record Librarians, p. 167.

[9]Ibid., pp. 169-76.

The Terminal Digit Filing System allows for (1) work to be easily distributed because of the numbering breakdown, (2) uniform expansion of all record sections, (3) eliminates heavy annual transfers of medical records to storage, (4) even filing distribution among file clerks, and (5) misfiles are reduced to a minimum.[10]

Open shelving allows for visibility and "visibility promotes accuracy."[11] An additional system used to prevent misfiles is a color code system. The three color code system used by the hospital eliminates the misfiles to between 1-2%.[12] In a few areas where the present shelving allows for 180° visibility, the misfiles are restricted to a maximum of 1%. One study shows that misfiles cost from $2.75 to $63.00 per misfile. "Vertical shelving and terminal digit filing reduced our misfiling problems markedly."[13]

Medical records file rooms that require the volume of daily record movement that is accomplished by the study hospital must of necessity produce increased efficiency. A national survey showed that 64% of the cost of a filing system was personnel costs--speed (efficiency, time, labor costs) is essential.[14] Hospital record personnel file records by two basic methods. First, a few records are picked up from the stacking table and the file clerk locates and files the record in its proper place. Second, records are placed in a shopping basket

[10] Ibid., pp. 181-86.

[11] "Ways to File it, Find it, Faster at Less Cost," Administrative Management, XXIV (September, 1963), 42.

[12] Stephen S. Henkin, "An Evaluation of Color Coding as a Solution for Misfiled Records," Hospital Management, XCVIII (August, 1964), 22.

[13] Ibid., p. 23.

[14] "Ways to File It," p. 44.

in sequence and are wheeled back and forth down the rows of shelves until the records are exhausted. This is the more efficient, yet done less often. The records are filed laterally on the shelf beginning with 00, 10, 20, 30, etc. The next lower shelf may begin with 60, 70, and so on. This is a waste of movement when filing in sequence. Vertical filing

10	90
20	00
30	10
40	20

and so on will reduce the filing clerks walking distance by over 90%.[15] Improved efficiency using the following formula and conditions existing in the study hospital, ie., open files 12 feet in length and 8 shelves high, is demonstrated below.

W = walking distance in feet
F = shelf length in feet
S = the number of shelves in height

Lateral order $W^1 = \boxed{(F-1) \times S} + (F-1)(S-1)$

Vertical order $W^2 = F-1$

$W^1 = \boxed{(12-1) \times 8} + (12-1)(8-1)$

$= 88 + 77$

$= 165$ feet

$W^2 = 12$ feet-1

$= 11$ feet

This can be shown as $W^2 = 6.6\%$ of W^1 when $S = 8$ thus walking distance is reduced by over 93% with 8 shelves by adopting a vertical order or 92% with 7 shelves.

Micro Summary and Conclusions

The records file room handles about 1200 records a day--about 500 records from the day's clinic visits, the same number pulled for

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[15] Hill, "Filing and Finding," p. 209.

the coming clinic visits, and some 200-300 records for walk-in clinic visits. The two full-time employees, two part-time employees, and when available, two to three Office of Economic Opportunity (OEO) and Neighborhood Youth Corps (NYC) trainees find themselves busy during all periods of the day. The combined use of open shelves, terminal digit filing, and color coding provide the most efficient manual system available and are all currently used by the hospital. Current file room space will not allow for adding sufficient shelving to meet required needs. The shortage of space has forced the microfilming of three years of records of the ten desired to be maintained in the active files.

The current operation provides the most effective type of manual systems recommended, providing for easy distribution of work load, uniform expansion, consolidation of all current records under one cover, elimination of heavy annual transfers of records to storage, and misfiles reduced to a minimum. An additional 96 feet of shelving could be added at the north end of the file room, but would still not be adequate for the ten years of medical records desired in the main file room. Improved efficiency can be accomplished by: (1) the adoption of a vertical use of terminal digit filing which will reduce walking by 93% rather than the lateral system, (2) the assignment of responsibilities for specific filing areas, and (3) improved management of outpatient records to insure correctness of physician's documentation and compliance with his instructions.

CHAPTER VIII

SUMMARY REVIEW

Every attempt was made to objectively perform the macro systems analysis of the medical records department, United States Public Health Service Hospital, New Orleans, Louisiana. This chapter discusses each selected micro system briefly in a separate paragraph in the same sequence followed in the text, beginning with the medical records department organization.

