MEDICAL RECORD - KEEPING STANDARDS IN HOSPITAL: RETENTION & DESTRUCTION

Dissertation report submitted in partial fulfillment of the requirements for the award of post graduate diploma

Submitted By

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POST GRADUATE DIPLOMA IN HOSPITAL & HEALTH MANAGEMENT: 2015-17

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ABSTRACT OF THE DISSERTATION

1. NAME OF THE CANDIDATE	**: COLONEL AMIT CHATTERJEE**
2. NAME OF THE INSTITUTION	**: INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, DWARKA, NEW DELHI**
3. MANAGEMENT COURSE	**: POST GRADUATION DIPLOMA IN HOSPITAL & HEALTH MANAGEMENT**
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7. APPROVED / NOT APPROVED	**APPROVED / NOT APPROVED**

Signature of CMO (In-charge)

Cantonment General Hospital

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Signature of the Mentor

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8. ABSTRACT OF THE INTENDED WORK:

INTRODUCTION

a. Physicians are required to create a complete and legible record of the medical care they provide to their patients. Whether in paper or electronic format the medical record must contain comprehensive documentation of the clinical care provided to the patient, including:

- Documentation of patient history, complaints and symptoms, examinations, and laboratory and imaging reports.
- Copies of emails or other communication with the patient, related to clinical care and follow-up, including documentation of telephone consultations or prescriptions.
- Copies of operative procedures, consultation reports, discharge summaries and other information created by other physicians or health-care practitioners which is relevant to the patient's medical care.

b. The medical record is the most important practice tool used by physicians, regardless of specialty, because it supports and enhances the care that our patients receive. It is also a legal document that details the care you provide to your patients, and acts as a record of your billing practices. In the event of a random or specifically indicated review of a physician's medical or billing practice, the medical record will come under scrutiny.

c. Medical Record Documentation Standards and Performance Measures can be as follows:-

STANDARD	PERFORMANCE MEASURES
MEDICAL RECORD	
1. Elements in the medical record are organized in a consistent manner.	• Medical record is clearly organized. • Records are organized in chronological order. • Medical record does not contain information for other patients. Exception: Family members in one record must be clearly separated.
2. Medical Records are maintained and stored in a manner which protects the safety of the records and the confidentiality of the information.	• All medical records are stored out of reach and view of unauthorized persons. • Staff receive periodic training in member information and confidentiality. • All practitioners with electronic medical records will maintain or have access to compatible electronic hardware and software that will enable the generation of a legible copy of the record in order to comply with patient and governmental access needs, and prepare and maintain a current back-up copy of electronic medical record files. • Upon meeting minimum record retention periods as defined by regulations, medical records should be discarded as follows: (1) For paper records, by incineration, shredding, pulping, or other comparable process which renders the records permanently unreadable; (2) For electronic or magnetic media, such as computer disks or magnetic tapes, by completely sanitizing the media, and not just by erasure or deletion; (3) For other media, such as film, photos, or compact discs, by destroying the media with no possibility of recovery; and (4) By complying with the HIPAA security provisions at 45 CFR §164.310(d), as amended.

3. Patient's name or identification number is on each page of record.	• Patient name or an identification number is found on each page in the record.
4. Entries are legible.	• Handwritten entries are legible to a reader other than the author. • Content of records is presented in a standard format that allows a reader, other than the author, to review without the use of separate legend/key.
5. Entries are dated.	• Entries and updates to a record are dated. •Documentation of medical encounters must be in the record within 72 hours or three business days of occurrence.
6. Entries are initialed or signed by author.	• Entries are initialed or signed by the author. Author identification may be a handwritten signature, unique electronic identifier or initials. Applies to practitioners and members of their office staff who contribute to the record. • When initials are used, there is a designation of signature and status maintained in the office.

Fig 1 Performance Measures

d. First and foremost, a comprehensive medical record enhances and supports the patient-centered care the patient receives. More specifically, we must maintain good medical records:

1. to provide an accurate and complete account of the history, examination, investigations, treatment plan and ongoing progress of the patient;
2. to assist colleagues when they are consulted or are assuming care for your patients;
3. to facilitate the preparation of chart summary, insurance and medico-legal reports
4. to defend and protect the best interests of the physician and patient in the event of a review by the NABH or Ministry of Health, and especially in the event of a malpractice action.

e. There are five reasons to keep comprehensive medical records for every patient.

1. As an account of the patient's medical history.
2. As a reference for colleagues.
3. As a reference for official reports.
4. As evidence in a medical record audit.
5. Disciplinary reviews.

f. There are clear guidelines for medical record-keeping. The basics are the same for all physicians, however although the guidelines apply for evaluation to both traditional paper and electronic medical records. The quality of your medical records, as well as the quality of the medical care, are chronicled in the records, will be assessed, rated and the peers will use several assessment tools as the basis for review. The assessor will then summarize the key components of the review of your medical records in one of four levels:

1. Appropriate
2. Appropriate with suggestions
3. Concerns
4. Not applicable

Mandatory remedial work and medical record-keeping upgrade courses may be required if your records do not meet the criteria most of the time.

8.1 NEED FOR THE STUDY

Auditing your own medical records is an excellent self-directed learning and experience, as well as a tool to help you prepare for an assessment. When applying the following Standards - do your medical records meet each criteria or need improvement?

1. Is each individual patient file readily retrievable?

2. Is the patient's name on all components of the file?

3. Is the record readable to any and all reviewers?

4. Are the patient's name, age, sex and address clearly shown on the file?

5. Is the date of each visit recorded?

6. Is a cumulative patient profile (CPP) summary sheet present and maintained?

7. Is there clear documentation of the requested lab and X-ray investigations?

8. Is there a system in place to clearly show that all lab tests come to the attention of the consulting physician?

9. Is the diagnostic impression are documented?

10. Are the treatment plan and follow-up instructions clearly noted?

11. Are medication doses and duration of use noted? Are medication amounts

and number of repeats noted?

12. Is there a clear evidence that the physician does a review of ongoing medication?

13. Do all physicians clearly indicate their entries in the file by signing or

initialling their names?

14. Are hospital discharge summaries retained?

8.2 REVIEW OF LITERATURE

A review of literature is an essential aspect of scientific research. It helps the investigators to establish support for the need for the study, select research design, developing tools and data collection technique. This dissertation reviews literature relevant to the study. The literature encompasses both theoretical and empirical works that bears on the study and the variables are measured.

Physicians are required to keep accurate, comprehensive medical records that will stand alone without their interpretation. In addition to meeting medico-legal requirements, good medical records will assist you and your colleagues in offering comprehensive, effective and efficient care for your patients.

Develop good recordkeeping habits at the outset of your medical career. Responsible, careful physicians can effectively and efficiently maintain excellent medical records, especially with dictation or voice-to-print, to the benefit of themselves and, most important, their patients.

8.3 STATEMENT OF THE PROBLEM

To establish a protocol for standards in Medical Record Keeping and the methods for Retention and Destruction of medical records.

8.4 OBJECTIVES OF THE STUDY

1. To study the current protocol and methods for medical record keeping standards and retention and destruction of old medical records.

2. To perform the standard analysis of the nascent Medical Records Department of

Cantonment General Hospital Delhi Cantt.

3. To identify gaps in the current protocol of record keeping standards and of retention and destruction of files.

4. To make recommendations for developing and improving the record keeping standards as per the NABH guidelines at Cantonment General Hospital Delhi Cantt and best practices being followed.

8.5 MATERIALS AND METHODS Sampling Method.

8.6 SETTING The study will be conducted in Cantonment General Hospital Delhi Cantt.

8.7 SOURCE OF DATA Responses of dependent Patients and Healthcare professionals of Cantonment General Hospital, Delhi Cantt.

8.8 EXPECTED OUTCOME It is expected that Cantonment General Hospital, Delhi Cantt. Being one of the best Cantt hospital located in the district of South West Delhi which is catering to the civil and affiliated villages around the cantonment, therefore best practices are followed. The Doctors, Nurses and Staff employed have adequate knowledge of OPD management.

8.9 DATA ANALYSIS AND INTERPRETATION The researcher will use descriptive and inferential statistics for data analysis and present in the form of charts.

International Institute of Health Management Research New Delhi

The Certificate is awarded to

Colonel Amit Chatterjee

in recognition of having successfully completed his Internship in the department of

Hospital Main Block: Cantonment General Hospital, Delhi Cantt

and has successfully completed his Project on

MEDICAL RECORD - KEEPING STANDARDS IN HOSPITAL: RETENTION & DESTRUCTION

Date: 01MAY 2017

Organisation: ***Cantonment General Hospital, Delhi Cantt***

He comes across as a committed, sincere & diligent person who has a strong drive & zeal for learning. We wish him all the best for future endeavours

Dr Gurdev Singh
Mentor
CMO (In-charge)

International Institute of Health Management Research New Delhi

TO WHOMSOEVER IT MAY CONCERN

This is to certify that ***Colonel Amit Chatterjee*** student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at ***Cantonment General Hospital, Delhi Cantt*** *from* ***01 February 2017*** ***to*** ***30April2017*** **.**

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements. I wish him all success in all his future endeavours.

Dr. A.K. Agarwal
Dean, (Academics and Student Affairs)
IIHMR, New Delhi

Dr. A.K. Agarwal
Mentor
IIHMR, New Delhi

CERTIFICATE OF APPROVAL

The following dissertation titled ***"MEDICAL RECORD - KEEPING STANDARDS IN HOSPITAL: RETENTION & DESTRUCTION"*** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of Post Graduate Diploma in Health and Hospital Management for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for Evaluation of Dissertation.

