MEDICAL RECORDS MANAGEMENT

MASTER OF BUSINESS ADMINISTRATION
(HOSPITAL ADMINISTRATION)

FIRST YEAR, SEMESTER-I, PAPER-VII

DIRECTOR, I/c.

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FOREWORD

Since its establishment in 1976, Acharya Nagarjuna University has been forging ahead in the path of progress and dynamism, offering a variety of courses and research contributions. I am extremely happy that by gaining 'A+' grade from the NAAC in the year 2024, Acharya Nagarjuna University is offering educational opportunities at the UG, PG levels apart from research degrees to students from over 221 affiliated colleges spread over the two districts of Guntur and Prakasam.

The University has also started the Centre for Distance Education in 2003-04 with the aim of taking higher education to the door step of all the sectors of the society. The centre will be a great help to those who cannot join in colleges, those who cannot afford the exorbitant fees as regular students, and even to housewives desirous of pursuing higher studies. Acharya Nagarjuna University has started offering B.Sc., B.A., B.B.A., and B.Com courses at the Degree level and M.A., M.Com., M.Sc., M.B.A., and L.L.M., courses at the PG level from the academic year 2003-2004 onwards.

To facilitate easier understanding by students studying through the distance mode, these self-instruction materials have been prepared by eminent and experienced teachers. The lessons have been drafted with great care and expertise in the stipulated time by these teachers. Constructive ideas and scholarly suggestions are welcome from students and teachers involved respectively. Such ideas will be incorporated for the greater efficacy of this distance mode of education. For clarification of doubts and feedback, weekly classes and contact classes will be arranged at the UG and PG levels respectively.

It is my aim that students getting higher education through the Centre for Distance Education should improve their qualification, have better employment opportunities and in turn be part of country's progress. It is my fond desire that in the years to come, the Centre for Distance Education will go from strength to strength in the form of new courses and by catering to larger number of people. My congratulations to all the Directors, Academic Coordinators, Editors and Lesson-writers of the Centre who have helped in these endeavors.

Prof. K. Gangadhara Rao
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MASTER OF BUSINESS ADMINISTRATION
(HOSPITAL ADMINISTRATION)
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PROGRAMME SYLLABUS
1st YEAR – 1st SEMESTER SYLLABUS

107HA26: MEDICAL RECORDS MANAGEMENT

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Unit V: Medico-Legal Aspects of the Medical Records - Medical Ethics - Hippocratic Oath and Code of Ethics for the Medical Record Professionals - Ownership of the Medical Record Privileged

References:

1. Dean F. Sittig (2014) Electronic Health Records challenges in design and implementation, Apple academic press.

2. Jem Rashbass & Heidi Tranberg Medical Records Use and Abuse, CRC press (Taylor and Francis Group)

3. Neil S. Skolnik Electronic Medical Records A Practical Guide for Primary Care, Humana Press. ISBN 978-1-60761-605-4

4. Giovanni Rinaldi New Perspectives in Medical Records Meeting the Needs of Patients and Practitioners, springer publications

5. Francis CM & Mario C de Souza, Hospital Administration, 3 rd Ed., Jaypee Brothers, N. Delhi

6. George, MA, Hospital Administrator, Jaypee Brothers, N.Delhi, 2003.

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LESSON-1
INTRODUCTION TO MEDICAL RECORDS

1.1 Definition:

A medical record is a written document of facts related to patients' treatment in hospitals. It is the systematic documentation of a single patient's medical history and care across time within one particular health care institution.

It includes a variety of types of "notes" entered over time by health care professionals, recording observations and administration of drugs and therapies, orders for the administration of drugs and therapies, test results, x-rays, reports, etc. The maintenance of complete and accurate medical records is a requirement of health care providers and is generally enforced as a licensing or certification prerequisite. The term medical record is used for both the physical folder of each individual patient and for the body of information found within.

As the medical record contains sensitive personal information many ethical and legal issues are implicated in their maintenance, access, appropriate storage and disposal, Although the maintenance of the medical record and its proper storage is generally the property of the hospital, the actual record is considered in most jurisdictions to be the property of the patient, who may obtain copies upon request.

A Medical record is a clinical, scientific, administrative and legal document relating to a patient's health care within a hospital having sufficient data and a record of the sequence of events to justify diagnosis, to warrant treatment and the final result or outcome.

- **Clinical**: Clinical history, Physical examination, investigations, nursing records etc.
- **Scientific**: To study the patient's condition, progress and for research
- **Administrative**: Control, Planning services, budgeting, quality of care, hospital statistics
- **Legal**: Malpractice suits, defence of hospitals and its clinicians

1.2 Characteristics of Good Medical Record:

1. Accurate: Reflect the patient's true medical history, diagnosis, treatment, and outcomes.

2. Complete: Include all relevant information, such as medical history, medications, allergies, and test results.

3. Concise: Clearly and briefly document patient information.

4. Clear: Easy to read and understand, with no ambiguity or confusion.

5. Timely: Documented promptly, ideally at the time of service or soon after.

6. **Legible**: Easy to read, with no illegible handwriting or unclear abbreviations.

7. **Confidential**: Protected from unauthorized access, with patient confidentiality maintained.

8. **Authentic**: Authenticated by the healthcare provider, with clear authorship and dates.

9. **Compliant**: Meet regulatory requirements, such as HIPAA and local laws.

1.3 Types of Medical Records

1. Clinical Records (Electronic Health Records - EHRs/EMRs)

These are the core documents detailing the patient's medical journey, diagnosis, and treatment.

Admission/Demographic Data: Includes the patient's personal details (name, age, contact), insurance, next-of-kin, and basic administrative information.

Medical History and Physical Examination: Documentation of past illnesses, surgeries, family history, social habits (smoking, alcohol), allergies, current medications, and the results of the initial physical exam.

Physician's Orders: Instructions from the attending doctor to the nursing staff and other departments regarding medications, diet, diagnostic tests, procedures, and activities.

Progress Notes: Continuous, chronological documentation by all healthcare providers (physicians, nurses, therapists) detailing the patient's condition, response to treatment, and any changes. Often follows the SOAP (Subjective, Objective, Assessment, Plan) format.

Diagnostic Reports: Results from various tests, including Lab Reports (blood, urine, cultures), Radiology/Imaging Reports (X-rays, CT, MRI, PET scans) , and specialized reports like ECGs or biopsies.

Procedure/Operative Notes: Detailed records of any surgical or invasive procedures performed, including pre-operative diagnosis, anaesthesia, a step-by-step account of the procedure, findings, and post-operative status.

Medication Administration Records (MARs): A precise log of all medications administered to the patient, including the drug name, dose, route, time, and the staff member who administered it.

Consultation Reports: Findings and recommendations provided by specialist physicians when they are called in to assess the patient.

Discharge Summary: A comprehensive document prepared at the end of the hospital stay summarizing the reason for admission, significant findings, procedures performed, hospital course, final diagnosis, condition at discharge, and instructions for follow-up care and medications.

2. Administrative Records

These records are necessary for the operational, legal, and financial functioning of the hospital.

Consent Forms: Legal documents signed by the patient (or guardian) granting permission for specific treatments, surgeries, or release of information.

Billing and Insurance Records: Documents related to the cost of care, charges, billing codes (e.g., ICD-10 or CPT codes), and communication with insurance providers.

Legal Documents: Includes records related to any medico-legal cases, informed refusal documents, or advanced directives/Power of Attorney for healthcare.

3. Management/Organizational Records

These are used for hospital-wide oversight, quality control, and research.

Quality Assurance & Audit Records: Documentation used to review the quality of care, track errors, and ensure compliance with accreditations (like NABH or JCI).

Staff Records: Personnel files detailing staff training, licensure, duty rosters, and performance reviews.

Statistical Records: Data extracted from clinical records used for public health reporting, disease surveillance, and internal performance metrics.

In modern super specialty hospitals, the majority of the clinical record is maintained in a centralized Electronic Health Record (EHR) system, which integrates all these components for immediate access by the multidisciplinary care team.

1.4 History of Medical Records:

The history of medical records spans thousands of years and is closely tied to the evolution of medicine itself.

Here is an overview of the key periods and milestones in the history of medical record-keeping:

Ancient Civilizations (c. 3000 BCE - 500 CE)

Medical records began primarily for educational and scholarly purposes, not just for individual patient care.

Mesopotamia (Sumeria): The earliest known medical text is a Sumerian clay tablet from around 2400 BCE, listing prescriptions and recipes for medicines.

Ancient Egypt: Papyri scrolls were used for documentation. The Edwin Smith Papyrus (c. 1600-1700 BCE) is the oldest surgical treatise and is structured somewhat like modern case reports, describing injuries and treatments. The Ebers Papyrus (c. 1550 BCE) is an extensive text with medical recommendations.

Ancient Greece: Hippocrates (460-370 BCE), the "Father of Medicine," and his followers recorded detailed case histories and observations (the Hippocratic Corpus), laying the groundwork for clinical documentation.

Rome: Physicians like Galen (130-200 AD) continued the tradition of detailed medical and surgical treatises, using papyrus and parchment.

Middle Ages & Renaissance

Early Middle Ages: Record-keeping in Europe often shifted to religious institutions, where lists of patients admitted to and discharged from hospitals were kept—considered early examples of data archiving.

Islamic Golden Age: Scholars like Rhazes and Ibn Sina synthesized medical knowledge and contributed to techniques for record-keeping and case descriptions.

Renaissance (1500s): Doctors in Europe began creating casebooks—written collections of cases recorded day-by-day. These often included the patient's name, age, complaint, cause, prescription, and sometimes payment. They served to account for, study, and reflect on their practice.

19th and Early 20th Centuries (Standardization)

Medical records began to take on a more administrative and legal role, moving beyond just educational material.

Hospital Systems: Hospitals started keeping more complete and systematic patient files.

Standardization: In the late 19th and early 20th centuries, there was a push for standardization in paper medical records.

Organizations like the American College of Surgeons (ACOS) took steps to establish consistent forms and practices for records.

The establishment of the Problem-Oriented Medical Record (POMR) system in the 1960s, with its structured SOAP (Subjective, Objective, Assessment, Plan) notes, provided a standardized method for recording patient information and treatment plans.

Late 20th Century to Present (Digital Revolution)

The introduction of computers fundamentally changed how records were stored, accessed, and used.

1960s-1970s: Early EMRs: The first efforts to computerize medical records emerged, though adoption was initially slow due to high cost and limited technology. The Regenstrief Institute developed an early Electronic Medical Record (EMR) system around 1972.

1990s: Accessibility: Technology became more accessible, leading to greater interest in electronic systems.

1996: HIPAA: The Health Insurance Portability and Accountability Act (HIPAA) was

enacted in the US, establishing national standards for the privacy and security of patient data, which drove the need for secure digital systems.

2000s - Present: EHR Adoption: The push for Electronic Health Records (EHR) and Electronic Medical Records (EMR) grew significantly. EHRs are digital versions of a patient's chart, improving care coordination, reducing errors, and allowing for real-time data access.

Today, the focus is on interoperability (the ability of different EHR systems to share data), patient access to their own records, and the integration of advanced technologies like Artificial Intelligence (AI) for data analysis and clinical decision support.

LESSON-2
MEDICAL RECORD FORMS AND THEIR CONTENT

2.1 Standard Order of Arrangement of Medical Record forms:

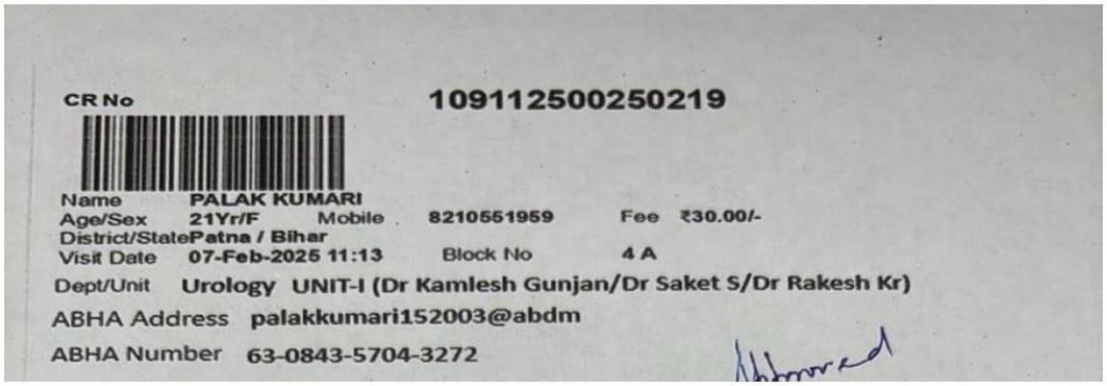
Patient Identification and Medical Record Numbering: Patient identification is the beginning of an efficient medical record system. Correct identification is vital to ensure that each patient has one central registration number. This helps in efficient linkage and retrieval of patient health records, to ensure unerring record management especially in case of namesakes. The responsibility for correct patient identification rests with the Medical Record Clerk/Technician/DEO at the registration counter. He/she should appropriately enter and verify the patient identity by using Unique Patient Characteristics. WHO defines "Unique Patient Characteristic" as "something about the patient that does not change", such as father/mother's maiden name, national identification number such as Aadhaar number, date of birth (NOT age) etc. This information along with other particulars of the patient should be recorded accurately by the clerk/self (in case of online registration) in the 'Pre registration Slip' when the patient visits the hospital for the first time.