The medical records department within the scope of the chapter is presently meeting all requirements to meet hospital accreditation standards. The question is, can it be done more efficiently through organizational changes? The trend both in governmental, corporate, and foundation type hospitals that have a full time physician staff, is to consolidate like areas for efficiency. The trend is to place the medical record department under administration, a practice followed for many years by voluntary hospitals. Department organization provides for proper delegation of duties and assignment of responsibilities, however from observations, the physical location of personnel impedes a smooth work flow.

The admitting room poses a number of problems. It is too small for the proper processing of some 6,200 admissions, 6,200 discharges, and 137,000 outpatients each year. Admitting clerks show lack of supervision, proper training and job knowledge requirements, resulting

in a queing problem during heavy periods of patient traffic. The lack of a bed accountability system accounts for additional confusion. The admitting room provides a barren, colorless, unattractive atmosphere, and it is characterized by both confusion and inefficiency during busy periods. No attempts have been made to screen patient's private interviews from the crowded waiting room.

The medical record completion standards dictated by the hospital and accreditation standards provide for both a desired completion period of 7 days and an acceptable completion period of 15 days. A statistical study indicated an average completion time of 31 days, twice the period of acceptability. A systems analysis revealed that the current system cannot normally produce even acceptable standards. Therefore, action must be taken to reduce delays in order to produce first, desired or second, acceptable results. The two major areas of delay are the physician and the stenographic service. The other problem fell basically into the realm of management techniques, providing for a proper communications system, streamlining work flow processes and motivation.

The dictation system used by the physicians was a decentralized system using individual dictating units which were located in some ten different locations throughout the hospital. Three dictation units used to produce 74% of the typing work load were located in one small unattractive room and is what might be called a type of centralized system. A weekly list of uncompleted medical records are furnished department chiefs. Certain medical service departments stress promptness in record completion while others did not. Eighty percent of the physicians dealing primarily with patients, had uncompleted records in the physicians dictation room. The system as now operated was incapable

of producing the standards established for medical record completion rate.

The stenographic service is also a modified system, yet so decentralized that it is difficult to provide proper supervision, training, or smooth out peaks and valleys in the work load. There appears to be no skill standards as some individuals do two or three times the productive work as others and yet hold the same pay ratings. Formal training is limited to a medical terminology course. The steno pool operating efficiency was incapable of providing the services needed to complete medical records in the required time.

The records file room handles about 1200 records a day--about 500 records from the day's clinic visits, the same number pulled for the coming clinic visits, and some 200-300 records for walk-in clinic visits. The two full-time employees, two part-time employees, and when available, two to three OEO and NYC trainees find themselves busy during all periods of the day. The combined use of open shelves, terminal digit filing, and color coding provide the most efficient manual system available and are all currently used by the hospital. Current file room space will not allow for adding sufficient shelving to meet required needs. The shortage of space has forced the microfilming of three years of records of the ten desired to be maintained in the active files.

One final comment to this chapter is that it should be remembered that the above summary would indicate a possibility of total ineffectiveness by the medical records department. Despite these areas of needed improvement the department has continued to meet requirements for accreditation over the past 13 years. Many areas display the mark of capable leadership and should be lauded; however, the purpose of this

study was to identify the few areas within the system that needed and could be improved within the scope of the study.

CHAPTER IX

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The most effective methods for improving the medical records department at the United States Public Health Service Hospital, New Orleans, Louisiana, that will produce the most significant improvement in efficiency and be most readily adaptable to implementation at minimum expense is to provide comprehensive supervision of the medical records activities by placing them under direct supervision of the Director of Administration, to enhance the hospital admitting atmosphere and improve admitting service, to reduce the medical records completion time rate, to accelerate stenographic services, and to increase medical records filing efficiency.

The Research and Training Divisions located within the hospital plus the Administrative Branch possess the necessary talents for implementing the below listed recommendations and recommendations for further study.

Recommendations

The following major recommendations for this systems analysis are listed in order of suggested priority for implementation. Minor recommendations are discussed in the micro summary section of each chapter.

1. Place the medical records department under direct

supervision of the Director of Administration and provide for relocation of work areas to improve work flow within the department.