Name	**Signature**
_____	_____
_____	_____
_____	_____

CERTIFICATE FROM DISSERTATION ADVISORY COMMITTEE

This is to certify that ***Colonel Amit Chatterjee*****,** a graduate student of the Post- Graduate Diploma in Health and Hospital Management has worked under our guidance and supervision. He is submitting this dissertation titled ***"MEDICAL RECORD - KEEPING STANDARDS IN HOSPITAL: RETENTION & DESTRUCTION"*** in partial fulfillment of the requirements for the award of the Post- Graduate Diploma in Health and Hospital Management.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Dr A.K. Agarwal
Institute Mentor
Dean, (Academics and Student Affairs)

Dr Gurdev Singh
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INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled ***"MEDICAL RECORD - KEEPING STANDARDS IN HOSPITAL: RETENTION & DESTRUCTION"*** and submitted by ***Colonel Amit Chatterjee*** Enrollment No. ***PGDHM/15-17/006*** under the supervision of ***Prof. Dr. AK Agarwal, IIHMR, Dwarka, New Delhi*** for award of Post-Graduate Diploma in Hospital and Health Management of the Institute carried out during the period from ***01 February 2017*** **to** ***30April 2017*** **embodies** my original work and has not formed the basis for the award of any degree, diploma associate-ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Col Amit Chatterjee (PG/15-17/006)
On Study Leave (MOD/Indian Army)

FEEDBACK FORM

Name of the Student**:** **Colonel Amit Chatterjee**

Dissertation Organisation**:** **Cantonment General Hospital Delhi Cantt**

Area of Dissertation**:** **"MEDICAL RECORD - KEEPING STANDARDS IN HOSPITAL: RETENTION & DESTRUCTION**

Attendance**:** **As required**

Objectives Achieved**:** **Fully**

Deliverables**:** **100%**

Strengths**:** **Sincere, Scientific and Analytical.**

Suggestions for Improvement**:** **Nil**

Suggestions for Institute (course curriculum, industry interaction, placement, alumni)**: Nil**

Dr Gurdev Singh
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I am thankful to the CEO Delhi Cantonment Board and management of Cantonment General Hospital at Delhi Cantt, New Delhi for providing me the opportunity to carry out my dissertation from their institution.

I am deeply indebted to *Dr Gurdev Singh*, Chief Medical Officer (In-charge), Cantonment General Hospital for his foresight and generous support without which it would not have been able to set the objectives for my dissertation. I would also like to express my gratitude to the functionaries and staff of all medical and non-medical administrative departments of the hospital who were extremely helpful in elucidating in detail their task, duties and workload.

I am once again thankful to *Dr Gurdev Singh*, CMO (In-charge) without whom this study would not have been possible. His cooperation, support, mentoring, incisive knowledge and guidance has been the strongest backup in putting together the research document. The interaction with each individual of the hospital, provided me with an opportunity to understand the working of the departments and practical experience in completing my internship cum dissertation.

The planned schedule of activity, with in-built manageability helped me to understand the nuances of Medical Records Department. The dissertation training has equipped me with the required expertise and thereby ensuring to perform the duties of a Hospital administrator within my organisation (Army Hospitals) and other Tertiary Care Hospitals.

Lastly my heartfelt thanks to *Shri. B Reddy Sankar Babu*, IDES, CEO Delhi Cantonment Board for sharing his deep insightful knowledge, practical experience, vision and direction in completing the research procedure to my satisfaction.

Col Amit Chatterjee (PG/15-17/006)
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PART I

DISSERTATION & INTERNSHIP REPORT

(01February-30April2017)

Introduction

1. *Delhi Cantonment (popularly referred as Delhi Cantt)* was established in 1914. Until February 1938, the Cantonment Board Delhi was known as the Cantt authority. The area of the Cantonment is approx. 10,521 acres (4,258 ha). At the 2011 census, the population of the Cantonment was 116,352. The Delhi Cantonment is as Class I Cantonment Board.

The Cantonment is governed by the Cantonments Act, 2006 while various policy letters and instructions from the Ministry of Defence pertaining to the area are issued from time to time. Although the board functions as a local municipal body, it remains under the administrative control of the Directorate General Defence Estates, New Delhi and Principal Director, Defence Estates, Western Command, Chandigarh.

2. The Delhi Cantonment is situated in south-west district of Delhi and bordering South and New Delhi districts. Delhi Cantt lies on the main axis road (NH-8) to Haryana and Rajasthan. Delhi Cantonment is very well connected by road, rail, air and metro to the other parts of Delhi. Both the domestic and international terminals are co-located at Delhi Cantonment. The Delhi Cantt railway station caters to all trains transiting to the states of Haryana, Rajasthan and Gujarat. The Delhi Cantonment now has a network of Metro lines and having four stations at various points in the Cantt.

3. As per the 2011 India census Delhi Cantt has a population of 116352. Males constitute 58 %(67,703) of the population and females constitute 42 %(48,649). Delhi Cantt has an average literacy rate of 91.11% higher than the national average 79.9%.Male literacy rate 94.54% and female literacy is 86.26%. In Delhi Cantt 11.36% of the population is under 6yrs of age. There is a need for having good healthcare facilities for the children and mothers.

4. The Cantonment board Delhi consists of 08 elected members, three nominated military members, three ex-officio members(Station Commander, Chief Garrison Engineer and Senior Executive Medical Officer), and one representative of the District Commissioner.

An officer of the Indian Defense Estate Services, part of the Central Civil services is posted as the Cantonment Executive Officer (CEO) as well as the member Secretary of the board. The board is headed by the president Cantonment Board (PCB) who is the Station commander and also presides over all the meetings of the Cantonment board.

Cantonment Board Hospital Delhi Cantt

5. Cantonment board hospitals has been raised and established in all the cantonments of the country to look after the civilian population living in and around the cantonments. These hospitals come under the Local Cantonment Board headed by the CEO and works under the administrative control of Director General Defence Estates, GOI, MOD. The present CEO is Mr. B Reddy Sankar Babu, IDES of Delhi Cantonment Board.

6. One of the primary functions of the Cantonment board is to provide basic health cover to the civilian population residing as part of Delhi Cantt. The Delhi Cantonment board has been discharging their basic duty through *Cantonment General Hospital located at Sadar Bazar Delhi Cantt.*

Fig 2 CGH

7. Cantonment General Hospital (CGH) provides the basic health cover to the civil population and villages in the vicinity of Delhi Cantonment through outreach .The hospital made a modest beginning from one of the barracks of the old Base Hospital Delhi Cantt complex at Sadar Bazar, Delhi Cantt. The hospital was shifted to its present location in 1963.The hospital is a ***100bedded unit*** (under extension) at present. The hospital provides general medical and primary, emergency care services including *laboratory, X-Ray and ante natal to post natal services.*

8. The hospital is managed by the permanent staff consisting of CMO, 13GDMO, dental surgeon and other doctors and specialist on contractual basis. The hospital has a full time dental clinic. The hospital provides *limited IPD services* and facilities are available 24x7. The hospital has in its premises a **Health Post of Delhi government** *which provides maternal and child health services including antenatal and child immunization programmes***.** The Cantonment General hospital has engaged Medical Specialists viz Gynecologists, Pediatrician, Anesthetists, Medicine, Surgeons, Ophthalmologist, Orthopedician, Radiologist, ENT, Dermatologist, Pathologist & Psychiatrist. Emergency services / Emergency ward is available round the clock. Support / Diagnostic Services like Ultrasound, X ray, ECG, Micro Biology Lab, Hematology Lab, Bio- Chemistry Labs are being provisioned satisfactorily. At Cantonment General Hospital one minor OT & One Major OT is presently functioning, second Major OT is likely to be commissioned in next three months and work in progress.

Fig 3 Casualty and Ambulance Service

9. Cantonment General Hospital is also running a DOT Center, Family Health care center, Ayush Clinic and Homeopathic clinic. The Cantonment General Hospital is providing free medicines to all patients. Besides, Cantonment residents' patients from adjoining areas around cantonment Sagarpur, Palam, Mahipalpur, LajwantiGarden etc. are also utilising health care services provisional by the Board. Cantonment Board is maintaining two mobile dispensaries which are visiting various pockets in the cantonment for neighborhood health care services. Board is also maintaining hearse van and a critical care ambulance equipped with high end lifesaving equipment.

The Cantonment General Hospital is also running School Health Program, health checkups of students are being done twice a year, health cards being maintained. Cantonment General Hospital is running all Central Government/ State Government sponsored health programs. Medical health camps are being organized by the CG Hospital at regular intervals for best health care services.

Mission, Vision and Values

10. The Delhi Cantonment Boards endeavor is to provide broadband capacity to deal with all regular ailments. The Cantonment Board vision encompass health beyond health care by providing Clean Environment, Potable water, Good sanitation & Best treatment and diagnostic services.

Layout of the Hospital

The Cantonment General Hospital is housed in a three storyed building with the present layout:-

(a) **Ground Floor** The hospital has the Reception cum Registration centre, Emergency, Casualty, Ortho, Gynecology, Ophthalmology, ENT, Medical, Psychiatric, skin, Ayurvedic and Homeopathic OPDs, Minor OT, Radiology (X-Ray &USG), ECG Room, labour room, Immunisation and Injection room, Family planning counselling room, Physiotherapy room, DOTS Centre, Pharmacy, Plaster room and Dressing cum first aid room.