Central Registration Number (CR No.): Once a patient has been identified, the next step is to allot a unique medical record number to this patient, which is referred to as the "Central Registration Number (CR No.)" in AIIMS, Patna. The allotted CR No. is unique and permanent to every new patient, visiting the institute for the first time and the same number is used during the entire episode of outpatient consultation or hospitalization. In subsequent visits to the institute, the same number is used to identify a patient and his/her medical record. It's the duty of Medical Record Clerk/ DEO on registration counters to ensure, with careful interviewing, that an old patient visiting the facility for second or subsequent time does communicate his/her existing CR No. for linking the new record with previous ones. In case, an old patient cannot recall his/her CR No., the clerk should trace it from the Hospital Management Information System (HMIS) by using the Patient Identification information and Unique Patient Characteristics. Every effort should be made on the part of the DEO to ensure that duplication of CR No. does not take place. The CR No. is a unique 15 digit number assigned in a straight numerical sequence by registration module of HMIS. The CR No. is used to 'file' the medical record and thus it is important to make sure that the number is correctly recorded on all forms in the patient's medical record (Example of CR No.:- 109112500250219 in this 10911 is hospital code 25 is year, then unique series). The first five digits of this number represent the hospital code next two-digit year next will be the series generated by HMIS when patient was first registered.

Indoor Record Number (Admission No.) & Outdoor Record Number: Along with the CR No., an alpha-numeric 'Outdoor Record Number' is also generated and printed on the OPD Card and Record. Similarly, a fifteen digit 'Indoor Record Number (Admission Number)' is generated and printed on all Inpatient Records. Both Outdoor Record No. & Admission No. are a combination of numerical series. These are used for finally 'Filing' the Medical records in MRD using Straight Numeric Filing method.

Registration Procedure & Timings: A patient visiting OPD belongs to one of the following categories: New Registration: against fee of Rs 30/- (for both, General or Super-speciality Clinic); A patient visiting Emergency needs to pay a registration fee of Rs.30/-. The Registration Module of HMIS is used at every registration counter, in

which the patient's demographic details like name, age, sex etc. are captured through Ayushman Bharat Health Account (ABHA) and stored in 'Patient Demographic File' while fee details are stored in 'Registration Fee File' against same C.R. Number. On registration, patient is automatically allotted a ABHA Address and ABHA number by the HMIS. Registration card label displays following information:



Registration Timing:

OPD New Registration: 8 a.m. to 11:30 a.m.

Emergency Registration in case of Unknown Patient: Emergency patient's registration can be done without his/her name, age and other demographic details in case of unavailability. In such a case, the name of the person who brought the patient, date and time of patient's arrival etc. may be recorded. However, capturing such information like details of accompanying person, patient's belongings etc. which are an integral component in the HMIS must not importunately hinder the treatment process. If the patient's name is not known, patient's name field should be recorded as 'Unknown'. Provision has also been made to mention whether the patient is a Medico Legal Case (MLC) or not. Registration fee of Rs. 30/- has to be remitted to registration counter at Trauma/Emergency Department. But in urgent situation and unknown cases, patient may be allowed to register even without paying the registration fee and it should not be treated as mandatory. In case identity of an unknown person is established after admission, the following documents are required before the patient's name and demographics can be recorded in the Hospital Management Information System (HMIS):

a). NOC from police station concerned,

b). Valid government ID of patient; and

c). Approval of Medical Superintendent.

Special Clinic Registration

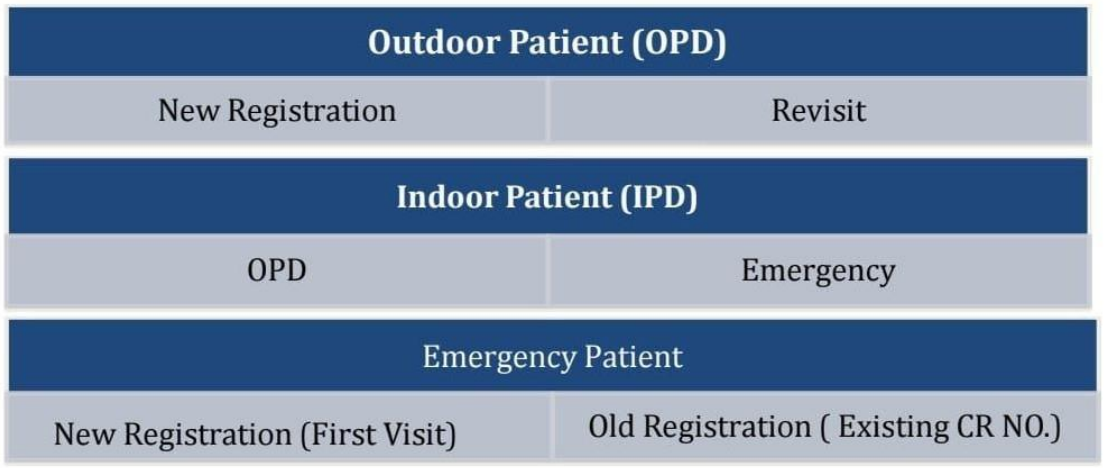
In case of internal departmental referral in hospital to a Special Clinic, patient may approaches the concerned Special Clinic departmental counter for registration on the specified date without any charge. In case of Patient referred from outside has to pay Rs. 30/- as registration fee only and is then registered at the Special Clinic.

Revisit

A revisiting patient should be directed to the same doctor or department that provided the initial treatment for follow-up care. However, if the patient has a new complaint, they may be referred to the relevant department. In cases where a duplicate registration booklet is issued, a registration fee of ₹30 will be charged for general patients, and ₹50 for patients with an EHS card

Medical Record Handling and Management

A visiting patient belongs to one of the following categories:



2.2.1 Analysis of Medical Record:

Every hospital has to have a system which can provide the hospital management with information necessary to plan and provide satisfactory patient care and efficiently manage the hospital. One of the main sources of hospital statistics is the medical record. Therefore, a suitably designed medical record system combined with a good patient registration system must be designed to suit these requirements.

Statistics are facts set down as figures. Preparing statistics involves the collection, analysis, interpretation, and presentation of facts as numbers. The hospital administrator and governing board use statistics to compare current operations with the past and as a guide in planning for the future.

Keeping up with current reporting system will save a great deal of unnecessary work. This will help to modify the collecting techniques so that information kept will be accurate and useful. Medical records are the primary sources of data used in compiling

medical statistics.

Daily, monthly and annual reports

The daily and monthly analysis report concerning the professional care rendered to patients may indicate the number of patients registered newly as out patients, and the number of patients registered as revisit patients. This will include reports of admissions, discharges, number of surgeries performed and, the number of patients occupied as in-patients on a given day or month.

This report may be combined with a comparative report of the previous year, the same day and same month. If this is done on a routine manner the necessary additional data can be compiled on a daily, monthly and yearly basis and the information will be available when it is needed. The monthly analysis and comparative reports are important to the administration and governing board for future planning and control of activities.

2.2.2 Qualitative Analysis:

Descriptive statistics

There is increasing emphasis on standardization of health statistics for valid intra hospital and inter hospital comparisons and analysis. In some hospitals, daily census reports are kept according to organized clinical services as well as nursing unit. Thus, for each service the daily statistical report will show the number of patients admitted directly or by transfer and the number of bed occupancy.

All statistical data gathered should be reviewed periodically so that obsolete or unused data no longer need to be collected. Since the medical records department sets the pattern for data collection, medical records in-charge should be aware of needs for new data related to activities newly developed in the hospital.

Some hospitals gather certain statistics for which there is no agreement among hospitals on definition. Such data will be useful only to those particular hospitals and to persons who are aware of the limitations of the definitions. Such data may be useful for internal operational purposes.

Out-patient services

Out-patient services data is extracted from the registers or system maintained at the registration counters in the out-patient department, specialty clinics and emergency services. The data will be useful to the extent that these registers or system contains pertinent information. Commonly used statistics pertaining to out patient services are,

1. Number of new patients
2. Number of revisit patients
3. Speciality wise break-up of patients
4. Unit wise break-up of patients

5. Age and gender wise distribution of patients
6. Out-patient diagnostic statistics

The formula for deriving this can be computed as follows:

$$\text{Daily average Out-patient visits} = \frac{\text{Total no. of out-patient visits during the period}}{\text{No. of op working days during the period}}$$

Weekly predicting report

In order to create awareness among the staff of the hospital, a report anticipating the number of out-patients, in-patients and surgeries can be generated based on relevant figures during corresponding year of previous year. This statistical report can be prepared by adding expected growth rate to the actual data of the last year. During this preparation one has to keep in mind about the discrepancy between days and festivals of previous year and the current year.

This can be corrected by comparing with the last 3 year statistical data and anticipating the actual number of patients for the particular day or the week. Depending on the growth rate of out-patients, in-patients and surgeries of the current year, the prediction calendar can be prepared by adding 3% to 5% to the next year. This predicted report will be useful to plan each week for man power resources, granting casual leave to the staffs and to create awareness among the working staff.

Fortnight report

Based on the predicted weekly report and the actual number of patients treated in the week, a comparative report can be prepared to understand about the present growth trend of the hospital. This report can be prepared by collecting the number of out-patients, in-patients and the surgeries performed within fortnight. To understand the growth trend elaborately, this report can be further included with villages, districts, taluks and, cities.

This fortnight report can be prepared by comparing with actual patient visit of the last year with the number of patients anticipated this year which is compared with the current number of patients treated this year. This report will be helpful to the hospital authorities, doctors and the working staff to know the growth trend of their hospital.

Preparation of prediction calendar

For any institute as it grows, it becomes absolutely necessary to predict the number of patients visiting the hospital every day. This workup can be done by developing a calendar for every day which can be further developed on monthly basis for twelve months in a year. This daily predicted data for the upcoming year can be even printed as a book with the predicted data on one side and the actual number on the other side.

National holidays, festival and all-important events which are going to take place in that New Year can also include in the prediction calendar. A column can be drawn in the calendar to

compare the actual number of patients versus the predicted number. A comparative report with actual number of patients treated for the past three years with the current year can also be prepared for every month to know the growth trend of the hospital.

2.2.3 Quantitative Analysis:

Comparative statistical reports

- The comparative report of professional performance provides comparative figures which are of value to the medical staff to evaluate its own performance, and to the governing board and the hospital administrator as a picture of professional performance of the hospital and medical staff
- The work of the current month can be compared with that of the same month of the previous year, and the total to date of the current year with that of the corresponding period of the previous year. The daily census provides some of the data for this report
- It is the responsibility of the medical records In-charge to keep up with the changing data requirements of the governing board to which the hospital must submit reports and have the data available when it is needed.

Common hospital percentages and rates

The term ratio is frequently used instead of percentage. A ratio expresses the quantitative relation of one thing to another, such as the relation of births to deaths. Careful attention must be given to all figures. Many errors in arithmetic occur because of misplaced decimal points.

There is one bit of common-sense reasoning that will help medical record In-charge when computing a rate. A rate should be considered as the number of times something did happen compared to the number of times something could have happened. When expressing this ratio as a percentage, the number of times a thing happened is divided by the number of times it could have happened.

Infection rate

Every hospital must have a committee charged with the responsibility to investigate, control, and prevent infections. The primary purpose of evaluating infections is to determine the cause so that repetition may be avoided. Medical judgment is needed to establish the incidence of infections and the proper control measures to be taken. The hospital committee charged with infection control should set up procedures for the surveillance and reporting of infections.

Postoperative infection rate

The ratio of all infections in clean surgical cases to the number of operations performed in a particular period. The postoperative infection rate may also be required

on statistical reports. If endophthalmitis rate is needed, it must be specified if this is to be computed out of all operations or out of all clean operations.

$$\frac{\text{Number of infections in clean surgical cases for a period}}{\text{Number of surgical operations for the period}} \times 100$$

Length of stay calculations

The length of stay (for one in-patient) is the number of calendar days from admission to discharge. To compute a patient's length of stay, the date of admission is subtracted from the date of discharge when the patient is admitted and discharged in the same month. The average length of stay (average duration of hospitalization, average stay) is "the average length of hospitalisation of in-patients discharged during the period under consideration"

The formula for computing the average duration of in-patient hospitalisation is

$$\frac{\text{Total length of stay (No. Of days stay)}}{\text{Total discharges}}$$

Average daily in-patient census (average daily census)

The average daily in-patient census records the average number of in-patients present each day for a given period of time. To arrive at the average number of in-patients in the hospital, the total in-patient service days for the period must first be determined. The formula to obtain the average daily in-patient census for a whole hospital is

$$\frac{\text{Total in-patient service days for a period}}{\text{Total number of days in the period}}$$

In-patient bed occupancy ratio

The in-patient bed occupancy ratio can be computed at any specified point in time or for any specified day. To compute the percentage for a specified day, the in-patient service days for that day are multiplied by 100 and divided by the in-patient beds available for the day. To obtain the in-patient bed occupancy ratio as a daily average in a longer period, the formula is

$$\frac{\text{Total in-patient service days for a period}}{\text{Total number of in-patient beds available x Number of days in the period}} \times 100$$

Anaesthesia death rate

The ratio of anaesthesia deaths caused by anaesthesia deaths caused by anaesthetic agents for a period to the number of anaesthetics administered for the period. Since anaesthesia deaths occur frequently, this rate will usually be computed on an annual basis. An anaesthetic death is defined as a death that takes place while the patient is under anaesthesia or which is caused by anaesthetics or other agents used by an anaesthetist or anaesthesiologist in the practice of his profession. The number of anaesthetics administered is obtained from the anaesthesiology department or the operating room. The formula for figuring this percentage is:

$$\frac{\text{Total number of deaths caused by anesthetic agents for a period}}{\text{Total number of anesthetics administered for the period}} \times 100$$

2.3 Incomplete Medical Record Control:

While incomplete medical records pose substantial challenges and potential risks, viable solutions exist to manage these issues.