2. Provide increased command emphasis on physician record completion time rate.

3. Provide for a centralized stenographic pool under the medical record department supervision.

4. Place a portable, colored privacy screen between patient waiting area and admitting booths.

5. Replace chairs in admitting room with a few of the colored plastic chairs located in conference rooms A and B.

6. Provide for an improved color scheme in admitting room and physicians dictation room.

7. Re-evaluate present staff job descriptions and establish fixed standards allowing for proper advancement of personnel in the medical record department.

8. Establish a training program to insure that there are properly trained and cross-trained individuals within the department.

9. Establish a vertical medical records filing system rather than a lateral system.

10. Add the maximum shelving possible in the medical records file room.

Recommendations for Further Study

The recommendations for further study are:

1. To determine the feasibility of converting medical records to microfilm immediately after the patient is discharged and the record is completed to solve limited record filing space.

2. To determine if sufficient photostatic work is currently

being done by local contract for the medical records department to warrant more and better reproductive equipment purchased for hospital use and needs.

3. To determine the feasibility of installing a centralized dictating system.

APPENDIX A

HOSPITAL FUNCTIONAL CHART

DEPARTMENT OF HEALTH, EDUCATION WELFARE
Public Health Service
Bureau of Health Services
Division of Direct Health Services

Hospital Functional Chart

OFFICE of DIRECTOR

The Director is responsible for the overall direction and operation of the hospital, within the scope of PHS laws and regulations, DDHS policy; maintains liaison with Division of Direct Health Services, other components of the Public Health Service, other Government agencies, public and private organizations that relate to the work of the hospital and patient care. Implements and develops medical school affiliations, research and training programs.

The CPS receives training and orientation in the duties and responsibilities of the Director.

The HAO participates with the Director in planning, direction and implementation of the total hospital program.

ADMINISTRATIVE BRANCH

Coordinates personnel, finance, general services, housekeeping, building and grounds management function; integrates these functions with medical programs; participates in the formulation of procedures, policies, and programs related to total hospital operation.

BUILDINGS and GROUNDS SECTION

Responsible for the total engineering and maintenance program which includes operation of maintenance shops, boiler plant, maintenance and operation of buildings, grounds, and equipment. Participates in formulation of plans and specifications for major improvements and alterations.

FINANCIAL MANAGEMENT SECTION

Responsible for total financial management program, including budgeting and accounting; advise hospital management on financial matters; services other PHS activities.

GENERAL SERVICES SECTION

Responsible for supply and property management; office services, security, transportation and station laundry.

HOUSEKEEPING SECTION

Responsible for planning and directing a housekeeping program for the hospital including environmental sanitation.

PERSONNEL SECTION

Responsible for total personnel management program (civilian and Commissioned Officers).

MOBILE OUTPATIENT CLINIC

Provides comprehensive medical and dental care to outpatient beneficiaries and emergency inpatient care in contract hospitals.

SUBSIDIARY MEDICAL FACILITIES

Outpatient Offices -14
Designated Physicians -5
Designated Dentists -1
Outpatient Clinic Canal Zone.

CLINICAL BRANCH

Coordinates operations of clinical services; responsible for maintenance and improvement of medical care standards, research and professional training programs; participates in the formulation of procedures, policies and programs related to total hospital operation.

CLINICAL DIVISION

Responsible for coordinating direct patient care and training and research activities pertaining to the clinical services.

MEDICAL DEPARTMENT

Provides diagnostic, therapeutic and preventive care in internal medicine to inpatients and outpatients; conducts clinical research, residency training and participates in intern training. Maintains a pulmonary laboratory.

PSYCHIATRY DEPARTMENT

Provides diagnostic, therapeutic and preventive psychiatric care to inpatients and outpatients; participates in intern training.

SURGICAL DEPARTMENT

Provides diagnostic, therapeutic and preventive care in the various surgical specialties to inpatients and outpatients; conducts clinical research, residency training and participates in intern training. Responsible for cancer chemotherapy service.

PATHOLOGY DEPARTMENT

Responsible for diagnostic clinical and anatomic pathology and consultation; serves as referral laboratory and histopathological center for other PHS facilities; conducts research programs, residency training and operates school of medical technology.