(b) **First Floor** Houses the Administrative block, Dental Department, Path Lab, Medical Records, Pharmacy store, Ayurvedic store, Family ward (18 beds), Medical Records and a Conference room.

(c) **Second Floor** It has the major OT, VIP Rooms (06), Private wards (18 beds), Male Ward (20beds) and CSSD.

(d) **Basement** The basement houses the AC Plant, Linen Store, Furniture Store, Pump House and Generator Store.

11. **Ambulances** The hospital has two mobile dispensaries to cater for distribution of medicines and critical care in remote areas of the cantonment and has two Basic Support Ambulance (BSA) and one ALS.

12. **Staff** The hospital is headed by a CMO (Incharge) under whom are the following staff:-

a. **Permanent Staff -** Doctors-13, Nurse Grade B/ANM-02, Technicians-02, Pharmacists-02, Administrative Staff-18.
b. **Contractual Staff -** Doctors-35(Specialist-19 additional GDMO-11), Nurses-39(including 2xOT nurse), Technicians-21, Pharmasicts-02.

13. **Out-Sourced Services** The hospital has outsourced the following services:-

a. Security Services – 30personnels
b. Housekeeping and Waste disposal - 60personnels

14. **Services not available in the Hospital** The hospital has not catered for the following services:-

a. Blood Bank
b. Mortuary
c. Laundry
d. Kitchen and Dietary Services
e. Manifold Services (*Manifold services form an important cost centre in hospitals. Manifold is a vital support service, included classification of costs, identification of the cost centres in the hospital, cost allocation and apportioning. The fact remains that it is cost intensive and underutilised and often poorly planned in terms of cost effectiveness. The focus on technology in manifold services needs to be sustained*.)

Departments in the Cantonment General Hospital

15. The hospital provides intimate care to its patients through the following departments:-

- DOT centre
- Medical
- Orthopedics
- Obstetrics and Gynecology
- Ophthalmology
- Skin
- ENT
- Dental
- Clinical Nutrition
- Psychiatry
- Radiology and Imaging
- Physiotherapy
- Health Check
- Path Laboratory
- CSSD
- Ayush Clinic
- Medical Records and Registration
- Pharmacy

Observations and Recommendations

16. The period of internship at a government of Delhi (Delhi Cantonment Board) hospital and administered by the cantonment board was an excellent opportunity to grasp and learn the nuances of government hospital. The hospital gives an insight into the healthcare delivery matching with the present state government policies and vision. It is a very well administered hospital under the able guidance of the present CMO (In charge). The internship provided an excellent opportunity of interaction platform to learn on all the aspects of Hospital administration including the clinical aspects.

All the departments of the hospital including the support services were visited, met and held discussions with the key personnel to garner ideas with the running and maintenance of the hospital. The observations, maintenance and the key recommendations based on the interaction during the internship are as enumerated:-

a. Accident &Emergency Services

(i) The accident & emergency department should cater for a separate entry and exit and not common to the other patients entry in the hospital.

(ii) Emergency signage should be visible from the main road as the Airport- Sadar Bazar road caters to heavy volume of civil traffic and thus available for access to patients travelling on this road.

(iii) The crash Cart needs to be checked and updated daily.

(iv) The staff should be trained in BLS/ACLS.

b. OPD Services

(i)Token system should be used for better management of queuing of patients.

(ii) Separate queue for differently abled patients.

(iii) Separate functional toilet for differently abled patients.

(iv) Waiting area to cater for more sitting and additional seats.

(v) Citizen charter and patient charter are to be displayed in the OPD.

(vi) Regular patient satisfaction survey is required to be carried out to enhance patient satisfaction.

Fig 4 OPD Block

c. Laboratory Services

(i) Personal protective equipment (PPE) need to be made available to the staff.

(ii) All the staff should be made aware about the safety precautions of needle prick injuries.

(iii) Percentage of redo cases needs to be monitored.

d. Radiology and Imaging

(i)Procurement and availability of all specification of X-ray films in store, being required for Radio diagnosis thus helping in patients to get the test done and preventing to go elsewhere.

(ii) Register to be maintained for reports having clinical co-relation with provisional diagnosis.

(iii) Reporting error register should be maintained separately.

e. Operation Theatre

(i) HVAC system is required to be installed.

(ii) Defibrillator is required to be installed in the OT.

(iii) Pre-operative checklist are required to be followed.

f. Labour Room

(i) *APGAR SCORE* system should be used for the new born. (The Apgar score, the very first test given to a newborn, occurs in the delivery after the baby's birth, to quickly evaluate a newborn's physical condition and to see if there's an immediate need for extra medical or emergency care)

Apgar Scoring System

Indicator		0 Points	1 Point	2 Points
A	Activity (muscle tone)	Absent	Flexed arms and legs	Active
P	Pulse	Absent	Below 100 bpm	Over 100 bpm
G	Grimace (reflex irritability)	Floppy	Minimal response to stimulation	Prompt response to stimulation
A	Appearance (skin color)	Blue; pale	Pink body, Blue extremities	Pink
R	Respiration	Absent	Slow and irregular	Vigorous cry

Fig 5 Apgar Scoring System

(ii) Separate areas should be demarcated for septic and aseptic deliveries.

g. Wards

(i) Infection control policies to be religiously and strictly followed as per the guidelines. Hospital Infection Control Committee (HICC) is required to be earmarked and ensure regular monitoring on:-

1. Guidelines for prevention & control of infections
2. Antimicrobial policy
3. Surveillance policy
4. Disinfection policy
5. Isolation policy
6. Policy for investigation of an outbreak of infection

(ii) Regular training to be given to the nurses on Basic Life Support and perform (CPR) on Infants, child and adults, as well as, fibrillation and how to use an Automated External Defibrillator (AED).

h. Pharmacy

(i) Proper receiving, segregation and storing area needs to be demarcated for easy dispensing of drugs.

(ii) Availability and installation of Ultra-low freezers, High performance freezers and Ice-lined solar medical/vaccine refrigerators (2-8°c).

(iii)Items are required to be labelled and stored alphabetically.

(iv) Inventory control management to be put into practice (ABC, VED and FIFO).

(v) Provision for storing of narcotics drugs under safety should be undertaken.

(vi) Hospital drug formulary should be made available.

(vii) Testing of supplied drugs on periodic basis.

j. Bio-Medical Waste Management

(i) In-service training sessions on the new BMW2016 policy and infection control to be conducted for all the staff at least twice a year and to be documented.

(ii)Nominate a common Bio-medical Waste Treatment Facility (CBMWTF) for easy segregation and safe disposal.

(iii) Visit to be carried out by the hospital authorities to the disposal site and be documented.

(iv) Appropriate pre and post exposure prophylaxis are to be provided to all concerned staff.

Fig 6 BMW Management

k. CSSD

(i) All equipment available needs to be installed and utilised effectively.

(ii) Chemical, Biological, Bowie-Dick test pack (thermochromatic) and Vaccum leak test are required to be performed.

(iii) Autoclave steam sterilisation cycle and operational and efficacy testing to be conducted at regular intervals.

l. Human Resource Management

(i) Due to the increased footfall and patient load the manpower requirement needs to be assessed for adequate staff/ technician to man the equipment efficiently and effectively.

(ii) The hospital is required to create a HR manual with the specific charter of duties and assigned responsibilities for effective functioning.

(iii) There is a requirement to increase the ratio of permanent to contractual staff thereby instilling a feeling of belongingness with the organisation.

m. Miscellaneous Aspects

(i) To streamline policy on equipment management, a hospital equipment management/utilization committee be created to instantly improve the capabilities of the equipment and seamlessly and effortlessly provide clear visibility.

(ii) Mock drills to be conducted for firefighting and disaster management and documented.

(iii) Setup a Technical Support Section and workshop with adequate staff, spares to provide intimate repair and maintenance.

PART-II

HOSPITAL RECORD-KEEPING STANDARDS

INTRODUCTION

1. Hospitals deal with the life and health of their patients. Good medical care relies on Well-trained doctors and nurses and on high-quality facilities and equipment. Good medical care also relies on good record keeping. Without an accurate, comprehensive up-to-date and accessible patient case history, medical personnel may not be able to offer the best treatment or may in fact misdiagnose a condition, which can have serious consequences. The medical record is a powerful tool that allows the treating physician to track the patient's medical history and identify problems or patterns that may help determine the course of health care.
The primary purpose of the medical record is to enable physicians to provide quality health care to their patients. It is a living document that tells the story of the patient and facilitates each encounter they have with health professionals involved in their care. It is also a legal document that details the care you provide to your patients, and acts as a record of your billing practices. Complete and accurate medical records will meet all legal, regulatory and auditing requirements.

2. Associated records, such as X-rays, specimens, drug records and patient registers, must also be well cared for if the patient is to be protected. Good records care also ensures that the hospital's administration runs smoothly, *unneeded records are transferred or destroyed regularly, and keeping storage areas clear and accessible,* and *key records can be found quickly,* saving time and precious resources.
Records also provide evidence of the hospital's accountability for its actions and they form a key source of data for medical research, statistical reports and health information systems. Managing Hospital Records addresses the specific issues involved in managing clinical and non-clinical hospital records, indicating where particular approaches are needed to meet the specific requirements of a records service within a hospital environment.
The Medical Records Department contribute to comprehensive and high quality care for patients by optimizing the use of resources, improving efficiency and coordination in professional settings and facilitating research.
This is achieved in the following ways:

• **Quality of care:** Medical records contribute to consistency and quality in patient care by providing a detailed description of patients' health status and a rationale for treatment decisions.