The continuity and accuracy of patient care hinge on the completeness and accuracy of their medical records, and medical transcription companies are an important part of this process**.**

The Importance of Comprehensive Medical Records

Patient care cannot be overemphasized, and a significant part of delivering excellent care lies in the hands of complete and accurate medical records.

These documents record patients' health history, including their diseases, allergies, medications, treatments, and other pertinent information. Medical professionals rely on these records to make informed patient care and treatment decisions.

The Consequences of Incomplete Medical Records

The repercussions of incomplete medical records are vast, affecting the healthcare provider and the patient. For healthcare providers, incomplete records can lead to issues such as:

Misdiagnosis and Improper Treatment: Physicians may not fully understand a patient's health condition without a complete record, leading to potential misdiagnosis and inappropriate treatment plans.

Legal Consequences: Incomplete medical records may not meet legal and regulatory requirements, exposing healthcare providers to potential lawsuits and penalties.

Financial Losses: Medical records are essential for billing purposes. Incomplete records can result in claim denials, impacting the revenue cycle.

Compromised Patient Safety: Missing information can lead to treatment errors, posing a significant risk to patient safety.

Delayed Care: Missing or incomplete data can delay care as medical professionals must spend additional time gathering the necessary information.

Effective Strategies to Overcome the Issue of Incomplete Medical Records

While the implications of incomplete medical records are serious, numerous solutions can be implemented to mitigate these risks.

Implementation of Electronic Health Records (EHR)

Transitioning from paper-based records to electronic health records (EHRs) can dramatically improve the completeness and accuracy of patient data. EHRs provide a centralized and standardized way to store and retrieve patient data, reducing the risk of lost or missing information.

Training and Education

Regular training sessions can ensure that all staff members understand the importance of complete medical records and know how to maintain them. This education can cover everything from correct data entry procedures to understanding the potential risks associated with incomplete records.

Regular Audits

Regular audits of medical records can identify issues early before they become significant problems. In addition, these audits can help detect incomplete data entry patterns and areas where training may be required.

Use of Medical Transcription Services

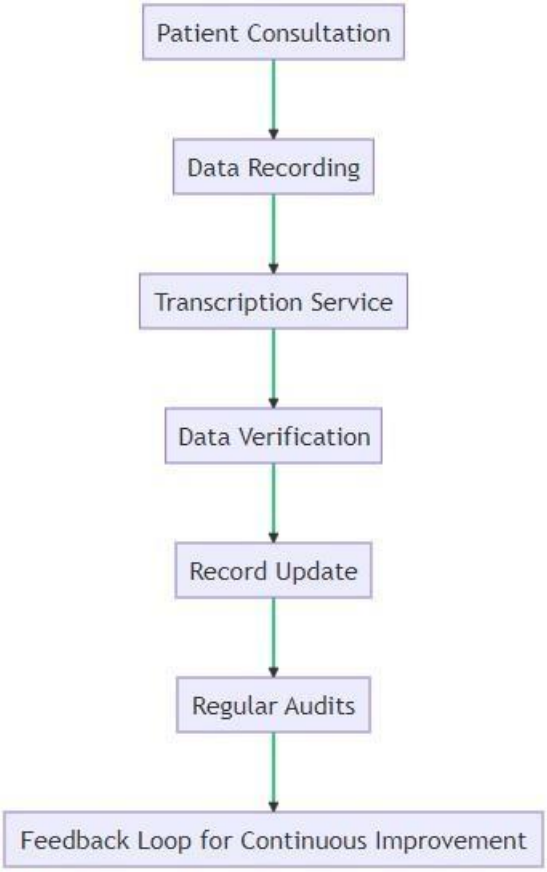
Medical transcription services can assist in ensuring that all patient interactions are accurately documented, reducing the risk of missing or incomplete information.

Adoption of Data Standards

Adopting data standards can ensure uniformity in medical records, making it easier to identify and fill gaps in patient information.

Diagram: Medical Record Management Process

The following diagram depicts a standardized medical record management process that can mitigate the challenges of incomplete medical records.



2.4 Medical Records - Numbering and Filing Systems Introduction

Medical records in most health care institutions are filed numerically according to patients' medical record numbers. In the past, some hospitals have filed records according to patient's names, discharge numbers, or diagnostic code numbers. Alphabetic filing by patient names is more cumbersome and subject to more error than numerical filing. Filing by discharge numbers and diagnostic code numbers is generally unsatisfactory because other important records or registers in the facility are concerned exclusively with medical record numbers.

Medical Records Numbering System

Three types of numbering systems are currently in use in health care facilities-serial, unit, and serial unit.

Serial numbering

In serial numbering the patient receives a new medical record number each time he is registered or treated by the hospital. If he is registered five times, he acquires five different medical record numbers.

Eg : Patient, Ravi, gets registered in the hospital and receives a number of 13650.When he returns for follow-up one month after treatment, he is registered under medical record number 14020. If he is visiting the hospital again the following year, he would receive still a third number such as 19560. Although all medical record numbers assigned to this patient has been recorded in the system, his medical records are filed in as many places as the number of times he has been treated in the facility.

Unit numbering

Similar to the serial numbering system, the unit numbering system provides a single record, which is composite of all data gathered on a given patient, whether as an outpatient, inpatient or emergency patient.

The patient is assigned a medical record on his first visit, which is used for all subsequent visits and treatments. His entire medical treatment is thus available in one folder under one medical record number. For example: With unit numbering, each time Ravi arrived at the hospital for treatment, he would receive the first number he had been assigned –13650.

Serial unit numbering

This numbering system is a combination of the serial and unit numbering systems. Although each time the patient is registered he receives a new medical record number, his previous record are continually brought forward and filed under the latest issued number. For example: When patient Ravi returned for his follow-up one month after treatment, he would receive number 14020, but his out patient treatment data, filed under 13650, would also be brought forward to be filed with the old medical record made during his most recent visit. A unit record is thus created.

When the older records are brought forward, tracer card must be left in the shelf where the old record has been pulled, to indicate the new number under which the record is now filed. The tracer card marked with a referral note to the new number is a satisfactory method for accomplishing this.

Annual numbering

In annual numbering system, two digits indicating the year are added to the end of a serial number. The year designation serves as a control number in inactivating medical records. The serial numbers together with the calendar year also provide immediate data on the number of hospital registration or visits that occurred during a specific year.

Family numbering

Another version of unit numbering is the family numbering system. Family numbering usually consists of placing extra two digits, which indicates assigning number to each individual in the family.

These digits are usually placed instantaneously before the regularly assigned medical record number. Prefix number pairs have a definite order and meaning, as follows:

- 01 = Head of Family (either mother or father)

- 02 = spouse
    - 03 = children
    - 04 = any other family relatives
    - 05 = servant

Even though each patient of his family is assigned a separate medical record, the information pertaining to this family is thus filed together under one medical record number as “Family number”.

File Expansion

It is necessary to leave 25% of the shelves vacant when the unit numbering system is followed. This is because of expansion of the medical records when more forms are added to a record during frequent visits of the patient.

When serial-unit system is followed in a hospital, old medical records are forwarded to combine with the new medical records of the patient. Gaps may occur on the shelves as records are pulled and forwarded. This commonly happens when revisit rates are very high. In a serial numbering system since patients are assigned a medical record number during every visit, the shelves are filling only at one end as new numbers are assigned to patients every time.

Bulky Files

Records of patients having had several occasions of treatment sometimes become so thick that additional folders are needed to house one complete medical record. In order to alert filing personnel and health care professionals that a medical record is contained in several folders, it is wise to mark each folder with both the volume number and the total number of volumes.

For example, the first folder can be labeled as” Volume 1 of 2”, the second folder “Volume 2 of 2”, etc. If an extra folder is added the label should be changed to indicate the total number of folders. The first folder labeled “Volume 1 of 2” would change to “Volume 1 of 3” as a third folder is added.

Medical Records Filing Systems

Three types of numeric filing systems are commonly used for filing medical records-straight numeric, terminal digit, and middle digit.

Straight numeric filing

Straight numeric filing refers to the filing of records in exact ascending order according to medical records number. Thus, simultaneously all the numbered records would be in an ascending series on the filing shelves. For e.g., the following four medical records would be filed in the following order on a shelf: 65023, 65024, 65025, and 65026.

Clearly it is a simple matter to pull fifty continuous records from the filing area for study purpose or for inactive storage. Perhaps the greatest advantage of this type of

filing system is the ease with which personnel are trained to work with it. However, this approach to filing has certain disadvantages. It is easy to misfile since a staff must consider all digits of the record number at one time when filing a record. The greater the number of digits that must be recalled when filing, the greater the chance for error. Alteration of numbers is common: medical record 65424 can be misfiled as record 56524.

A more serious problem to straight numerical filing is that the heaviest filing activity is concentrated in the area with the maximum number of new records. Several staff filing records at the same time in such areas is bound to get in each other's way. Since staffs are usually filing in the area of the most current records, it is not possible to fix responsibility for a section of the file to one staff.

Terminal digit filing

A six-digit number or a seven-digit number can be used and divided with a hyphen into three parts, each part normally containing two digits. Within the number, the primary digits are the last two, secondary digits are the middle two and, the tertiary digits are the first two or three digits.

In a terminal digit filing, there are 100 primary sections, ranging from 00 to 99. A staff must first consider the primary section while filing the records. With each primary section, groups of records are matched according to the secondary digit, after locating the correct secondary digits section, the medical record staff files in numerical order by the tertiary digits. In medical records, the second tertiary digits changes with every record.

Note the following example in a terminal digit file 66-31-0698-11-3898-99-50

67-31-0699-11-3899-99-50

68-31-0600-12-3800-00-51

69-31-0601-12-3801-00-51

The terminal digit method of filing is described using six numbers, but as mentioned earlier it can be adapted for using five, seven, or even nine digits. With a five-digit number, one could break it into three sections, as follows:

7-65-43 0-00-01 etc.

With seven digits, the break up might be:

765-43-21 000-00-01 etc.

There are numerous advantages of terminal digit filing. When new records are added to the shelves, their terminal digit numbers are equally distributed throughout 100 primary sections of the shelves. Every 100th new medical record will be filed again in the same primary section of the shelves.

The obstruction that results while straight numeric filing is followed when several staff

are filing in the same area is avoided. Staffs may be assigned responsibility for certain sections of the shelves. When four staff are filing, the first staff can be responsible for terminal digit sections 00-24, the second for 25-49, the third for 50-74, and the fourth for 75-99.

As registration numbers are still assigned in straight numerical order, the work is evenly distributed amongst each staff in each section. Numbers 463719, 453720, and 463721 are assigned in strict sequence, but the records would be filed in terminal digit section “19”, “20”, and “21” respectively.

Inactive records may be pulled from each terminal digit section as new records are added. In this way the volume of records in each primary section is controlled and large gaps in the file which require back shifting of records is prevented. This volume control also simplifies planning for filing equipment.

Advantages of terminal digit filing

Misfiling is considerably reduced with the use of terminal digit filing. Since the staff is concerned with only one pair of digits at a time, the transposition of numbers is less likely to occur. Even if the tertiary digits are increased to three, e.g., 245-68-90, recalling three digits is easier than recalling seven.

The training period for medical records assistant is usually a little longer for a terminal digit system than for a straight numeric filing, but most of the staff can learn it in a few days time.

Initial setting up of file shelves may be required from the starting stage, which may require more units of shelving since expansion capabilities must be planned for the total medical records area.

Middle digit filing

In this method the staff files according to pairs of digits, as in terminal digit filing. On the other hand, the primary, secondary, and tertiary digits are in different positions. The middle pairs of digits in a six-digit number are the primary digits, the digits on the left are the secondary digits, and the digits on the right are the tertiary digits

76 -- 68 -- 96

Secondary primary
tertiary Shown
below is a sample sequence in middle digit file

76-68-96 99-68-96

76-68-97 99-68-97

76-68-98 99-68-98

76-68-99 99-68-99

77-68-00 00-69-00

77-68-01 00-69-01

From the example given, the staff can see that blocks of 100 records (e.g., 76-78-00 through 76-78-99) are in straight numerical order.

This has several advantages:

- First, it is simple to pull out 100 consecutively numbered records for research purposes.
- Second, conversion from a straight numerical system to a middle digit system is much simpler than converting to a terminal digit system.
- Third, blocks of 100 records pulled from a straight numerical file are in exact order for middle digit filing.

Middle digit filing provides a more even distribution of records that does straight numerical filing, although it does not equal the balance achieved by a terminal digit filing system.