DENTAL DEPARTMENT

Provides diagnostic, therapeutic and preventive dental care to inpatients and outpatients; designs and constructs prosthodontic appliances; consultant services; conducts clinical research and dental intern training.

ANESTHESIOLOGY DEPARTMENT

Provides a complete program of anesthesiology including pre-op and post-op evaluation of surgical patients, diagnostic and therapeutic services; participates in intern, residency, and research programs. Provides inhalation therapy service.

OBSTETRICS AND GYNECOLOGY DEPARTMENT

Provides diagnostic, therapeutic and preventive medical care to inpatients and outpatients in obstetrics and gynecology; conducts clinical research, residency training, participates in intern training.

OPHTHALMOLOGY DEPARTMENT

Provides diagnostic, therapeutic and preventive medical and surgical care for diseases and conditions of the eye. Conducts clinical research, residency training and participates in intern training.

ORTHOPEDIC DEPARTMENT

Provides diagnostic, therapeutic and preventative care in the orthopedic specialty to inpatients and outpatients; conducts clinical research, residency training and participates in intern training.

RADIOLOGY DEPARTMENT

Provides diagnostic X-ray service for hospital and consultation services for PHSH Carville and other Federal facilities; radiotherapy consultation; conducts residency and student technician training.

PHYSICAL THERAPY DEPARTMENT

Provides physiotherapy rehabilitation service for inpatients and outpatients as prescribed by medical staff; responsible for speech therapy unit.

NURSING DEPARTMENT

Provides comprehensive nursing care for patients; participates in patient teaching and rehabilitation, clinical investigations; conducts inservice training.

OUTPATIENT DEPARTMENT

Provides comprehensive outpatient general medical care, admission determinations, and referral to specialty clinics; operates an employee health clinic.

PEDIATRICS DEPARTMENT

Provides comprehensive inpatient and outpatient pediatric care; operates the Nursery. Participates in intern training.

SOCIAL SERVICE DEPARTMENT

Provides casework for inpatients and outpatients; participates in joint rehabilitation effort with other ancillary staff; conducts social worker intern training; responsible for patient recreation and volunteer programs.

PREVENTIVE MEDICINE DEPARTMENT

Responsible for planning and executing studies in incidence and etiology of various disease processes in selected patient groups. Responsible for developing techniques in prevention of certain diseases.

OTOLARYNGOLOGY DEPARTMENT

Provides diagnostic, therapeutic and preventive care, both medical and surgical, in otolaryngology; participates in intern training.

PHARMACY DEPARTMENT

Provides complete pharmaceutical service for hospital and satellite stations; collects and issues pharmacological information; conducts residency training. Maintains poison control and drug information center. Provides around-the-clock coverage of the pharmacy.

DIETETIC DEPARTMENT

Responsible for total food service operations, providing nutritionally adequate meals to patients; coordination of food service activities with other clinical and administrative activities.

OCCUPATIONAL THERAPY DEPARTMENT

Provides patients with activities to aid in physical restoration, psychological adjustment, and assessment of aptitudes, interests and abilities pertinent to potential employment or vocational training.

MEDICAL RECORD DEPARTMENT

Responsible for the total medical record program required for in and outpatient care, research and training; complies and prepares statistical reports. Establishes eligibility of patients and admitting office.

RESEARCH DIVISION

Responsible for planning, coordinating and supervising execution of all research activities of the hospital (both intramural and collaborative). Responsible for editorial clearance of all manuscripts and speeches.

CLINICAL RESEARCH DEPARTMENT

Responsible for the hospital's research programs which include basic and clinical research.

HEALTH SERVICES RESEARCH DEPARTMENT

Responsible for the development and application of operational research investigating all aspects of health care services.

TRAINING DIVISION

Responsible for hospital training activities including professional, subprofessional, and managerial training for hospital and community health science personnel. This includes training by hospital as well as other specialists. Responsible for health sciences library and audio-visual facilities.

HEALTH SCIENCES LIBRARY DEPARTMENT

Maintains a health sciences library to provide reference, bibliographic and interlibrary loan service for professional staff for clinical, training and research activities.