• **Continuity of care:** Medical records may be used by several health practitioners. The record is not just a personal memory aid for the individual physician who creates it. It allows other health care providers to access quickly and understand the patient's past and current health status.

• **Assessment of care:** Medical records are fundamental components of:
- *Externa*l reviews- such as those conducted for quality improvement purposes (e.g. Independent Health Facilities Programs)
- *Investigations* -such as inquiries made by the ministry Office/MCI, and College investigations
- *Billing reviews* -records must be properly maintained in order for physicians and administration to bill for services
- *Physician self-assessments*- whereby physicians reflect on and assess the care they have provided to patients (through patterns of care recorded in the patient case sheet/EMR).

• **Evidence of care:** Medical records are legal documents and may provide significant evidence in regulatory, civil, criminal, or administrative matters when the patient care provided by a physician is questioned. The legal policy requirements for medical records, explains how medical records must be kept, outlining general requirements and considerations about the collection, use, storage, and disclosure of patients' personal health information, with respect to both paper and electronic records.

WHY HOSPITALS MUST MAINTAIN GOOD MEDICAL RECORDS

3. There are ***important reasons*** to keep comprehensive medical records for every patient, which enhances and supports the patient-centered care that the patient receives.

- The account of the *patient's medical history* which are comprehensive, accurate, legible and complete helps in getting timely insurance claims.
- As a *reference for colleagues*. A comprehensive record with a clear, well-organized history and workup assists saves valuable time and healthcare resources and avoid redundant investigations and medication of previous hospitalisations.
- *As a reference for official reports.* A comprehensive, well-organized medical record will also help you to prepare reports efficiently and effectively.
- *As a evidence in a medical record audit and* comply with and accountable to all of the rules, regulations and standards of government regulatory bodies.
- *Disciplinary reviews.* Defend yourself and your actions in a malpractice case or review of billing practices.
- *Quality Assurance activities* Practice of scientific medicine based on recorded facts.
- *Statistical Data* and means of communication for the medical team.
- *Continuity of medical care* for follow up and treatment.
- *Planning of services* and improving quality of care.

4. AIM

To establish a protocol for standard in Medical Record Keeping and methods for Retention and Destruction of medical records.

5. OBJECTIVES

- To study the current protocol and methods for medical record keeping standards and retention and destruction of old medical records.
- To perform the standard analysis of the nascent Medical Records Department of Cantonment General Hospital Delhi Cantt.
- To identify gaps in the current protocol of record keeping standards and of retention and destruction of files.
- To make recommendations for developing and improving the record keeping standards as per the NABH guidelines at Cantonment General Hospital Delhi Cantt and best practices being followed.

Fig 7 MR Number System

6. SCOPE

1. The Medical Recordkeeping process
2. Physical facilities, Storage, System of filing and Functioning
3. Privacy in Practice for Patient MR Management
4. Policy for Retention and Destruction
5. Transition to Electronic Medical Recordkeeping

7. Medical Recordkeeping Process

(7.1) Medical Record Maintenance process

Step 1: Deposition of files

- Files are brought by the ward boys from all the departments in the MRD after death or discharge of patient.
- Files are put in file receiving rack.
- All files are accompanied with the ward register indicating to which ward the patient belong.
- Deposition of files from respective wards are after 2pm.

Step 2: Collection or Receiving of files

-Files are picked up from the receiving racks and checked for any deficiency.

-In case the files are complete then the MRD receives it by putting receiving signatures in ward register with date and time.

-Incase the files are incomplete a slip is attached to the file cover with the incomplete part indicated on it and sent back with the register for completion.

-Discrepancy register is also maintained for the incomplete files sent back to the respective wards and are daily updated and reported and reviewed by higher authority periodically.

Step 3: Assembling of Files

-All documents attached in the file are arranged in a prescribed manner after crosschecking with a checklist which arranges the documents and a chronological sequence is created for uniformity.

Step 4: Coding

-Every file is given an ICD-10(International Statistical Classification of diseases and health related problems-ICD, a medical classification list by the WHO containing codes for diseases, symptoms, abnormal findings and external cause of injury) which describes the type of disease the patient suffered.

Step 5: Entries into the excel sheet software programme

-EMR software helps doctors and medical practioners to keep track of patient information through a centralised electronic system.

-The popular software are eclinical works, epic, care360, Allscripts and GE Healthcare.

-All entries are entered in the software programme as per requirement.

Step 6: Indexing

-This step involves coding which is entered into the programme ad an index of a particular disease is created by ICD10.

Step 7: Filing

-Files are arranged in the racks after allotting serial nos. Each rack can hold 80-100 files.

-Slips are pasted on the racks to indicate IP nos for easily accessing the files.

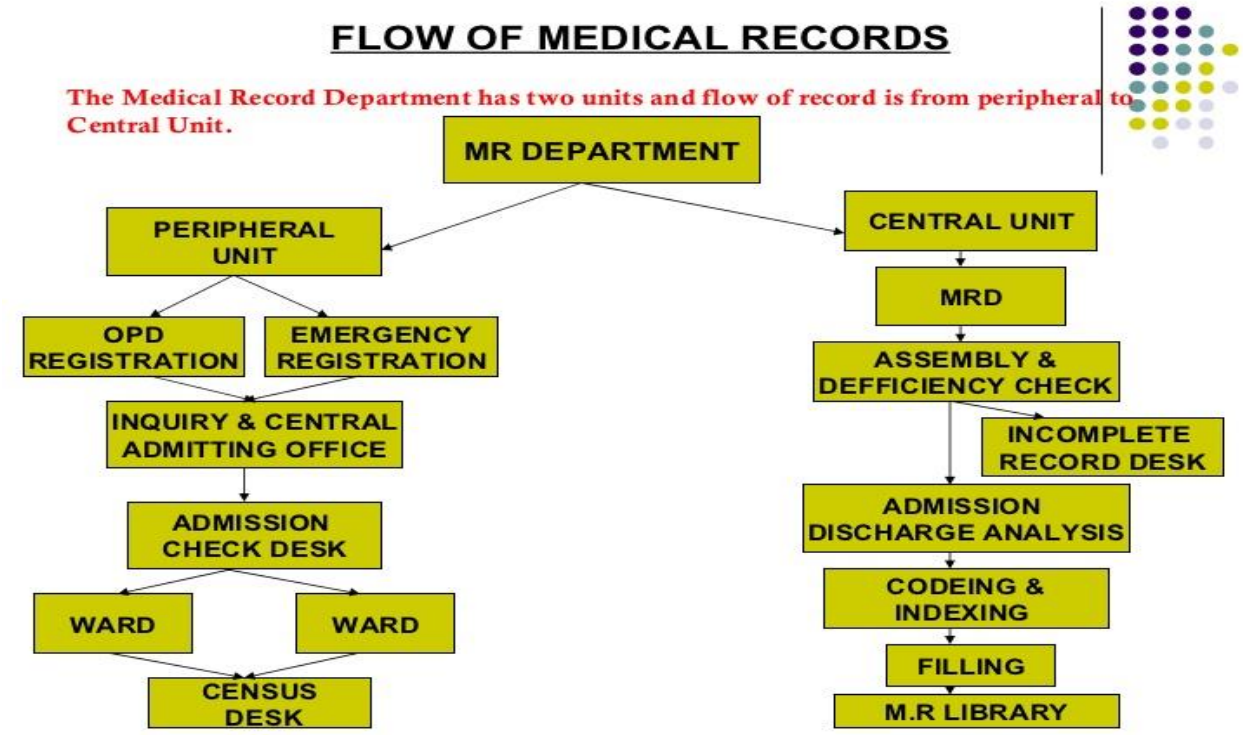


Fig 8 Medical Record Flow

(7.2). Retrieval Process

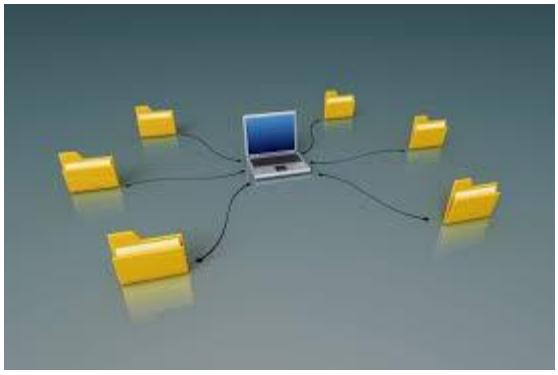



Fig 9 Retrieval Process of Files

a. Whenever patient or his relative comes to seek information about his treatment with patient IP nos, the details are checked in the computer and information providing steps are initiated.

- On-site

-Paper scan – Scan paper onto secure laptop

-Print to scan –Field Technician come print from the EMR and scan onto secure laptop

-Encrypted Flash Drive – ECS retrieves information from EMR with encrypted flash drive

- Off-site

-Fax/mail – Transfers data to a remote location as per patient requirement

- EMR Remote – Remotely gain access to EMR and get information

b. Steps in Record Retrieval:

-Record retrieval process is initiated by the patient

-File is retrieved from the rack at the medical facility.

-Follow up and reconfirmation with the facility to ensure that request has been received

-Status update of request ad check for status update and readiness

-Once the records are scanned from the secure database and ready for collection, appropriate payments are done.

-Check to ensure that all information requested are accurate and legible.