As in terminal digit filing, the staff is filing by pairs of digits rather than by six or seven digits; therefore wrong filing is reduced.

There are certain disadvantages to middle digit filing. More training may be necessary than the straight numeric or terminal digit filing.

Centralisation

Centralisation refers to the filing of outpatient, inpatient, and emergency patient's records in one location. When continuous follow-up care is regularly provided by a hospital, a filing system which renders a unit record is most practical. Unit records are stored within the medical record department.

Decentralisation

- A decentralised file results when outpatient records are filed in the medical record department, but inpatient and emergency patient records are stored in their respective patient care areas.
- A large medical complex consisting of several health care units which are physically separated from each other might need to adopt such a decentralised system for easy record retrieval and accessibility.
- The decentralised file areas should remain, however, under the control of the medical record department.

Regardless of whether files are centralised or decentralised, there must be centralisation of authority over them. One person, logically the Manager of medical records department, should be authorised to establish and maintain control over all filing procedures and record usage.

Medical Record Request Form

Routine requests for medical records from Specialty clinics or doctors performing study or research, should be delivered to the medical record department by a specified time of day fixed by Hospital administrator or by medial records policy. The routine requests from the doctors or clinics are received through the medical record request form. The requisitions slip usually is a single form which contains necessary columns.

ARAVIND EYE HOSPITAL, MADURAI
MEDICAL RECORDS DEPARTMENT

Medical Record Request Slip

✓ Tick the appropriate box

I need the following case sheets

☐ To Study ☐ For Research Work ☐ For Referral Letters Reply ☐ To Retain for other examination

Name of the Person Requested _____ Department : _____

Date : _____ Date of Return : _____

S.No.	MRN	Patient Name	Issued	Received
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

✦ Only 15 case sheets at a time

Received by :
MRD Staff :

Requested by :

Note :

- Give the request one day prior to the date you need.
- **Do not keep Medical Records more than 48 hours.**
- If you need case sheets more than 48 hours, for any research work get special permission.
- If you retain case sheets for any purpose, please use this form to inform Medical Records.
- Do not take case sheets out of Aravind Eye Hospital of Laico.

Medical Records request Form

The minimum information to be included are, the patient's name, medical records number, sign of person issuing medical records and the name of the person

requesting with signature.

All routine requisitions for records should be received before 4 p.m. every day. The exact time set for the deadline is dependent on (1) the volume of requests received daily and (2) the number of medical records retrievers available to pull requisitioned records.

Usually maximum of 15 medical records may be issued to any doctor requesting for study. This is to minimize the delay in getting back from the concerned doctor the medical records of patients who may visit the hospital for consultation. If too many records are held by a doctor, the visiting patients may have to wait for a long time till their records are got back from the doctor.This will also reduce the work load of the concerned retriever thus, by controlling the huge number of medical records taken out from medical records filing area.

When the medical record is returned back, it is rechecked with the medical records request form and sent for filing. If the medical record is not returned within the established time, a note is sent to the person who has taken the medical records to return that immediately.

Summary

While the methods of numbering medical records and the system of filing have the same objective, that is, that is making available a continuous record of the patient at all times , the centralised unit or serial-unit system automatically attains this objective because all records of a patient are filed together in one folder and in one department. If a centralised unit system is coupled with terminal digit filing in hospitals where the activity of all records is very great, efficient and improved service for the patient, doctors, and other personnel should be the result. Unless the medical record is immediately available when and where needed all the time, labor and expenses in maintaining a medical record department is wasted.

Because the space required for the filing of medical records is growing rapidly, the medical record manager must face the problem of retention of records realistically. Therefore periodical surveys should be made by the departmental head which can greatly assist the administrative personnel responsible for making decisions regarding storage space and retention schedules.

2.5 Storage - Microfilming and Disk Storage

Microfilming and disk storage are two different methods for storing medical records, each with its own set of advantages and disadvantages. While microfilming is a physical, long- term archival method, disk storage (part of Electronic Health Records, or EHRs) offers modern accessibility and efficiency.

Microfilming of Medical Records

Microfilming involves photographing paper documents and storing the reduced images on photographic film (either microfilm rolls or microfiche flat sheets). It is primarily used for archival and long-term preservation of inactive records.

Key Advantages of Microfilming

Longevity (Archival Quality): Microfilm can last for up to 500 years if stored under proper environmental conditions, making it an excellent medium for permanent records.

Space Efficiency: It compresses a large volume of paper records into a minimal physical space.

Security and File Integrity: Once filmed, records cannot be easily altered, removed, or lost individually, providing high file integrity and security against digital threats.

Non-Reliance on Technology: The records are human-eye readable with a simple magnifying glass and light source, meaning they are not dependent on evolving computer hardware or software formats.

Key Disadvantages of Microfilming

Slow Retrieval: Locating and viewing a specific record is a time-consuming, manual process that requires specialized microfilm readers.

Lack of Searchability: Unlike digital files, you cannot search for content within the film (e.g., searching for a diagnosis or medication name).

Creation Cost and Labor: The process of converting paper documents to film is labor-intensive and expensive.

Storage Requirements: To achieve maximum lifespan, the film must be stored in a space with controlled temperature and humidity, preventing deterioration like "vinegar syndrome."

Disk Storage of Medical Records (EHRs)

Disk storage refers to saving medical records digitally on media like Hard Disk Drives (HDDs), Solid State Drives (SSDs), or in the cloud. This forms the backbone of modern Electronic Health Record (EHR) systems.

Key Advantages of Disk Storage

Accessibility and Retrieval: Records can be accessed instantly from multiple locations and devices by authorized personnel. Advanced search capabilities (like keyword and full-text search) allow for rapid retrieval of specific information.

Efficiency and Workflow: EHRs streamline workflows, reduce the time spent on manual filing and retrieval, and allow for real-time sharing of patient information among care providers.

Improved Patient Care: EHRs can include features like drug-interaction alerts, decision support tools, and complete, up-to-date patient histories, leading to safer and more informed clinical decisions.

Scalability: Storage capacity can be easily and quickly scaled up (especially with cloud- based solutions) to accommodate growing data volumes, including high-resolution medical images.

Key Disadvantages of Disk Storage

Initial and Ongoing Costs: High initial cost for software, hardware, implementation, and training, along with ongoing costs for maintenance, software updates, and IT staff.

Security Risks: Digital records are vulnerable to cyberattacks, unauthorized access, data breaches, and ransomware, requiring robust security measures (encryption, firewalls).

Technical Obsolescence: Digital formats and storage media must be continually migrated and updated over time to remain compatible with new hardware and software.

System Downtime: A system failure, power outage, or technical malfunction can render all records temporarily inaccessible.

2.6 Retention of Medical Records:

Objective elements in maintaining medical records:

Every medical record has a unique identifier

Organization identifies those authorized to make entries in MR Every MR is dated and timed.

The author of the entry can be identified.

The contents of medical record are identified and documented.

The record provides an up to date and chronological account of patient care

The medical record contains information regarding reasons for admission, diagnosis, and plan of care

Operative and other procedures are incorporated in MR.

Documented policies and procedures exist for maintaining confidentiality, security and integrity of information.

Privileged health information is used for purposes identified/required by law and not disclosed without patient's authorization.

Documented policies exist for retaining MR, data and information. The retention process provides expected confidentiality.

The destruction of medical records according to laid down procedure.

Documented policies for retention time of records, data and information

Hospital has to define the time frame for retention of records, data, registers (birth register, death register, MLC, admissions etc..) copies of certificate issued, blocks, slides etc.

Retention time should be in consonance with the state, national laws and other regulations.

The retention period can be kept higher than the prescribed time frame but cannot be less than the prescribed time frame.

Guidelines for retention period MCI guidelines:

Every physician shall maintain the medical records pertaining to his / her indoor patients for a period of 3 years from the date of commencement of the treatment in a standard preform laid down.

If any request is made for medical records either by the patients /authorised attendant or legal authorities involved, the same may be duly acknowledged and documents shall be issued within the period of 72 hours.

A Registered medical practitioner shall maintain a Register of Medical Certificates giving full details of certificates issued.

He / She shall not omit to record the signature and/or thumb mark, address and at least one identification mark of the patient on the medical certificates or report.

The OPD records should be retained for a period of two years.

The records that are the subject of medico-legal cases should be maintained until the final disposal of the case even though only a complaint or notice is received.

If a child is delivered/treated in your hospital, then it is essential to maintain his/her records till the time the child reaches 18 years of age.

Section 29 of the PNDT Act, 1994 requires that all the documents be maintained for a period of 2 years or until the disposal of the proceedings.

The PNDT Rules, 1996 requires that when the records are maintained on a computer, a printed copy of the record should be preserved after authentication by the person responsible for such record.

From the law point of view

How long medical Records to be preserved?

CPA demands maintenance of the Medical Records for three years. But they can condone and give extension for delayed filing.

What about legal Validity of medical records?

Medical Records are acceptable as useful evidence by court as per section 379 Indian Evidence Act 1872 amended in 1961 as it is agreed that documentation of facts during the treatment of a patient is genuine and unbiased

Medical Records that are written after the discharge or hours after death do not have any legal value.

Erasing of entries is not permitted and is questionable in court.

In the event of alteration, the entire line or word should be scored and rewritten with date and time.

Electronic records

According to the latest act DISHA Act(Digital Information

Security In Health Care, Act) electronic records are not to be deleted at least for 10-15 years as of now.

It extends to the whole of India except Jammu and Kashmir

When are the medical records asked for in court?

Criminal cases.

Road traffic accident cases.

Labour courts in relation to the Workmen's Compensation Act. Insurance claims to prove the duration of illness and the cause of death. Medical negligence cases.

Documented policies and Procedures to maintain confidentiality, security integrity of records

Limited access to MRD

List of those who can access is available in MRD

Photocopy to patients given within 72 hours after written authorization. Access and editing rights clearly defined for electronic records.

Audit trails should be available in case of E-records.

In e-records copying of patient records can be restricted by authorized staff. Tracer method to track movement of chart in and out of MRD.

Can be handed over to clinical dept on authorization for research purpose. MLC cases are kept blunder lock and key.

MRO is the overall supervisor. Adequate back up for e-records.

Protection from fire, pest, floods, software malfunction.

24 hours access to records by appropriate mechanism ensuring accountability.

Mandatory information to be shared

MLC reporting Death and birth Notifiable diseases

Child, adult or domestic abuse Judicial and administrative proceedings.

The Hospital shall maintain health information and statistics in respect of national programmes, and emergencies/disasters/ epidemics and furnish the same to the district authorities.

2.7 Registers And Indexes:

Indexes and registers (or registries) allow health information to be maintained and retrieved by health care facilities for the purpose of education, planning, and research.

The American Heritage Dictionary of the English Language provides the following definition for an index "an index serves to guide, point out, or otherwise facilitate reference, especially an alphabetized list of names, places, and subjects treated in a print work, giving the page or pages on which the items is mentioned."

The American Heritage Dictionary of the English Language provides the following definition for a register "a formal or official recording of items, names or actions."

Whereas, a registry is an organized system for the collection, storage, retrieval, analysis, and

dissemination of information on individuals who have either a particular disease, a condition that predisposes to the occurrence of a health related event, or prior exposure to substance or circumstances known or suspect to cause adverse health effects.

As we previously noted in a prior unit, indexes, registers, and registries are considered secondary sources of patient information.

We will now discuss a very important index that is used in the health care setting. This index is referred to as the **Master Patient Index**. Rather than saying Master Patient Index, most health care professionals will refer to it as the "MPI." The Master Patient Index is also referred to as the Master Person Index. The MPI is the key to locating patient records.

The MPI is retained permanently and filed alphabetically by the patient's last name. The demographic data that should be included on each patient's MPI include the following: The patient's name (their last name, first name, middle initial)

The patient's address (to include street, city, and zip code) Social Security number

Their date of birth (make sure to use the mm/dd/yyyy format) The medical record number (this is assigned by the facility) The name of the facility and/or provider

The type of care received (such as inpatient, outpatient, emergency, or physician's office)

The main purpose of the MPI is to provide continuity of care. As previously mentioned, it is important to link the patient to their established medical record. The admission specialist needs to make sure to ask the patient if they have previously been seen in the facility. This process prevents the duplication of multiple medical record numbers for one patient. For the facility the MPI provides a customer database.

We will now discuss the disease, procedure, and physician indexes. Patient medical records are the source of data for the **indexes**. Data from the patient medical records abstracted into the computer system. The computer then generates a computerized database which creates the indexes.

The **disease index** is organized according to ICD-9-CM disease codes. **The procedure index** is organized according to ICD-9-CM and/or CPT/HCPCS procedures/services. **The physician index** is organized according to physician number. The physician number is assigned to the physician by the facility. Once a number has been assigned to a physician it is never reassigned to another physician.

The database for all three indexes also collects the following information:

Patient demographic data (age, ethnicity, gender, inpatient admission and discharge dates or outpatient treatment date, and zip code)

Financial data (third-party payer type and total charges)

Medical data (attending physician, consulting physician, surgeon, medical service classification, disease and/or procedure/services code(s), date of surgery, and type of anaesthesia)

If you are an HIT student, this is the information that you will abstract from the patient medical record to generate the indexes that we previously discussed.