Director — Date 10-67

Director, Division of Direct Health Services — Date

APPENDIX B

MEDICAL RECORD DEPARTMENT FUNCTIONS

MEDICAL RECORD DEPARTMENT FUNCTIONS

CHIEF. The Chief is responsible for the development, control, and maintenance and continuing review of a system of medical records for inpatients and outpatients, together with the secondary records necessary to meet the needs of patient care, research and study by the medical staff, and approval of the hospital by the various accrediting agencies.

DEPUTY CHIEF. The Deputy Chief receives training and orientation in the duties and responsibilities of the Chief. Assists in the planning, directing and implementation of the total medical record program.

ASSISTANT CHIEF. The Assistant Chief is responsible for planning, directing and implementation of the units concerned with correspondence, reports, statistics, record review, coding of diagnoses and operations and medical record transcription.

Transcription. Responsible for the transcription of medical staff members' dictation pertaining to medical care rendered.

Correspondence. Prepare abstracts of clinical records in answer to requests for information on treatment rendered; processes BEC forms, prepares records for photo-copying and for review by attorneys. Maintains Tumor Registry.

Statistics. Responsible for completion and preparation of statistical reports for administrative and professional use. Develops secondary reports and indices.

Record Review. Assembles and analyzes component parts of the medical record on patients discharged from the hospital. Codes all diagnoses and operations by ICDA. Prepares data summary sheets for Automatic Data Processing.

ASSISTANT CHIEF. The Assistant Chief is responsible for planning, directing, and supervising clinical secretaries and relief staff.

Secretarial. Provides stenographic and clerical service to the Chiefs of the following services: Ophthalmology, OB-GYN, Otolaryngology, Medicine, Surgery, Psychiatry, and Orthopedics.

Relief. Serves as relief clerk for all positions within the department. These positions consist of a variety of clerical, stenographic, and secretarial functions.

SUPERVISOR. The Supervisor is responsible for the planning, directing, and implementation of the elibibility determination and the admission of all patients, the maintenance of the medical record files and the outpatient appointment system.

File. Maintains custody of medical records in a secure but accessible manner. Maintains continuous charge-out system for all records.

Appointments. Maintains appointment system for 21 outpatient clinics. Prepares outpatient visit forms for each patient reporting to the hospital.

Admitting. Establishes eligibility and interviews patients reporting to hospital. Prepares all medical records for inpatients and outpatients. Interviews potential 3rd party cases. Processes all FH, M80, IA, FEE and other examination papers. Answers subpoenas for clinical records.

SOURCE: This information came from the Medical Records Department, USPHS Hospital, New Orleans, Louisiana, Functional Organizational Chart, dated January 1968.

APPENDIX C

OUTPATIENT AND INPATIENT STATISTICS
FISCAL YEARS 1958-1968

OUTPATIENT AND INPATIENT STATISTICS

FISCAL YEARS 1958-1968

Fiscal Year	Outpatient Visits	Admissions	Average Daily Patient Load
1958	71,658	4,916	314
1959	74,208	5,189	339
1960	72,886	5,456	327
1961	73,255	5,884	328
1962	80,946	5,459	338
1963	93,292	5,860	329
1964	99,480	5,773	315
1965	125,197	6,186	309
1966	137,751	6,073	322
1967	136,984	6,203	304
1968	129,557	6,377	310

SOURCE: Division of Hospitals, Annual Statistical Summary, U.S. Department of Health, Education, and Welfare, Public Health Service.

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SYSTEMS ANALYSIS MEDICAL RECORD DEPARTMENT
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LTC James B. Fisher
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ABSTRACT

This study was concerned with determining the most efficient methods of improving areas within the medical record department at the United States Public Health Service Hospital, New Orleans, Louisiana, that would produce the most significant improvement in efficiency and be most readily adaptable to implementation with minimum expense. A systems analysis was performed in the medical record department with time studies, statistical sampling, interviews both in and outside the hospital and its system, a thorough literature review, and correspondence with various agencies.

Findings, in general, revealed a productive medical record department compared to operations described in literature. Specific major deficiencies were a lack of supervisory support at hospital level, congested work flow processes, inability to complete medical records as desired, queing problems and lack of privacy in the admitting office, and lack of needed efficiency in the file room.

Recommendations included general reorganization of the medical record department under administrative supervision, improved work flow suggestions, centralization of steno pool and establishment of training programs, privacy screens and improved color schemes in the admitting office, a change in the records filing system, and improvement in the supervision of physicians administrative responsibilities.