-Records are delivered through secured digital link/download or photocopies are handed over.

c. The medical record has **four major sections**:

• **Administrative:** which includes demographic and socioeconomic data such as the name of the patient (identification), sex, date of birth, place of birth, patient's permanent address, and medical record number.

• **Legal data:** including a signed consent for treatment by appointed doctors and authorisation for the release of information.

• **Financial data:** relating to the payment of fees for medical services and hospital accommodation.

• **Clinical data:** Of the patient whether admitted to the hospital or treated as an outpatient or an emergency patient

(7.3). Components and Content of a Medical Record

a. The physical medical record will eventually consist of the following:

(i) **<u>Medical record forms</u>**

- Personal Identification Information/Identification summary sheet

- Consent for treatment and consent to release information to authorized persons to be signed by the patient

- Medical History to include all diagnoses, medical care and treatments, allergies, and even the lack of need for medical care

- Correspondence and legal documents received about the patient

- Admission notes to include Family medical history for diseases that are genetic in each generation, presence of those genetic markers that can shed light on an illness or set of symptoms

- Clinical progress notes to record patient's daily treatment and reaction to treatment

- Medication history to know about herbal, over the counter, home remedies, prescription medicines and even illegal drug use.

- Nurses' progress notes recording daily nursing care.

- Operation report if an operation or operations are performed.

- Pathology reports including Hematology, Histology, Microbiology and other reports; X-ray.

- Treatment history like what treatments have been given, whether they worked, and which have failed is significant information.

- Special nursing forms for observation of head injuries.

-Medical directives: most patients who have had any treatment at a hospital have a medical directive or Living Will

(ii) **Clip or fastener to hold the papers together**

(iii) **Dividers between each admission and outpatient notes**

(iv) **Medical record folder**

b. *Medical Record Content* should be having:

-Current medication list

-Medication allergies and adverse reactions

-Past medical history

-Present Complaints

-Working diagnosis

-treatment Plans

-Clinical evaluation and findings are documented

-Immunisation records for children

8. Functions of MRD

Thus the major functions of a Medical Record Department include:

• *Admission procedure* Includes patient identification and the development and maintenance of the master patient index (MPI).

• *Retrieval of medical records*

• *Coding diseases and operations*

• *Filing medical records*

• *Evaluation of the medical record service.*

• *Completion of monthly and annual statistics.*

• *Medico-legal issues* relating to the release of patient information and other legal matters.

• *Ownership, security and custody of medical records*

9. How Medical Records should be maintained

Medical records of different departments and healthcare services should be managed in an efficient and effective way.

a. **Well Planned:** The first consideration for the MRD is related to planning, focusing attention on the records of different departments, arranging them accordingly and by providing the best quality medical care.

b. **Comprehensive:** The next important quality is related to comprehensiveness which makes it essential that the management of record should speak for itself. Accurate and complete documentation in the medical record that is in keeping with the requirements of the policy is essential in facilitating and enhancing collaborative patient care.

c. **Accuracy:** In MR management one needs to ensure that all fact and figures, information made available is accurate, authentic and reliable. The authenticity and accuracy of medical records is required as it influences policies and plans.

d. **Time Management:** For the context of MR management it is required to assign due significance to time. All inpatient Medical Records must be completed within 14 days

from the date of discharge and all Medical Record entries are to be dated, the time entered, and signed. It is quite natural that different persons, departments, agencies, organisations come to the records department for collecting and collating information which itself is a time consuming process, and thereby provide the reputation for professional excellence.

e. **Well-Classified:** For making MR management ideal, effective and purposeful, it is pertinent that the records are classified as per their utility. Since it is inevitable that there will be space constraints, it is therefore essential that necessary arrangements for indexing, cataloguing and protection (Protected Health Information) are mandatory.

f. **Economics:** All activities of the hospitals and healthcare organisations are required to be cost-effective. Putting this context into focus, the economies of scale should also be applicable for managing the hospital records. The basic criteria is to protect them and locate them conveniently. It also essential that the Hospital Administrator has an in-depth idea of its relevance and usefulness.

g. **Technology-Savvy:** In the age of IT the MR also needs to be technology driven. Records of patient information including official medical can exist in e-format/paper based format or a combination of both. This minimizes functional responsibilities related to documentation, proper storing and less storage space. Thus the process of making the management of records tech-driven makes it cost-effective for both long and short term and electronic records enable a dramatically enhanced capacity for the management of patient information.

10. Physical facilities, Storage, System of filing and Functioning

(10.1) Physical Facilities

While planning for physical facilities for the MR department we need to take the following into consideration:-

a. *Location*

The Central admission and record office should be located near the main entry of the hospital and in close proximity to the Outpatient Department and Accident & Emergency Services as the majority of the patients in the hospital come to these department and get admitted from these areas. The Outpatient record section also be locate in close proximity to the outpatient department near its entrance.

The central MR office should form part of the hospital administrative wing. The central MR office should deal with inpatient records and be located in proximity to the IPDs.

b. *Space and General Facility Requirement*

The *Admission and Inquiry Office* requires a space of 125-175 sq. ft. The counters should be aesthetically made to facilitate easy communication between staff, patients and

corporate clients. General office equipment will mainly be required for the staff working here. Separate counters for receptionist, billing clerk and patient admission desk should be provided. The area should have adequate waiting space with all facilities for patients and their attendants. Telephone with local and STD calls must be made available.

The *Central Record office* requires space as per the size of the hospital. As a rough idea a space of 2-3 sq.ft per bed may be sufficient. The details are:-

- **50 bedded hospital - 150 -175 sq.ft**
- **100 bedded hospital - 225 -250 sq.ft**
- **200 bedded hospital - 450 -500 sq.ft**
- **500 bedded hospital - 1000 -1200 sq.ft**

- The planning should include sufficient 10 store inactive medical records. The space for this should be planned at around 120-150 sq.ft with adequate shelves in the general record storage area on a separate floor.

- The Medical Record department should ensure in advance the growth of MRD and anticipate and make arrangements for the future requirements and make arrangements to procure the required space and storage equipment.

- Written procedures, which have been gathered together into a procedure manual. With all procedures recorded in a written manual and no readily apparent procedural problems, the medical record coordinator often finds it easy to forget about procedural improvements. But, procedures can always be improved and periodic review can result in, increased operating efficiency, lower costs, and better use of employees and/or equipment.

In addition to computers for functioning, general office equipment for smooth office work, filing equipment and stationery be available to the staff.

The *Outpatient Record Office* requires the following:-
i. Outpatient medical records include those for visits at HCIs, polyclinics, GPs, specialists, nonresidential institutions.

ii. A&E records should only be treated as outpatient medical records if the patient is not admitted for inpatient treatment.

iii. Patients, who are admitted into the same institution for inpatient treatment, should have both sets of medical records retained together, for the retention period recommended under the inpatient medical records.

iv. The retention period for outpatient medical records is for 6 years as a precautionary measure.

(10.2) Storage

Completed medical documents are stored in the main medical records by following a filing system. The following factors are considered for an efficient and effective filing system:-

a. Compactness to reduce physical effort and cost of storage space.
b. Accessibility for speedy location and identification.
c. Simplicity for understanding of all concerned.
d. Economical in cost, installation and operation.
e. Scope to expand according to future requirement.
f. Tracer system for documents in circulation

(10.3) Filing

For the system of filing any one of the procedure can be followed:-

a. *Decentralised Filing System* Under this system inpatient and outpatient department have their own individual records and file them independently within the department. If incase the patient gets transferred from one department to another the file is loaned to the other department. The system is labour intensive and with higher operating costs.

b. *Centralised Filing System* Under this system the medical records are filed centrally in the medical records department. The centralised system is efficient, provides better control and followed in most hospitals.

c. *Methods of Filing* The various methods available for filing are:-

(aa) Numerical Method

(ab) Alphabetical Method

(ac) Chronological Order

(ad) Terminal Digit System

(ae) Mid Digit System

Numerical method of filing is the commonest method in use. Each patient is provided with a unique number at the time of admission/registration number and filing is done in numerical order. This method is most suitable for retrieval of files.

d. *Filing Procedure* File indexing is a key to locate the files. Index is a reference list used for locating a particular document in the filing system. It is useful to use files of different colours for different years for easy retrieval and identification.
Files should be of uniform standard size and 8.5" x 11" is preferable. The filing jacket should be ½" bigger than the length and breadth of the file in use. The following type of filing procedure are used as under:-

- **Vertical card indexing** is universally used in which files are kept vertically on its spine and supported by other files and card within the section storage steel cabinets/racks. The system is economical, adaptable, easily referable and scope for extension.

- **Suspended card indexing** specially designed filing cabinets are required and the records are suspended from frames in drawers in the cabinet. The system is costly and not easily adoptable but security is higher.

- **Horizontal book indexing** the medical records are inserted in folders which are kept on one another in chronological order. The retrieval of records are a little difficult and orderly manner cannot be maintained at all times.

- **Loose leaf book indexing** it is an improved form of of book indexing. It is an improvement of book index. The index pages are not stitched up and they remain loose. Pages are maintained as per alphabets and added thereon. It is flexible as necessary pages can be added on it.