Registers and registries contain information about a disease, such as cancer, or an event, such as a birth, and are maintained by individual health care facilities, federal, state government agencies, and private organizations.

Case report forms are submitted by health care facilities and provide reported data to sponsoring agencies, facilities, and organizations.

Common registers that are used in the hospital setting are the admission register, discharge register, and death register. Just as the name implies, these registers list the admissions to the hospital, the discharges from the hospital, and the deaths that occurred while hospitalized.

Registers and registries provide the facility, as well as the providers and public health officials, with information needed to assess and monitor the health given in a particular population.

There are many different types of registers and registries that are maintained in the United States. I am just going to mention a few as the list could go on and on:

Birth Defects Registry Cancer Registry Implant Registry National Exposure Registry Organ Donor Registry United States Eye Injury Registry

2.8 Record Movement Control:

Medical records movement control refers to the policies and procedures established by healthcare organizations to manage the secure and accurate transit of a patient's health information, whether physical (paper charts) or electronic (EHRs), both within and outside the facility.

The primary goals are to:

Maintain Confidentiality and Security: Ensure patient data is protected against unauthorized access, loss, or damage, complying with regulations (like HIPAA).

Ensure Availability and Accuracy: Guarantee that the complete, correct record is available to authorized caregivers when and where it's needed for continuous, high-quality patient care.

Provide an Audit Trail: Create a documented history of who accessed the record, when, and where it was moved.

Controlling Physical Records Movement

Managing the movement of paper medical records, often housed in a Medical Records Department (MRD), requires strict procedural controls:

Check-Out/Check-In System: All records leaving the secure storage area (MRD) must be checked out to a specific person or department (e.g., Ward 4, Radiology). A tracking mechanism, such as a "tracer" card or out-guide left in the file's place, logs the destination, date, time, and authorized requester.

Authorization: Only authorized personnel (e.g., medical care team members) should be allowed to request and receive records.

Timely Return: Procedures mandate a quick turnaround for record use, ensuring they are returned to the MRD promptly after use for filing, quality check, and safekeeping.

Internal Transport: Records must be transported securely, often in sealed, labeled containers or by a dedicated courier/porter service, to prevent loss or viewing by unauthorized persons during transit within the hospital.

External Transfer: For records leaving the facility (e.g., to court, another facility), a formal request, often with patient consent, and secure transfer methods (like registered mail or secure courier) are mandatory.

Controlling Electronic Records (EHR) Movement

In the context of Electronic Health Records (EHRs), "movement control" shifts from tracking a physical location to managing access and data exchange.

Access Control: This is the core control mechanism. Access is managed through unique user IDs, passwords, and multi-factor authentication. Permissions are based on the user's role (e.g., doctor, nurse, billing specialist), limiting what data they can view, modify, or share.

Audit Trails: EHR systems automatically generate a comprehensive audit log that tracks every interaction with the record:

Who viewed it.

When they viewed it.

What specific information was accessed or modified.

From where (e.g., IP address).

Secure Data Exchange: When records are "moved" or shared electronically, it must be done using secure, encrypted methods, often adhering to standards like Health Level Seven (HL7) for information exchange. This includes secure email, encrypted file transfer protocols (SFTP), or specialized Health Information Exchange (HIE) networks.

Transfer Security: Any data transferred off-site (e.g., to a portable device) must be encrypted and minimized to only the necessary data.

Importance of Control

Effective medical records movement control is vital because it directly impacts:

Patient Safety: Ensures clinicians have the most current and accurate patient history to avoid errors like drug-drug interactions or wrong-site surgery.

Legal Compliance: Helps the organization meet legal and regulatory requirements (e.g., HIPAA in the US, GDPR in Europe) by proving that patient data has been handled securely and confidentially.

Continuity of Care: Allows a new provider or facility to pick up a patient's treatment without delay or unnecessary duplication of tests.

LESSON-3
ORGANIZATIONAL ASPECTS OF MEDICAL RECORD DEPARTMENT/SERVICES

3.1 Organisational Policy

Each organisation must have an overall policy statement on how it manages all of its records. This may be a standalone policy or part of the overall suite of IG policies. The policy should include details of how the organisation will use the records it creates. For example, as well as records being used to plan and deliver care, they will also be used for service improvement and research.

This statement must be endorsed by the Operational Management Team, board (or equivalent) and made available to all staff at induction and through regular updates and training. The policy statement should provide a mandate for the performance of all records and information management functions. In particular, it should set out an organisational commitment to create, keep, manage, and dispose of records and document its principal activities in this respect. The policy should also:

* outline the role of records management within the organisation and its relationship to the organisation's overall strategy

* define roles and responsibilities within the organisation in relation to records, including the responsibility of individuals to document their actions and decisions. An example is, who is responsible for the disposal of records

* assign responsibility for the arrangements for records appraisal, selection and transfer for the permanent preservation of records (as required by section 3 (1) of the Public Records Act 1958)

* provide a framework for supporting standards, procedures and guidelines and regulatory requirements (such as CQC and the NHS Digital hosted Data Security and Protection Toolkit)

* indicate the way in which compliance with the policy and its supporting standards, procedures and guidelines will be monitored and maintained

* provide the mandate for final disposal of all information by naming the committee or group that oversees the processes and procedures

* provide instruction on meeting the records management requirements of the FOIA and the UK GDPR

The policy statement should be reviewed at regular intervals (at least once every two years) and if appropriate should be amended to maintain its relevance.

The policy is also an important component of the organisation's information governance arrangements and should be referenced in the organisation's IG policies or framework.

Organisations must also conduct an annual survey to understand the extent of their records management responsibilities and to help inform future work-plans.

It will aid organisations to know:

* what series of records it holds (and potential quantities)

* the format of its records

* the business area that created the record (and potential Information Asset Owner)

* disposal potential for the coming year

Information Asset Management systems may support this process. They can help identify where records are held and whether they are being held under the correct security conditions, and in the case of health and care records, remain confidential. The process can also be used as an opportunity for asset owners to identify how long their records need to be held. The process will identify business critical assets and ensure that there are adequate business continuity measures in place to assure access.

3.2 Functions of Medical Record Department:

The Medical Records Department (MRD) is a vital part of any healthcare facility, with functions that span clinical, administrative, legal, and research domains.

Here are the key functions of the Medical Records Department:

Core Functions: Documentation & Care

Maintenance of Records: Systematic documentation, collection, and storage of all patient medical records (both inpatient and outpatient) to create a complete clinical history.

Facilitating Patient Care: Ensuring that patient records are readily available to attending doctors, nurses, and other healthcare professionals to support informed, continuous, and effective patient care.

Ensuring Completeness and Accuracy: Reviewing records to ensure all required documentation is present, accurate, legible, and complies with hospital standards and regulations.

Retrieval and Accessibility: Organizing records (physical or electronic) for quick and secure retrieval whenever needed for ongoing patient care, audits, or legal purposes.

Administrative & Statistical Functions

Coding and Indexing: Translating diagnoses, procedures, and treatments into standardized codes (like ICD-10) for data analysis, research, and billing purposes.

Statistical Reporting: Generating statistical reports on daily, monthly, and yearly bases (e.g., disease trends, procedure rates, birth/death reports) for hospital management, public health authorities, and planning.

Quality Assurance: Monitoring the quality and content of medical records, which serves as a basis for evaluating the quality of care provided by the hospital and its practitioners.

Forms Management: Designing and managing standardized forms used for documentation across the hospital.

Legal and Regulatory Functions

Medico-Legal Documentation: Maintaining records in a professional and legally compliant manner to protect the legal interests of both the patient and the hospital in case of disputes, claims, or lawsuits.

Confidentiality and Privacy: Strictly maintaining the confidentiality and privacy of all patient health information, adhering to all information release guidelines and ensuring records are kept in a secure environment.

Handling Legal Requests: Processing requests for records from courts of law, police authorities, or insurance companies, and sometimes deputing staff to attend court with the requisite records.

Birth and Death Reporting: Forwarding official birth and death reports to the designated government registrars.

Support Functions

Research and Education: Providing anonymized data or records (as per policy) for medical research, epidemiological studies, and the continuing education of health professionals.

Training: Providing training and orientation to new MRD staff on departmental policies, procedures, coding practices, and confidentiality standards.

3.3 Location, Space, Layout & Equipment Requirements

3.3.1 Location Requirements:

The medical record department is in constant communication with the registration departments of the out-patient and in-patient care units. Every day, many doctors visit the medical records department for completion of medical records or for records reference. The medical records department must be located in an area near the new and review registration counter and admitting and discharge office.

If the medical records department is not staffed 24 hours a day, it should be located within easy walking distance from the admitting or out-patient area to ensure hospital staffs are able to retrieve medical records on an emergency basis. Security surveillance for safeguard of medical records information and equipment when the department is closed should also be considered.

3.3.2 Space requirement

Space allocation should be determined by the departmental services to be provided, the equipment and computer systems to be used and the daily workload to be handled. Although services vary somewhat from hospital to hospital, services and tasks to be considered when allocating space include record filing cabins, coding and indexing desk, medical records sorting and arranging desk, outpatient registration area, and admitting and discharge office.

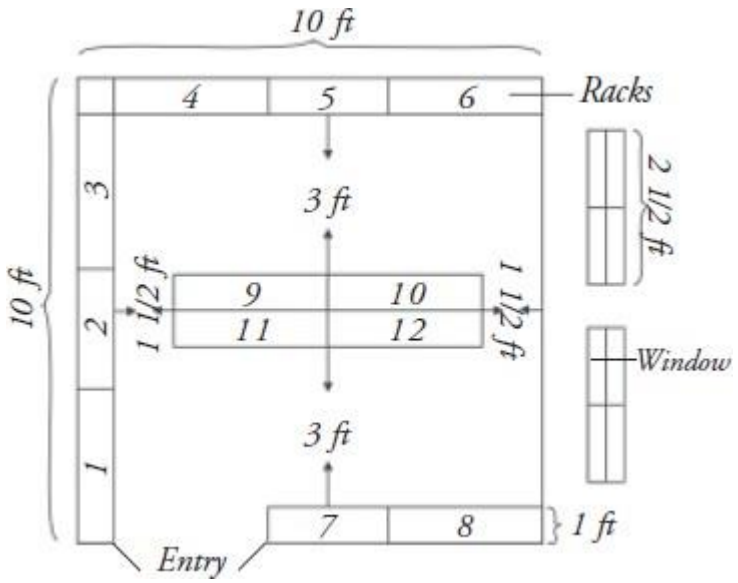
The medical record service requires adequate space, which is generally not available and presents a universal problem. Therefore, the medical records technician should review space requirements frequently to overcome the highly common filing problems in medical records department.

The medical records technician should anticipate in advance the growth of MRD and make arrangements for the future requirements and to procure the required space.

3.3.3 Departmental layout

Departmental layout: Proper layout of the medical record department adds to its efficiency and attractiveness. The key consideration in layout is workflow i.e.: the flow of record from desk to desk. Desks should be arranged so that, as far as possible, records move in straight lines and only a short distance at a time.

Departmental colouring: The proper use of colour is another important consideration in office design. Effective use of colour not only gives a good and bright appearance of an office, but also improves working conditions. Psychologically colour can affect human emotions, senses, and thought processes, as well as individual's ability to relax. White colour will have a favourable psychological effect; others a negative effect. White colour gives a lift; others can either hasten or depress mental action.



Departmental lighting: Lighting is another environmental factor, which cannot be over looked. Light sources on the ceiling can usually provide enough light for the entire office area at a prescribed level of illumination.

3.3.4 Equipment requirement

Open-shelf filing units are the most commonly used storage system for medical records. They are less expensive. Medical records assistant can file or retrieve records faster. Most importantly open shelves are space savers, accommodates more records in a given floor area. Open-shelf filing equipment may consists of 7 or 10 shelves with a height of 9 to 10 ½ feet

depending upon the NO. of shelves. 7 open shelves having 3 feet long and 1 feet width each with dividers can house an average of 750 outpatient records in one compartment, thus housing 5250 records in a single open-shelf filing unit. If a unit-numbering system is used, adequate shelf space must be provided for growth of records as a result of readmission and repeat clinic visits.

A review of records from the past several years is the best source of information for working estimates of the amount of space required. One approach is to tabulate the average number of sheets per medical record of repeat clinic visit and discharged patient over two or three months. This can be achieved by counting the sheets per current episode of care and the sheets for previous episodes of inpatient or outpatient care. This tabulation indicates the size of an average medical record for the hospital.

3.4 Designing and controlling forms in the Medical Record Department (MRD)

It is crucial for ensuring accurate, complete, and efficient documentation of patient care. This involves systematic design principles and a comprehensive control process.

Forms Designing in MRD

The design of medical record forms aims to standardize information, reduce writing time, and prevent errors. The following principles guide effective forms design:

Key Principles of Design

Determine Purpose and Necessity: Before creating a new form, clearly establish its purpose and ensure it's truly necessary to avoid redundant or unnecessary documentation.

Simplicity and Standardization:

Keep forms simple, clear, and concise.

Use uniform paper size (e.g., standard 8.5" x 11") and a uniform binding margin (e.g., 20mm on the left) for ease of handling, filing, and retrieval.

Maintain consistency in the placement of key identification information (e.g., patient name, ID number).

Usability and Layout:

Spacing: Assign line spaces appropriately for whether the form will be handwritten, typewritten, or both.

Binding: Ensure information printed on both sides is correctly positioned for proper assembly based on the binding method (top or side).

lor-Coding: Use color-coded borders (instead of colored paper, which can create reproduction issues) for quick identification of different form types.

Quality and Durability:

Use good quality paper with appropriate weight, especially if printing on both sides, to prevent ink show-through.

Specify a print color (usually black) that is readily reproducible when scanned or copied.

Types of Forms

Forms in the Medical Record Department are generally classified into different categories, though the most common documents in a patient's chart include:

Administrative/Identification: Admission/Registration forms, Consent Forms, Patient Information Forms.

Clinical Documentation:

History & Physical Examination: Medical History forms, Physical Exam forms.

Treatment & Care: Physician Order Sheets, Medication Administration Records, Progress Notes (e.g., SOAP notes), Operative Reports, Anesthesia Records.

Diagnostic & Results: Laboratory Results, Radiology/Imaging Reports.

Summary & Discharge: Discharge Summary Forms.

Specialized Forms: Flow Sheets/Graphic Records (for tracking vital signs), Nursing Notes.

Forms Control in MRD

Forms control is the systematic process of managing all aspects of the forms used in a healthcare facility, from creation and revision to storage and destruction. Its purpose is to ensure all forms are effective, efficient, compliant, and cost-effective.

The Forms Control Process

Request and Justification: A department or individual identifies a need for a new

form or the revision of an existing one. A request is submitted with a clear justification of its purpose and the information it will contain.

Review and Approval (Forms Committee): A Medical Record Forms Committee (or similar body) oversees the process. Its functions include:

Reviewing the form's necessity, purpose, and content.

Checking for redundancy and promoting standardization (avoiding multiple similar forms). Ensuring compliance with hospital policies, standards, and legal/regulatory requirements. **Optimizing usability and operational workflow.**

Design and Specification: The form is designed according to the established principles (paper size, margin, layout, quality). Specifications for printing are finalized.

Trial Use: A small supply of the new form may be prepared for a trial period in a specific department to test its practicality and effectiveness before mass production.

Introduction and Inventory Control: Once approved, the form is introduced. Strict inventory control is necessary to manage stock, ensuring adequate supply without excessive obsolescence. Each form should be assigned a unique identifying number (and revision date) for tracking.

Periodic Review and Revision: Forms must be reviewed periodically to keep pace with clinical, legal, and operational changes. Outdated forms must be systematically removed from stock and destroyed to prevent their use.

Destruction of Obsolete Forms: Discontinued or superseded forms are removed from all supply areas and destroyed to ensure only the most current version is used for documentation.

By implementing strong design and control processes, the Medical Record Department ensures the integrity, accessibility, and utility of the patient health record.

3.5 Processing Of Records And Their Flow

Steps in Initiating Records: Flow chart showing development and movement of medical records upon the admission of a patient is given in Fig below

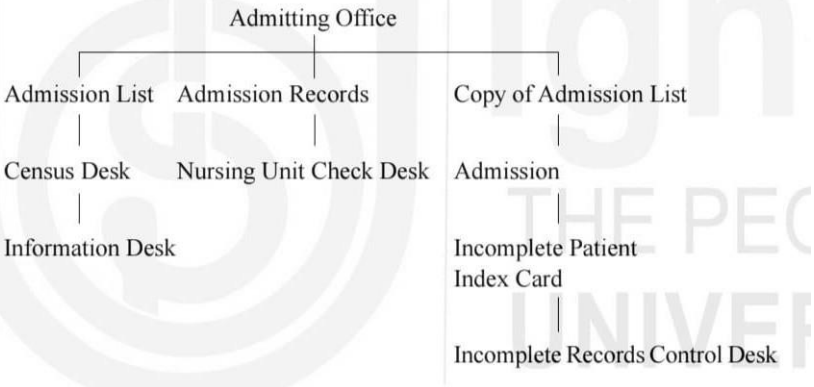


Fig. 14.1: Flow Chart Showing Development and Movement of Medical Records upon the Admission of a Patient.

Whenever a patient present for admission the steps involved are:

- Initiate Inpatients Records: The admitting office keeps assembled set of blank clinical record forms which are initiated whenever the admission of a patient takes place.

- Fill in a Patient Index Card: Usually a 3" x 5" card with patients identifying data such as name of the patient, address, date of birth, sex, name of father and so on is filled at the time of admission of the patient. This card is retained in a file in alphabetical order to give information regarding patient.

- Inscribe in an Admission Register: The identification data of a patient with date of admission as and when admitted.

- Identifying Number: Each patient is given a unique identifying number, which is recorded in all the documents. Unit or serial system is followed in assigning the number. Under the unit system the patient on his first admission receives a number which is the identification of all the documents pertaining to him in all subsequent visits/admissions. All documents are filed in the same folder. This system is suitable for hospital serving a population of defined catchment area and ordinarily gives repeated care to the patient over a long period. Under the serial system the patient receives a new serial number on each admission and records for each admission are filed separately or brought forward and filed together in the folder of the most recent admission. Most hospitals begin a new series of numbers at the beginning of each fiscal year with the admission number followed by the year such as 1973-99.

- Medical records so initiated on admission containing patient's admission number and identification data are sent to the ward with the patient.

- The important actions taken by various functionaries at the admitting office are summarized below: (a) Admitting Office

- Initiates patient's hospitalization record

- Assigns admission number

- Prepares Admission record: (i) Admission number (ii) Identifying Data (iii) Signature of authorization
- Sends patient to nursing unit
- Sends admission record to nursing unit
- Sends copy of admission record to admission check desk (b) Admission Check Desk
- Receives admission advice from Admitting office
- Checks patient index for previous admissions
- Enters this admission on patient index card of previous admissions
- If no previous admission, make new patient index card
- Sends index card to incomplete record control desk
- Sends records of previous admission to nursing unit
- Prepares record folder with admission record and name and sends it to complete records control desk
- Makes entries to register. (c) Census Desk
- Prepares admission list from admitting office
- Collects discharge patient records from nursing units daily
- Prepares discharge list
- Prepares census reports Medical Records at the Inpatient Unit: The patient documents in the ward are filled in by the attending doctors, residents and interns for history, physical examination, orders for diet, treatment, operation procedures and progress notes. Nurses fill in the charts for temperature pulse and respiration. Medical Records Upon Discharge: The attending doctor completes all the entries in the clinical case documents including preparation of discharge summary and discharge slip. Case documents are submitted to the medical record department. The movement of medical records and action taken upon discharge are depicted in Fig

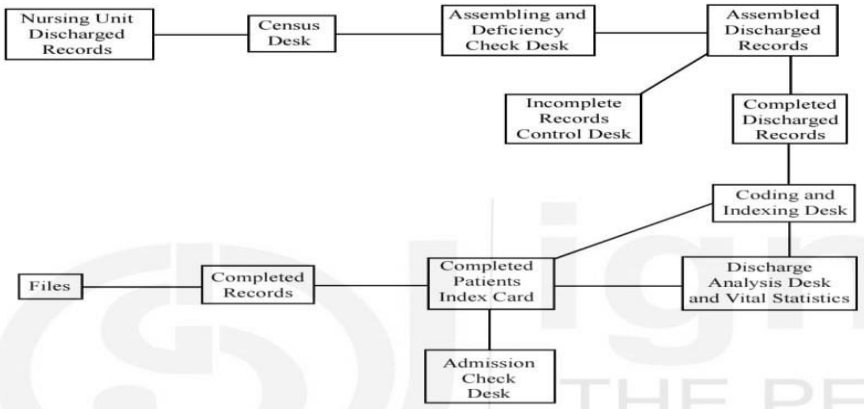


Fig. 14.2: The Chart Showing the Movement of Medical Records upon Discharge of a Patient

At the medical record office action taken by the various functionaries is summarized below:

(a) Assembling and deficiency check desk:

- Receives discharge patients record from census desk
- Assembles records in standard order and staple binds
- Checks deficient entries on record
- Sends records to incomplete control desk

(b) Incomplete Records Control Desk:

- Receives discharge record from assembling desk
- Receives index card from admission check desk
- Maintains "In hospital" file of index cards of patients not discharged
- Maintains gone "home file" of index cards of patients discharged but whose records are incomplete
- Sends reminders to doctors of incomplete records
- Completes patient index card for discharge patients whose records are complete 41 Support and Utility Services-I
- Sends index card to admission check desk for filling
- Sends records to discharge analysis desk.
- Vital statistics desk
- Collects birth reports, enters data into the birth register and submits reports to

municipal authorities

- Collects death report, enters data into death register and submits report to the municipal authorities
- Collects infectious disease reports enters data into the register (If maintained) and submits reports to the municipal authorities
- Discharge analysis and administrative statistics desk
- Receives records from incomplete records desk
- Enters discharge date in register
- Analyzes and develops statistics and daily, monthly or annual reports for the entire hospital, each service, each doctor, as required, on such items as: (i) Admissions (ii) Discharge (iii) Births (iv) Deaths (v) Rates (vi) Gross results (vii) Hospital days (viii) Length of stay (ix) Occupancy (x) Patient by age, sex, religion and geographic distribution (xi) Operations (xii) Autopsies (xiii)Consultants (xiv) Occupations (xv) Others (e) Coding and indexing desk
- Receives records from discharge analysis desk
- Codes diagnosis and operation on medical records, using International Classification of Disease and Operations
- Enters data into 5x8 inch diagnostic and operation index cards
- Prepares medical statistics (f) Completed records control desk
- Receives records from coding desk
- Checks for full processing 42
- Places records in folder and stores vertically in permanent file shelves for quick and easy accessibility
- Make available records on readmission of patient and for research and group studies
- Maintains records of withdrawn medical records, sends reminders for return

3.6 Centralized Admitting Services

Centralized admitting services in a medical record department (MRD) involve the administrative processes of patient registration, admission, transfer, and discharge, all handled through a single, unified system, often located near the hospital's entrance. The department is responsible for collecting patient data, maintaining bed occupancy records, and coordinating with other hospital services for pre-admission testing. Modern versions of this system are often part of a Centralized Electronic Medical Record System (CEMRS).

Key functions

Registration: Registering new patients and updating existing patient information, including name, address, and contact details.

Admission: Processing the admission of patients, which involves creating and filing their medical records and assigning a unique medical record number.

Data collection: Collecting and verifying all necessary patient data, including insurance and billing information, and obtaining consent forms.

Coordination: Coordinating with other departments for any required pre-admission tests and appointments.

Record maintenance: Maintaining accurate, up-to-date records and ensuring they are securely stored and retrievable for authorized personnel.

Discharge and transfer: Processing the discharge and transfer of patients, ensuring all necessary documentation is complete.

Bed management: Maintaining records of bed occupancy and availability throughout the hospital.

Benefits of a centralized system

Improved efficiency: A single point of entry reduces confusion and streamlines the admission process for both patients and staff.

Enhanced data accuracy: Centralizing data reduces the risk of errors and ensures a more complete and accurate patient history.

Better care coordination: It facilitates better communication and coordination between different departments involved in a patient's care.

Reduced duplication: By having a single, comprehensive record, it helps avoid duplicate tests and procedures.

Increased security: Centralized management of records makes it easier to implement and enforce security protocols.

Improved analytics: It provides a foundation for generating data for healthcare statistics, research, and quality improvement initiatives.

Identification data in a medical records department is collected through **manual data entry** from paper forms, **direct electronic data entry** into an Electronic Health Record

(EHR) system, and **automated data extraction** from patient-facing systems. Other methods include collecting information via **surveys**, **patient self-reporting**, and from **administrative sources** such as registration and billing systems.

3.7 Data Collection Methods

- **Electronic Health Records (EHRs):** The primary method in modern departments is through direct entry into EHRs, which provides a centralized and standardized way to store patient information, notes, and other medical data.

- **Paper forms:** For patients without electronic records, or for specific data points not captured digitally, manual entry from paper-based forms into an electronic database is used.

- **Surveys and patient-reported data:** Information on patient demographics, history, and lifestyle is often collected via questionnaires, which can be administered in person, by phone, or online.

    - **Administrative data:** Data is also collected from administrative and operational activities, such as patient registration and billing systems.

    - **Automated data extraction:** In some cases, data can be automatically extracted from other systems or digital sources, like pharmacy records, to populate the medical record.

    - **Proxy/Informant data:** When a patient cannot provide their own information, data can be collected from a proxy respondent, such as a family member.

    - **Review of records:** Experienced personnel can collect historical data by reviewing existing records, including past admissions, lab reports, and physician notes, which is often done for research or quality improvement purposes.

    Data input and management

    - **Manual entry:** Data from paper forms is manually entered into a database, which can be a source of human error.

    - **Direct electronic entry:** Data is entered directly into the EHR by healthcare staff, which is more efficient and less prone to input errors.

- **Case Report Forms (CRFs):** These are structured paper or electronic forms that ensure data is collected consistently for specific studies or purposes, helping to minimize bias and maintain confidentiality.

3.8 Types of Central Admitting Services

Central admitting services in a healthcare setting primarily manage the intake process for patients and can be categorized based on the *type* of admission (how urgent or planned the admission is) and the *patient status* (inpatient or outpatient).