(10.4) Functioning

The functioning of a medical records department include designing patient information, assisting hospital medical staff and creating informational statistical reports. Other responsibilities include the maintenance of death and birth register for perusal of the health ministry (MOH&FW) and keeping track of communicable diseases as per the government directives. It includes:-

a. The medical records department handles the security and maintenance of all electronic and written medical records of a health facility. It also ensures that all information available in the records is complete, accurate and only available to personnel who have authorized access.

b. The department indexes medical records, according to the hospital's prescribed standard order. It maintain and preserves patient medical records including diagnostic reports in a scientific manner.

c. A hospital's medical records department develops and maintain an informational base as well as a mechanism for the provisioning of statistical data. It also liaises with concerned agencies to submit regular reports.

d. Personnel in the medical records department controls the movement of patient files. The intentions are to achieve a unit record system, protect any unauthorised access and ensure utmost confidentiality for the legal interests of the patients, physicians and the hospital. The department handles carrying out of all the admitting procedures for the patients requiring hospitalisation.

e. Thus the MRD is the critical department for the hospital information system, therefore continuous improvement of its services and processes through scientific methods like ***Lean management*** which is a process improvement technique to identify waste actions and processes to eliminate them. It improves the quality of the outcome in terms of mistakes and error, and significantly accounts for the amount of time taken for the process.

11. Privacy Practice for Patient MR Management

a. Physician Accountability

1. The physician has ultimate responsibility for his or her patient records.
2. Office employees should be aware of and adhere to privacy policies.
3. Records must document a patient visit accurately.
4. Clear rules must exist for the retention and disposal of records.

b. Patient Rights

1. Patients own the information in their record but the physician owns the actual records.
2. Patients have the right to timely access to their record.

3. In extremely limited circumstances, patients may be denied the right of access to their record if this poses a serious risk to themselves or others.

4. Patients can get a copy of their record at a reasonable cost.

5. Patients can request changes in their own record, and this request should be documented by an annotation in the record.

6. A standardised process exists for dealing with patient complaints.

c. Consent

1. Only information needed for the care and treatment of the patient should be collected.

2. Patients need to know how their physician will use their health information.

3. Consent is implied by the collection, use and disclosure of information needed for care and treatment.

4. No consent is needed to disclose patient information when the disclosure is mandated by legislation.

5. Consent is required to share information with third parties for reasons other than care and treatment.

6. Patient consent can be withdrawn at any time.

7. The consequences of denying or withdrawing consent should be made clear to the patient.

d. Office Safeguards

1. Access to patient records is granted on a need-to-know basis.

2. Office layout should maximize protection of patient information. The location and access of the records as well as sound-proofing exam rooms, administration and reception areas, are essentials.

3. Physical safeguards should be put in place.

4. Electronic safeguards should be put in place.

5. Employees should sign confidentiality agreements.

6. Office policies need to ensure confidentiality when physicians and staff share medical records.

7. Procedures must be in place to meet college and CMPA policies for appropriate destruction of portions of the medical record.

e. Business Implications

1. Contracts signed with third parties should explicitly address the protection of privacy.

2. When physicians close or transfer a practice, they must comply with government regulations (MOH&FW) for the storage or transfer of patient records.

12. Policy for Retention and Destruction of Medical Records

All Medical Records are retained for at least as long as required by state and central government law and regulations. Medical Records are retained as per the medical retention schedule stated in NABH policies/procedures manual.

a) All Medical Records, regardless of form or format, must be maintained in their entirety, and no document or entry may be deleted from the record, except in accordance with the destruction policy.

b) Handwritten entries should be made with permanent black or blue ink, with medium point pens. This is to ensure the quality of electronic scanning, photocopying and faxing of the document. All entries in the medical record must be legible to individuals other than the author.

c) When an error is made in a medical record entry, the original entry must not be obliterated, and the inaccurate information should still be accessible. The correction must indicate the reason for the correction, and the correction entry must be dated and signed by the person making the revision.

d) The contents of Medical Records must not otherwise be edited, altered, or removed.

e) Patients may request a medical record amendment and/or a medical record addendum.

f) The retention policy of medical records are as follows:-

g) Hospitals and physicians are obligated to retain the original medical record and only transfer copies to others. A proportion of the records generated by the hospital will be scheduled for archival preservation.

DOCUMENTS	TIME
Inpatient Medical Records (case sheet)	**10yrs**
Outpatient Medical Records	**05yrs**
Medico-Legal Cases(or till finalization)	**10yrs or more**
X-Ray(outpatient/Inpatient)	**5/10yrs**
Statistical Reports	**Permanent**
All Registers	**Permanent**
Log Book	**2yrs**

12.1Destruction of *Obsolete records or Time-Expired records* are as follows:-

1. Physicians must not dispose of a record of personal health information unless their obligation to retain the record has come to an end, as personal health records contain confidential information, any means of destruction must have safeguards in place against unauthorised access or accidental disclosure.

2. Electronic records must be permanently deleted from all hard drives, as well as other storage mechanisms. Hard drives must either be crushed or wiped clean with a commercial disk wiping utility.

3. Records must be disposed of in a secure manner such that the reconstruction of the record is not reasonably foreseeable in the future.

13. Transition to Electronic Medical Records (EMRs)

a) As medical care gets more and more complex and new information is already overwhelming physician‘s capacity to treat patients with the latest technology. Physicians need to learn new technologies to help them cope.

b) There is a great need for a digital record to allow capture of patient data that can then be *processed and mined* for insights into better treatment for the patients.

c) When making the transition from paper to electronic records, physicians must ensure without interruption patient care and appropriate record keeping practices continue. Five key principles have been identified to guide the transition process:

• Patient information must be secure.

• Privacy of patient information must be maintained.

• The integrity of the medical record content must be maintained.

• The integrity of the clinical workflow supported by the medical record must be maintained.

• Continuity and quality of care must be maintained through the transition period.

d) Electronic medical records (EMRs) and electronic health records (EHRs) have become an integral part of healthcare delivery system in India. They can improve the management of individual patient care and bolster the overall effectiveness of the healthcare system.

e) The electronic medical record (EMR) is the tool that provides an electronic version of the paper record generally maintained by doctors for their patients, and platform from which new functionality and new services can be provided.

f) Electronic Health Record (EHR) is the system that attempts to meet health system needs. Thus an EHR is maintained by a hospital, regional health authority, or central government and typically includes a spectrum of repositories of patient data.

g) Clearly, the EMR (used by physicians in their chambers) and the EHR (used by health systems to transmit and manage health care data), are complementary technologies.

h) Physicians are expected to document encounters they have with patients to ensure crucial information for decision-making and actions taken are also recorded. When a physician converts paper records into an electronic format, the original paper records may be destroyed in accordance with the principles set out in this policy, provided that :-

   - Written procedures for scanning are developed and consistently followed.
   - Appropriate safeguards are used to ensure reliability of digital copies.
   - A quality assurance process is established, followed, and documented by comparing scanned copies to originals to ensure that they have been accurately converted.
   - Scanned copies are saved in "read-only" format.

i) Physicians who are using Optical character Recognition (OCR) technology (OCR is a technology process that converts an image of handwritten or typewritten text into machine-editable text) convert records into searchable and editable files, provided they retain the original or scanned copy.

j) Electronic medical records are, definitely, the present and future of medical record systems. The efficiency and effectiveness that an EMR system can add to the daily practice of medicine is amazing, enhancing both the quality and comprehensiveness of care.

k) Introduction of Electronic Medical Records (EMR) in a hospital, has many advantages which are :-

   1. Remove duplication of work using Barcode
   2. Simplifies Work by using Templates
   3. Internet Enabled EMR for sharing patient data across the globe securely
   4. Quickly retrieval of all the information of a patient
   5. Validation Checks and Security Procedures

6. Digitisation of paper and films
7. Standardisation of Diagnosis
8. International Coding of Procedures
    a) Better Storage facility
    b) High degree of Security & Audit
    c) Faster search and updates and Online availability of records for Doctors (24 x7)
    d) Paperless medical history and in maintaining health information of patients
    e) Reduced healthcare costs
    f) Empowering the stakeholders to deliver right treatment at the right time
    g) Promote the practice of evidence-based- medicine
    h) Accelerate research and building effective medical practices

l. Some e-Records are equipped with *decision support tools* embedded in the software that prompt the physician to consider certain factors or possible decisions in response to the inputted data. The software may also include alerts, flags, or instant messaging capabilities to assist physicians in diagnosing, treating, and monitoring their patients' clinical conditions or managing their prescriptions.

m. The e-Record system is equipped with robust security features including access controls based on the user's role and responsibilities and ensuring encryption protection on all computer systems and portable data storage devices.

n. Once the EMR is installed, it is prudent for practitioners to periodically conduct privacy audits and ensure that the e-Records has an audit trail that clearly indicates alterations but does not obscure the original record.

o. Legislation and regulatory authority policies require that electronic files are routinely backed-up and that the system allows files to be recovered, possibly daily or weekly and ensure the backup files are encrypted.

p. A digital signature is a technology-specific type of electronic signature. An electronic signature, although not tangible in nature, can still be an evidence of the association of the signatory with the document and its contents.