The primary types of central admitting services can be broken down as follows:

By Type of Admission

These categories relate to the urgency and planning involved in the patient's arrival:

- **Elective/Routine Admission:** This involves planned admissions for investigations, treatments, or surgeries that are not immediately life-threatening. The admission can be scheduled in advance, allowing for pre-registration and preparation (e.g., a patient with diabetes needing a planned workup or an appendectomy).
- **Emergency Admission:** This type covers sudden and unexpected medical situations where immediate care is required. Patients are admitted through the emergency department when they are in a critical state and need urgent intervention.
- **Outpatient Requiring Immediate Admission:** This occurs when a patient presents for a scheduled outpatient visit (e.g., a clinic appointment or diagnostic test) and their condition is deemed severe enough by the physician to require immediate inpatient care.
- **Transfer:** This service manages patients being moved from one facility to another, or from one unit within the hospital to another, often requiring bed management and record transfer.

By Patient Status

Central admitting also manages different patient types based on their length of stay and care requirements:

- **Inpatient Admission:** Services for patients who require an overnight or extended stay in the hospital for ongoing medical care, surgery, or monitoring.
- **Outpatient/Ambulatory Services:** While not always "admitting" in the traditional sense, central services manage the registration and intake for outpatients receiving chemotherapy, diagnostic testing, or day surgery who do not stay overnight.

Specialized Admissions (e.g., Psychiatric)

Some specific departments have specialized admission processes due to legal and consent requirements:

- **Voluntary Admission:** A patient willingly consents to be admitted for treatment.
- **Involuntary/Compulsory Admission:** A patient is admitted against their will, usually because they pose a danger to themselves or others, and a legal order (e.g., court order or medical board certification) permits the admission and treatment.

The central admitting department is essential for coordinating patient flow, assigning beds based on medical need and insurance coverage, and ensuring all patient records are initiated correctly from the initial registration.

LESSON-4
MEDICAL RECORD DEPARTMENT MANAGEMENT

4.1 The core functions for managing personnel within a Medical Records Department (MRD) fall under the established principles of the management

process: **Planning**, **Organizing**, **Directing**, and **Controlling**. Here is how these functions apply specifically to an MRD setting:

4.1.1 Planning

Planning involves defining goals, setting strategies, and outlining the tasks necessary to manage information securely and efficiently.

- **Workforce Planning:** Determining the necessary number and types of staff (e.g., coders, data analysts, transcriptionists, release of information specialists) needed to meet the department's workload and regulatory requirements.
- **Job Design and Analysis:** Creating clear job descriptions with defined responsibilities, qualifications, and reporting structures for each role.
- **Policy Development:** Establishing standard operating procedures (SOPs) for health information management (HIM) practices, ensuring compliance with regulations like HIPAA, and defining policies for data integrity and privacy.
- **Strategic Alignment:** Ensuring departmental goals (e.g., achieving a specific coding accuracy rate, digitizing records by a target date) support the hospital's overall mission.

4.1.2 Organizing

Organizing involves structuring the department's resources and personnel to effectively execute the plans.

- **Departmental Structure:** Establishing an organizational chart that clearly defines chains of command and communication channels.
- **Delegation of Authority:** Assigning specific tasks and the necessary authority to managers and supervisors (e.g., delegating release-of-information authorization to the HIM director).
- **Resource Allocation:** Ensuring staff have the necessary tools, such as the correct software systems (EHR, coding platforms), secure workspaces, and current coding manuals.
- **Team Formation:** Creating specialized teams for specific functions (e.g., a coding team, a scanning team, a data quality team).

4.1.3 Directing (Leading)

Directing involves motivating, leading, and guiding staff to achieve the departmental goals.

4.1.4 Leadership and Supervision: Providing day-to-day guidance, support, and oversight to ensure tasks are completed correctly and on time.

4.1.5 Communication: Clearly communicating changes in regulations, new procedures, and departmental goals to all staff.

4.1.6 Motivation and Engagement: Implementing strategies to keep staff motivated, recognizing high performance, and fostering a positive work environment.

4.1.7 Training and Development: Ensuring staff receive ongoing training to stay current with evolving coding classifications (like ICD-10/11) and health IT advancements.

4.1.8 Controlling

Controlling involves monitoring performance, comparing results against established standards, and taking corrective action as needed.

- **Performance Monitoring:** Tracking key performance indicators (KPIs) such as coding accuracy rates, days to bill, turnaround time for release of information requests, and incomplete chart numbers.
- **Quality Assurance (QA):** Regularly auditing medical records and processes to ensure compliance with legal standards and internal policies.
- **Corrective Action:** Addressing performance gaps, implementing retraining programs for staff who consistently fall below quality benchmarks, or revising inefficient procedures.
- **Feedback Loops:** Utilizing data gathered during monitoring to inform future planning cycles, creating a continuous improvement process.

4.2 Principal Responsibilities and Duties of a Medical Records Manager

Safeguarding and managing sensitive documents is a priority in every hospital and clinic. This is where a Medical Records Manager comes into play. They manage all the medical record files as well as reports related to patients' health data within the healthcare institution. Their role ensures data is accessible, which supports accurate patient care by doctors and nurses. In this article, we will discuss the daily activities of a Medical Records Manager and highlight why their role has a significant impact in the healthcare sector

Introduction

A medical record manager is a person who is responsible for maintaining of all patient files and health records. They ensure that the information is correct, updated and kept

confidential. They help doctors and nurses find patient details quickly when needed. Without this well- structured role, it would be difficult for the health teams to take things. That's why this role is so important in any healthcare.

4.2.1 Key Duties of a Medical Record Administrator/Director

The position of Medical Records Manager is quite relevant in both hospitals and clinics. They help ensure that records containing sensitive patient health information are monitored systematically for precision and safety. Such works help doctors, nurses, and other health care providers attend to the patients in a more efficient manner.

1. Organizing Patient Records

For each patient, they gather files containing test results, treatment histories, doctor's notes as well as any relevant reports into structured systems.

All files are stored digitally or physically so that retrieval is efficient within the organization when they are needed.

It is ensured that all patients have complete files and documents at hand to provide the best care possible.

2. Maintaining Privacy and Security

A patient's information is sensitive. Medical Records Managers guarantee it is well guarded, ensures confidentiality, and maintains strict access controls.

They follow rules like HIPAA (in some countries) or local privacy laws to safeguard the information.

3. Updating Records Regularly

Every time a patient goes to the hospital, the background info part of their record must be updated with information pertinent to their situation.

The manager does accuracy checks both for missing details and wrong details and corrects them promptly within about one business day.

4. Using Health Information Systems (HIS)

Most hospitals now use computers instead of paper files.

Medical Records Managers use special hospital software to store, track, and manage records. They also help train staff to use the system correctly.

5. Managing Medical Coding and Billing Support

They help make sure that medical codes are used correctly. These codes are used to explain a patient's illness and treatment in numbers.

This helps the billing team charge patients and insurance companies properly.

If there are any coding errors, the manager works with the billing or coding staff to fix them.

6. Preparing Reports for Management

Medical Records Managers create reports for hospital management, showing:

How many patients were treated Types of illnesses or procedures

Staff performance in handling records

These reports help the hospital make better decisions.

7. Ensuring Legal Compliance

Hospitals must follow certain rules when keeping patient records.

The Medical Records Manager checks that the hospital follows all laws and rules related to data storage and record-keeping.

If rules change, they update the system and train staff on the new process.

8. Supervising the Records Team

They often manage a team of records clerks, data entry workers, and file handlers. They assign work, solve problems, and make sure the team is working well.

They also train new staff to handle medical records properly.

9. Helping Doctors and Nurses

When doctors or nurses need a patient's record quickly, the manager helps them find it. They also explain how to access or update files correctly.

If there are any issues with missing or locked records, the manager solves them.

10. Backing Up and Archiving Records

They create digital backups of all patient records so that nothing is lost during a power cut or computer crash.

Old records are stored safely in archives for future use or legal needs.

4.2.2 Core Responsibilities in Day-to-Day Operations

As a Medical Records Manager, assistants collect and maintain structured files with the highest possible levels of order, security, organization, and retrievability. They support other employees with tasks; assist in confidential error checking; uphold confidentiality standards; and data storage compliance procedures. All these activities align towards judiciously managing resources to improve care outcomes.

1. Reviewing and Updating Patient Records

Every day, new patients come in and old patients get updates to their treatment.

The Medical Records Manager checks all files to make sure the latest reports, test results, and doctor notes are added.

If anything is missing or incorrect, they correct it right away.

2. Managing Electronic Health Records (EHR)

Most hospitals now use computers to store patient data.

The manager works with Electronic Health Records (EHR) systems to keep files organized. They make sure all information is entered correctly and saved securely.

3. Ensuring Data Privacy and Safety

Patient records are private and should be protected. The manager controls who can see or update the files.

They also make sure no one without permission can access patient information.

4. Helping Doctors, Nurses, and Staff

If a doctor needs a file or a nurse can't find a report, the manager helps them quickly. They respond to staff requests for files, updates, or patient history.

They also train staff on how to use the record systems properly.

5. Supervising the Records Team

If the hospital has a team of people working with files, the manager leads them. They assign tasks, answer questions, and check that work is done correctly.

They also support new staff by teaching them how to manage records.

6. Handling Record Requests

Patients or outside doctors may ask for medical records.

The manager checks if the request is valid and then provides the correct information. They make sure the process follows hospital rules and privacy laws.

7. Backing Up Files

To prevent data loss, the manager backs up all files regularly. They may store copies on external drives or

secure cloud storage. This protects patient data in case of power cuts or system crashes.

8. Tracking Record Storage and Retrieval

Some records are stored for years, especially those of serious illnesses or surgeries.

The manager keeps a system to track where files are stored and when they can be removed or archived.

This helps avoid confusion and keeps space organized.

9. Checking for Errors

Every day, the manager checks for mistakes in patient files—wrong dates, missing names, or unclear notes.

They fix these errors to keep the records clean and accurate.

10. Reporting to Hospital Management

The manager may share daily or weekly updates with hospital leaders.

These reports show how many records were updated, any issues found, or how well the team is performing.

4.3 Best Document Management Tools for Medical Administration:

In fast-paced clinical environments, documentation errors delay diagnoses, invite audits, and damage patient trust. That's why every healthcare facility—from solo practitioners to enterprise hospitals—needs a robust document management system (DMS) tailored to medical workflows. These systems streamline everything from intake forms to diagnostic reports, minimizing compliance risk and accelerating access to care-critical information.

Unlike generic storage tools, medical-grade DMS platforms integrate HIPAA-compliant protocols, real-time access controls, and automated audit tracking—features essential for anyone in a documentation-heavy role. And for those looking to specialize, our Medical Scribe Certification trains students to evaluate, deploy, and manage these tools in live clinical scenarios. This guide breaks down the best options by facility size, compliance strength, and cost-efficiency, so you can choose—and implement—the right system with confidence.

Must-Have Features in Medical Document Management Systems (DMS) HIPAA-compliant storage and access

The foundation of any healthcare DMS is its ability to secure protected health information (PHI) according to HIPAA regulations. This means full encryption, access logs, and two- factor authentication—not optional features, but legal requirements. Systems must offer AES- 256 encryption for data at rest and TLS 1.2+ encryption for data in transit, ensuring end-to- end protection even when users are off-site. Without these, organizations are exposed to serious data breach penalties.

Equally vital is granular access control. A compliant DMS will enforce role-based permissions, allowing only authorized staff—such as providers, scribes, or billing personnel—to access specific documents. Combined with unique logins and real-time session tracking, this limits both internal and external data exposure. These controls are particularly crucial for facilities with rotating staff, temporary workers, or remote teams.

Whether you're documenting SOAP notes, lab requisitions, or billing statements, HIPAA compliance must be non-negotiable at every system layer.

Automated audit trails and timestamps

Every change to a medical document—whether it's a revision, view, deletion, or signature—must be tracked, time-stamped, and logged by user ID. This is not just a best practice; it's required for audit readiness. Audit trails prove to regulators that your workflow maintains integrity, accountability, and version control.

Without automation, teams are forced to manually track changes across spreadsheets or PDFs—leaving room for error, omissions, and policy violations. Modern DMS platforms automate this entire process, providing immutable logs that can be exported instantly during internal reviews, third-party audits, or legal inquiries.

For medical scribes, this functionality is critical. Whether they're working in-person or remotely, they must operate within systems that log every action in real time. That's why our Medical Scribe Certification covers hands-on training with audit-ready platforms, so professionals can support physicians with documentation that stands up to any level of regulatory scrutiny.

Multi-device document access

Clinicians today need document access on desktops, tablets, and mobile devices—often in the same shift. A DMS that doesn't support responsive, secure access across devices instantly fails the modern usability test. But accessibility isn't just about convenience—it impacts care delivery.

Imagine a doctor in surgery needing prior imaging results, or a scribe pulling old visit notes while working from a tablet. A DMS must load intelligently indexed documents within seconds, regardless of screen size or location, without compromising security. Systems should also allow offline access with automatic sync for providers in rural or low- connectivity areas.

More advanced platforms offer biometric login options (e.g., fingerprint or Face ID), plus remote-wipe capabilities in case of lost or stolen devices. This adds a critical layer of control without slowing down clinical workflows.

Scribes trained under our Medical Scribe Certification are taught to vet platforms based on multi-device functionality—ensuring no documentation bottlenecks, even during **EMR** downtime or cross-device transitions.

HIPAA Compliant System Features

Feature	Key Functions	Why It Matters
HIPAA-Compliant Storage & Access	AES-256 encryption (at rest) TLS 1.2+ encryption (in transit) Role-based permissions Two-factor authentication	Prevents PHI exposure, ensures legal compliance, and limits access to authorized users only.
Automated Audit Trails & Timestamps	Logs all views, edits, deletions Timestamps actions by user Immutable exportable logs	Ensures accountability, supports audits, and protects against undocumented changes or data loss.
Multi-Device Document Access	Access on desktop, tablet, and mobile Offline sync capabilities Biometric login and remote wipe	Enables real-time documentation across care settings without compromising security or uptime.

Best Medical DMS Tools by Facility Size Solo Practices

Independent providers often don't need bloated, enterprise software. They need simplicity, speed, and affordable HIPAA-ready storage. Two top contenders dominate this space in 2025:

Google Workspace—when configured for healthcare—offers encrypted Drive storage, detailed access logs, and seamless document sharing. With the addition of a Business Associate Agreement (BAA) and optional HIPAA configuration via admin console, it transforms into a practical, scalable DMS for solo clinicians.

Zoho Health is purpose-built for small providers, offering form creation, secure communications, and custom workflow automation. It's popular among general practitioners and behavioural health professionals due to its plug-and-play compliance features.

Those trained under our Medical Scribe Certification are taught to configure and assess solo-scale systems, ensuring doctors don't overspend on enterprise-grade platforms they won't fully use.

Small to Mid-Clinics

Clinics with 5 to 50 providers face a new layer of complexity—multiple users, departments, and devices. They need tools that allow collaborative access while maintaining strong compliance.

Doxy.me is an ideal match for hybrid clinics offering telehealth. It bundles video consults, file uploads, and secure chat into a single interface, and comes with a default BAA. It's perfect for

fast-growing clinics that value virtual care workflows.

DrChrono combines EHR, billing, and document workflows into one customizable interface. With e-prescribing, lab integration, and note automation, it removes the need for separate DMS platforms in many clinics.

Simple Practice specializes in behavioural health and allied therapy spaces, with robust client portals, forms management, and session notes handling. It's a favourite among clinics seeking both front- and back-office efficiency with minimal setup.

The right DMS choice at this scale depends on whether the clinic prioritizes clinical speed, billing precision, or telehealth reach—all of which are covered in our Medical Scribe Certification to prepare scribes for tech-forward documentation environments.

Large Hospitals

Hospitals demand DMS platforms with deep compliance infrastructure, advanced integrations, and the ability to support hundreds of users across departments. Three leaders consistently rank highest in 2025:

Athenahealth delivers powerful hospital-wide documentation, analytics, and financial tools in one ecosystem. Its DMS component connects directly to patient EHRs, giving providers instant access to records, signatures, and revision logs.

Veeva Vault, known in life sciences, is increasingly adopted by hospitals conducting research or undergoing FDA audits. Its focus on version control, regulatory audits, and clinical trials makes it ideal for high-risk document environments.

Oracle Healthcare provides a backend-first approach, integrating clinical DMS with AI-driven process automation and large-scale data warehousing. It's best suited for systems managing huge patient volumes and requiring dynamic reporting layers.

Scribes working in hospital settings must know how to navigate these tools without causing slowdowns or breaches—skills built step-by-step in our Medical Scribe Certification through mock deployments and admin-side simulations.

Facility Size	Recommended DMS	Key Features	Usage Notes
Solo Practices	Google Workspace (Healthcare-configured)	Secure Drive storage, Access control, Real-time collaboration	Ideal for budget-conscious solo practitioners who need HIPAA tools added via add-ons or BAA configuration.
	Zoho Health	Encrypted storage, Patient communication, Custom workflows	Good entry-level DMS with built-in EHR components and compliance automation.
	Doxy.me	Telehealth + secure docs, BAA included, Easy integration	Best for hybrid clinics with virtual care needs and simple document workflows.
			Combines practice management

Small to Mid Clinics	DrChrono	Customizable templates, eRx, Lab result handling	with document automation features.
	SimplePractice	Forms management, HIPAA-compliant portal, Audit logs	Great for behavioural health and allied professionals with modest admin needs.
Large Hospitals	Athenahealth	Enterprise-grade DMS, EHR integration, Analytics	Ideal for hospitals needing scalability, performance insights, and unified billing.
	Veeva Vault	Regulatory document handling, Audit readiness, Cloud-native	Commonly used in clinical trials and research hospital settings.
	Oracle Healthcare DMS	Data warehouse integration, AI workflows, Robust compliance	Best suited for large systems needing powerful backend infrastructure and regulatory depth.

LESSON-5
MEDICO-LEGAL ASPECTS OF THE MEDICAL RECORDS

5.1 The Hippocratic Oath is a historical ethical code for medical practitioners, emphasizing principles like prioritizing patient well-being, respecting confidentiality, and avoiding harm. While modern versions have been updated for secular contexts and to reflect contemporary patient rights, the oath's core tenets of service, integrity, and patient welfare remain central to medical ethics today.

5.1.1 Core principles in medical ethics

- **Prioritizing patient care:**

The oath commits physicians to dedicating their lives to the service of humanity and ensuring the patient's health and well-being are the first consideration.

- **“Do no harm” principle:**

Though not literally in the ancient text, the principle of "first, do no harm" is a central tenet of the oath and modern medical ethics.

- **Patient confidentiality:**

Physicians pledge to keep a patient's secrets, even after death, and to practice with conscience and dignity.

- **Professional integrity:**

The oath includes a commitment to uphold the honor and noble traditions of the medical profession, share knowledge for the benefit of patients, and not be swayed by factors like age, disease, creed, or social standing.

- **Respect for life:**

The oath emphasizes the utmost respect for human life and the dignity of each patient.

Modern relevance and evolution

- **Updated versions:**

The original oath, dating back to the 5th century BC, has been revised over time. The 1964 version by Louis Lasagna is a widely adopted, more secular version for modern medical practitioners.

- **Secular adaptation:**

Modern versions often remove references to ancient deities and religious obligations, focusing on a secular commitment to service and human well-being.

- **Evolving principles:**

Contemporary ethics also place greater emphasis on patient autonomy and the right to be

informed, which was a significant shift from the more paternalistic medical practices of the past, states Britannica.

- **Continued significance:**

Despite its age, the oath is still seen as a foundational moral code and an expression of the ideals and values that guide physicians in their practice, says the National Institutes of Health.

5.1.2 Code of Ethics for Medical Record Professionals:

A code of ethics for medical record professionals, as guided by organizations like the Health Information and Management Association of Australia (HIMAA) and the International Medical Informatics Association (IMIA), includes principles like maintaining patient confidentiality, ensuring the accuracy and integrity of health information, and protecting patient data from unauthorized access. They must also respect patient autonomy, act with honesty and integrity, avoid conflicts of interest, and uphold the standards of the profession.

Core ethical principles

- **Patient Confidentiality and Privacy:** Protect and secure patient health information (PHI) to ensure it is not disclosed improperly.
- **Integrity and Accuracy:** Ensure all health information is acquired, recorded, stored, maintained, and transmitted in a reliable, secure, and accurate manner.
- **Honesty and Integrity:** Act with honesty, integrity, and diligence in all professional activities.
- **Patient Autonomy:** Respect the rights and dignity of each patient, including their right to informed consent and to make decisions about their care.
- **Professional Competence:** Recognize the limits of one's own competence, consult with other professionals when necessary, and maintain and improve professional skills.
- **Conflict of Interest:** Avoid conflicts of interest and always prioritize the patient's well-being.
- **Professional Conduct:** Uphold the reputation of the profession and refrain from unprofessional conduct, while also reporting any misconduct by colleagues to the appropriate authorities.
- **Respect for Others:** Treat all colleagues, patients, and other healthcare professionals with respect.

Practical application

5.2 Data Security: Implement appropriate security measures to protect electronic health records and other patient data.

5.3 Documentation: Ensure all medical records are complete, accurate, and timely. This includes patient demographics, clinical notes, diagnoses, and treatment plans.

5.4 Consent: Obtain informed consent for any procedures or release of information, and ensure the patient understands what they are consenting to.

5.5 Disclosure: Only disclose PHI when legally and ethically required, or when it is in the patient's best interest to do so and consent has been given.

- **Reporting:** Report any breaches of confidentiality, suspected fraud, or unethical or incompetent behaviour by other professionals to the proper authorities.

5.6 Ownership of Medical Record Privileged

Doctors and hospitals as providers of services and patients as recipients of services. The three of them form a medical and a legal relationship. The legal relationship between the doctor and the patient mutually agrees to bind in the execution of the treatment so that an agreement (verbintenis) is formed. The basis of the doctor-patient relationship is called a therapeutic agreement/contract (Chandrawila, 2021).

Transaction means agreement or agreement, namely a reciprocal relationship between two parties who agree on one thing. Therapeutic is a translation of therapeutic that means in the field of treatment (Yudaningsih, 2015). A therapeutic transaction is a transaction to determine or seek the most appropriate therapy for a patient by a doctor (Guwandi, 2004)

Medical procedures performed by physicians on patients in hospitals are in the form of medical treatment contracts between the patient and the hospital (Hatta et al., 2024). A contractual relationship that occurs legally will give rise to rights and obligations. This relationship can form an agreement or agreement, that is, the hospital as the party providing medical services and the patient as the party receiving medical services (Lesmonojati, 2020a).

The rights and obligations of hospitals are regulated in Articles 189 and 191. Furthermore, the rights and obligations of patients are regulated in Articles 276 and 277 of Law Number 17 of 2023 concerning Health. In Article 189 paragraph (1) letter h of Law Number 17 of 2023 concerning Health, one of the obligations of hospitals is to maintain medical records. Medical records are records during hospital treatment for patients. Medical records contain data on health history and health professional records in the form of physical findings, results of diagnostic and therapeutic procedures, and patient responses (Prasasti & Santoso, 2017).

Referring to the provisions of Article 296 of Law Number 17 of 2023 concerning Health, it is explained that every medical worker and health worker are obliged to make a medical record and complete it after the patient has finished receiving health services. These medical records must be kept confidential by medical personnel, health workers, and leaders of health service

facilities. The prohibition on disclosing patient secrets by doctors, in principle, prohibits doctors from disclosing their patients' secrets, which the patient has disclosed to the doctor (Notoatmodjo, 2010).

The obligation to keep medical secrets has been a moral obligation held firmly by physicians since the time of Hippocrates. Hippocrates formulated an oath that must be fulfilled by his students regarding the secret of a doctor's work saying: "Whatever I hear or see, about someone's life that is not worth spreading widely, I will not reveal, because I must keep it a secret." However, in the development of medical science and technology, there have been exceptions to disclosing doctors' positions and work, to maintain the public interest and prevent things that could harm other people (Hanafilah, 1999).

Article 783 of Government Regulation Number 28 of 2024 concerning Implementing Regulations of Law Number 17 of 2023 concerning Health, explains that the disclosure of the contents of medical records can be done: a) with the patient's consent; and b) not with the patient's consent. The opening of the contents of medical records with the patient's consent is carried out for a) maintaining the patient's health, treatment, and care; b) the patient's request; and/or c) administration, insurance payments, or health financing guarantees. Disclosure of the contents of medical records without the patient's consent is carried out for a) fulfilling requests from law enforcement officials in the context of law enforcement; b) handling outbreaks, epidemics, or disasters; c) Limited education and research; d) efforts to protect against dangers to the health of other people individually or in society; e) other interests regulated in statutory regulations.

According to Yusuf Hanifah as quoted by Poppy Hidayani in general medical records are useful for 1) As a communication tool between doctors and health workers (Hidayani, 2023);

2) Is the basis for planning the treatment/care that must be given to the patient; 3) As written evidence of service and treatment for patients; 4) As an analytical basis for service quality evaluation studies. towards patients; 5) Protecting the legal interests of patients, hospitals and doctors, and other health workers; 6) Providing special data that is very useful for research purposes; 7) As a basis for calculating patient medical service costs; 8) Become a source of memory and accountability (Abduh, 2021).

The determination of the ownership of medical records is contained in Article 297 (1) of Law Number 17 of 2023 concerning Health, explaining that medical record documents belong to health service facilities. Strengthening that medical record documents belong to health service facilities can also be found in Article 784 paragraph (1) of Government Regulation Number 28 of 2024 concerning Implementing Regulations of Law Number 17 of 2017 concerning Health.

Article 297 paragraph (2) of Law Number 17 of 2023 concerning Health states that every patient has the right to access the information contained in medical record documents. In the

explanation of Article 297 paragraph (2) of Law Number 17 of 2023 concerning Health, it is explained that: "Access to information on medical record documents, including in the form of medical records or verbal explanations from medical personnel and/or health workers or health service facilities". Furthermore, Article 737 paragraph (6) of Government Regulation Number 28 of 2024 concerning Implementing Regulations of Law Number 17 of 2017 concerning Health, explains that gaining access to the information contained in medical records is carried out by the provisions of statutory regulations. Medical records are one of the sub-systems of the hospital information system. The role of medical records is very important and closely related to medical and health service activities (Hapsari, 2019). The medical record recording system can be manual or electronic (digital).