14. Medical Record Keeping Standards: Types

a. A medical record, documents a patient's complete medical treatment, past and current health status and treatment plans for future health related care and thus remains an integral component of delivering quality health.

b. The principal purpose of medical records and medical notes is to record and communicate information about patients and their care. If notes are not organised and completed properly, it can lead to frustration, debate, clinical misadventure and litigation. Many of the causes of inaccurate clinical coding of this secondary data are rooted in the quality of medical notes.

c. It is therefore necessary to regularly assess compliance with the standards and monitor the processes and procedures of the services provided by the physician, which facilitates the delivery of continuous and coordinated healthcare.

d. The hospital should necessarily establish a performance goal and compliance with medical record standards. The aim of the Records Standards programme is to improve the quality of clinical information in the hospital setting by:-

- Developing standards for recording and communicating information about patients
- Applying these standards to medical records to improve the validity and utility of patient data
- Structuring the records so that the information can be incorporated into electronic records, shared with other healthcare providers and analysed for performance monitoring with confidence.

e. Record keeping standards can be sub-divided into two categories:

- *Generic standards* for good practice (Generic medical record keeping standards apply to all medical notes and addresses the broad requirements for clinical note keeping) &
- *Specific standards* to define the structure and content in a specific clinical context. (Standards are also needed so that records are structured appropriately and clinical information is recorded in the right place. Content standards apply to the format and definition of what is recorded in this structure.)

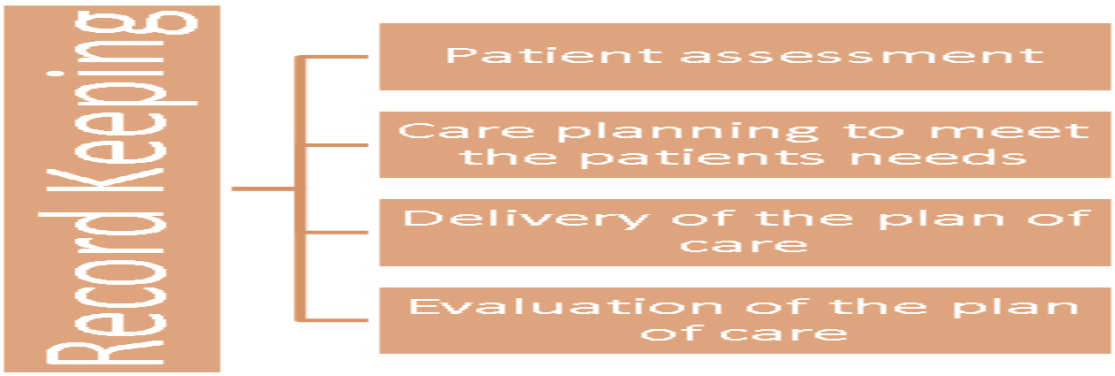


Fig 10 Record Keeping

15. Rationale of the Study

a. The healthcare industry is going through *basic demographic trends*, particularly increased education of people, higher income levels, more working hours and ageing of the working class. Thus consumers are more knowledge, discerning and demanding. The industry needs to adopt to the changes and be prepared with information that a patient.

b. The healthcare organisations are service organisations and treatment details must be available and accessible and well maintained to enhance quality of care. The Records programme should develop to convert all entries into medical notes and standards for the content of admission, handover and discharge records, focus on hospital episode statistics and their use for monitoring clinician performance.

c. This study analyses the basic and nascent Medical Records Department of Cantonment General Hospital Delhi Cantt and its working as per required regulations.

d. This study will enable the hospital administration to identify the discrepancies and making available additional infrastructure and allocate equipment, take corrective actions to ensure smooth working of the department.

16. Problem Formulation

This study is focused to deliver tangible inputs to the growth of medical records department with a transition to EMRs and EHRs. This document would provide valuable inputs to all stakeholders like patient, hospital, management and the government.

17. General Objectives

To study and establish the standards for the nascent medical record department of Cantonment General Hospital Delhi Cantt, Delhi.

18. Specific Objectives

1. To perform the standard analysis.

2. To study the storage system, retention and destruction of the medical record files.

3. To suggest suitable measures for improvement and transition to EMR at Cantonment General Hospital Delhi Cantt, Delhi.

19. Review of Literature

1. This dissertation reviews literature relevant to the study. The literature encompasses both theoretical and empirical works that bears on the study and the variables are measured. An extensive literature search reveals no previous research utilisation of the study variables.

2. The idea of recording patient information electronically instead of on paper –the Electronic Medical Record (EMR) –has been around since the late 1960‘s, when Larry Weed introduced the concept of the Problem Oriented Medical Record into medical practice. Until then, doctor‘s usually recorded only their diagnoses and the treatment they provided.

3. Weed‘s innovation was to generate a record that would allow a third party to independently verify the diagnosis. In 1972, the Regenstein Institute developed the first medical records system. Although the concept was widely hailed as a major advance in medical practice, physicians did not flock to the technology.

4. In 1991, the Institute of Medicine, a highly respected think tank in the US recommended that by the year 2000, every physician should be using computers in their

practice to improve patient care and made policy recommendations on how to achieve that goal.
However, in spite of pockets of use of EMR since the 1970's, mostly in government hospitals and a few visionary health institutions, EMR use has not taken off.

5. Standards Analysis for EMRs: There are many standards that have to be met in providing electronic medical records. These standards are set by the government, having different ability to enforce or encourage their use.

6. Privacy and Confidentiality- Patient consent is mandatory

7. Similarity Standards - Vocabulary standards to record symptom and diagnostic information. Medication standards to allow decision-support tools to work properly, by implementing the (WHO) - ICD (10) code and hence to support research.

8. Compatibility Standards - Platform specifications, other initiatives are concerned with the *transmission* of data between systems so that various healthcare institutions involved in patient care and can share information.

(8.1) *Medical records and Record-keeping standards*

(i) The structure and quality of medical records has been a matter of clinical, administrative and legal interest for many years. Medical records are now used not only for primary but also for secondary clinical purposes including reporting the activity of hospital services, monitoring the performance of hospitals, and research.

(ii) As the pressure to improve the quality of doctors' practice and hospital services grows, with ever increasing expectations and costs of medical care, so the focus on the structure and content of the clinical record is becoming ever more important.

(iii) The advent of electronic medical records is also bringing with it an added urgency for standardisation so that notes can be recorded, stored and reliably retrieved using computers.

(iv) The aim of Records keeping Standards is to improve the quality of clinical information in the hospital setting by:-

- Developing standards for recording and communicating information about patients

- Applying these standards to medical records to improve the validity and utility of patient data

• Structuring the records so that the information can be incorporated into electronic records, shared with other healthcare providers and analysed for performance monitoring with confidence.

(vi) The features of quality of data include:

- Accessibility – data items should be easily obtainable and legal to collect
- Accuracy – data are of correct values and are valid
- Comprehensiveness – all required data items are included
- Consistency – data is recorded in a consistent manner
- Currency – the data should be up- to -date
- Definition – each data element should have a clear meaning and acceptable values
- Granularity – the attributes and values of data should be defined at the correct level of detail
- Relevancy – data must be meaningful for the purpose for which they being collected

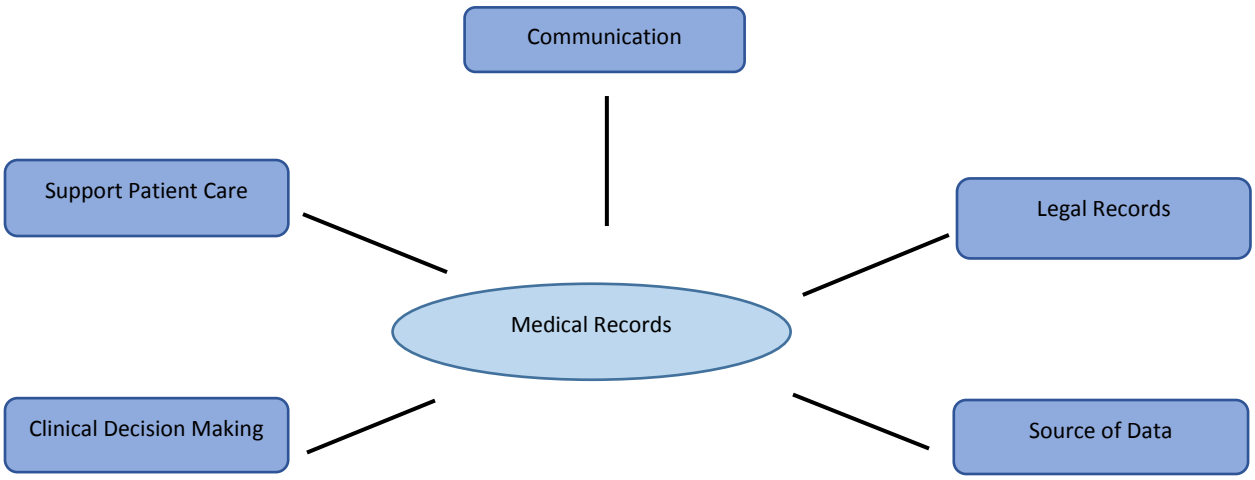


Fig 11 Process of Medical Record Keeping

(8.2) *Retention of Medical Records*

All healthcare records are required to maintain medical records for a specific period. The life cycle of record management begins when information is created and ends when the information is destroyed. The diagram provides a simple reflection of the entire records

retention process. The goals for an organisation is to manage each step in the record keeping life cycle to ensure uninterrupted record availability of patients.

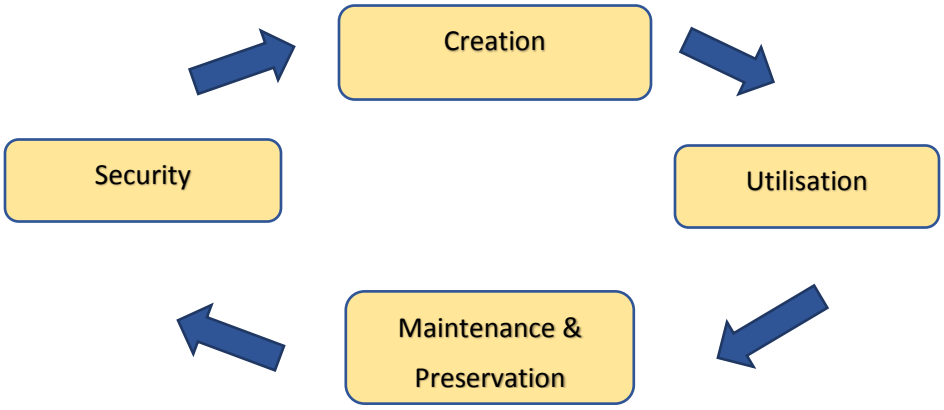


Fig 12 Retention Cycle

(8.3) *Destruction of Medical Records*

(i) The destruction of records is an irreversible act. Records contain sensitive and confidential information and their destruction must be undertaken in secure locations and proof of secure destruction should be documented. Destruction of all records, should be conducted in a secure manner to ensure there are safeguards against accidental loss or disclosure. The normal destruction methods used are:-

- Shredding
- Pulping
- Incineration
- Magnetic Degaussing
- Nailing and Drilling

(ii) In the absence of investigation, litigation or legal hold, records that have satisfied their legal, fiscal, administrative and archival requirements may be destroyed in accordance with NABH policy & procedure manual or as deemed appropriate beyond the maximum retention period. Documentation of destruction of medical records are mandatory and be recorded in register containing the following details:-

- Detailed description of the records destroyed
- Date
- Time
- Method of destruction
- Identity of the individual whose record being destroyed

- Log register needs to be authenticated by committee members

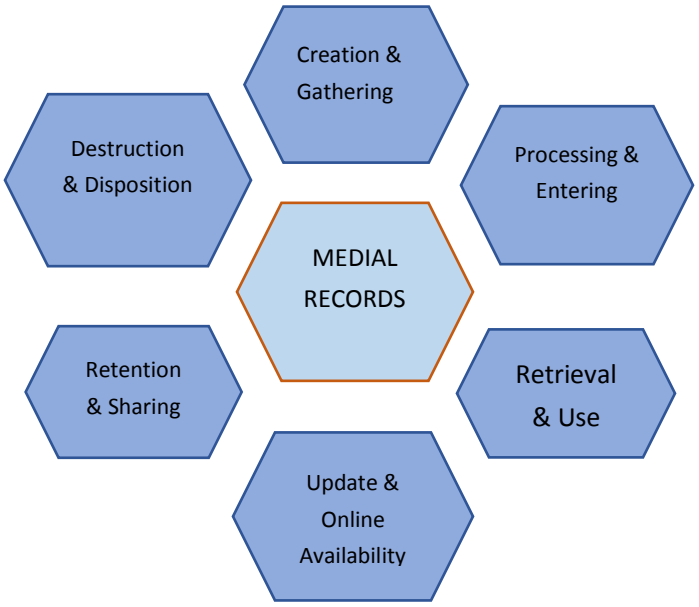


Fig 13 Destruction process

(8.4) *Transition of Medical Records to Digitisation*

(i) It has become very difficult for a physician to track a patient's medical history (including past visit information, lab results, previous medications, and drug allergies) through a traditional system. It is not uncommon for patients to have labs repeated because of improper lab records.

(ii) An EMR system helps physicians and hospitals function in a smoother, safer, and more secure manner, allowing hospital personnel to retrieve and update the information of any patient with a click of a button. The doctors and administration can then concentrate more on the patient's problem than on the patient's records and administrative tasks.

(iii) Thus an EMR system promotes the evolution of healthcare transactions from an inefficient, *paper-based system to a more reliable real-time paperless system*. Transcription cost, dictation time, manual note taking, and prescription writing are virtually eliminated.

(iv) EMR systems efficiently and reliably store patient data electronically in a central data repository that can be accessed by various people at the same time, as seen in the examples

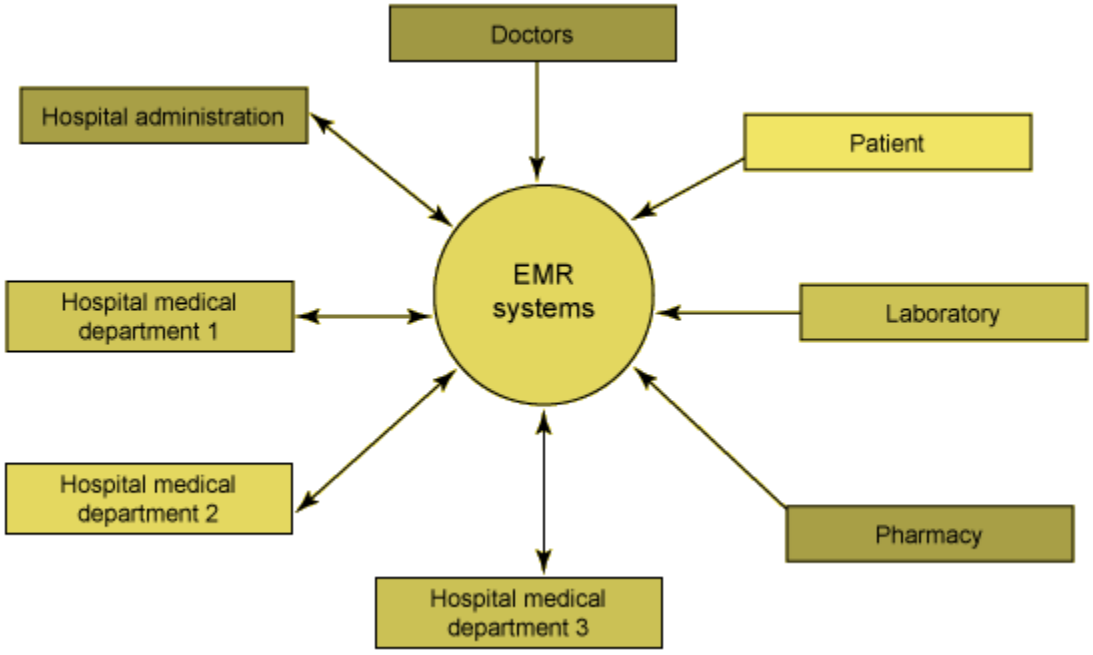


Fig 14 Electronic Medical Records

(8.5) *Preferred Filing System*

(i) *Terminal Digit filing* is an arrangement of numeric files that groups together all file numbers that end in the same last two digits. Although file numbers are assigned in straight numeric sequence, location is determined by reading them in reverse order (right to left) in groups of two digits. The main advantages include ease of locating misplaced files due to colors, and difficulty for unauthorized people to access the files.

(ii) The terminal digit filing provides the following:-

- Provides equal distribution in the storage area
- The filing is based on the last two digits of medical record number
- In Terminal digit filing a six /seven digit is used and divided into three parts:

15 /015	**20**	**94**
Tertiary	**Secondary**	**Primary**

Part I - The *Primary digits* which are the last two digits on the right side **(94)**

Part II – The *Secondary digits* are the middle two digits **(20)**

Part III – The Tertiary digits are the first two/three digits on the left most side **(15/015)**

(iii) Thus the process of filing should be as follows :-

a) In the terminal digit file there are 100 primary sections ranging from 00-99.
b) When filing the primary digits are considered first i.e. He file will be filed in *94* primary section
c) Within each primary section there are *100* secondary sections also from 00-99. So after filing the primary digits the secondary digits are considered i.e. The file is placed in the 20th secondary part of the 94th section
d) Within each secondary section there are 0-999 tertiary sets. Thus the file will be placed in 20/94 section, with the numerical order 15/015 of the tertiary number.
e) This method helps to generate about 01 crore numbers.

(8.6) Colour Coding

Colour coding/bars can be used in various position along the edge of the files.

Colour coding creates distinct pattern s of colour. Colour coding is convenient, facilitate easy sorting and prevents filing error.

In case of using two colours, the top colour represents the first digit of the primary number i.e. 9 and the second colour the second digit i.e. 4. Any additional colour will represent secondary numbers.

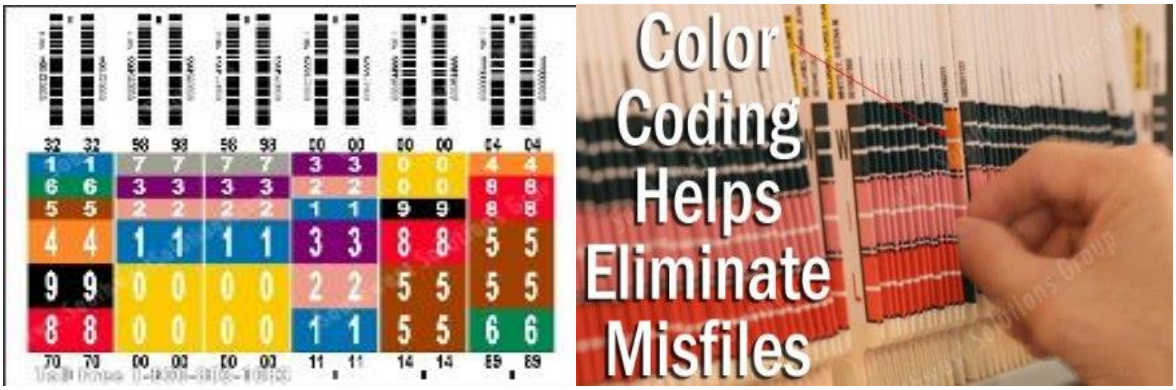


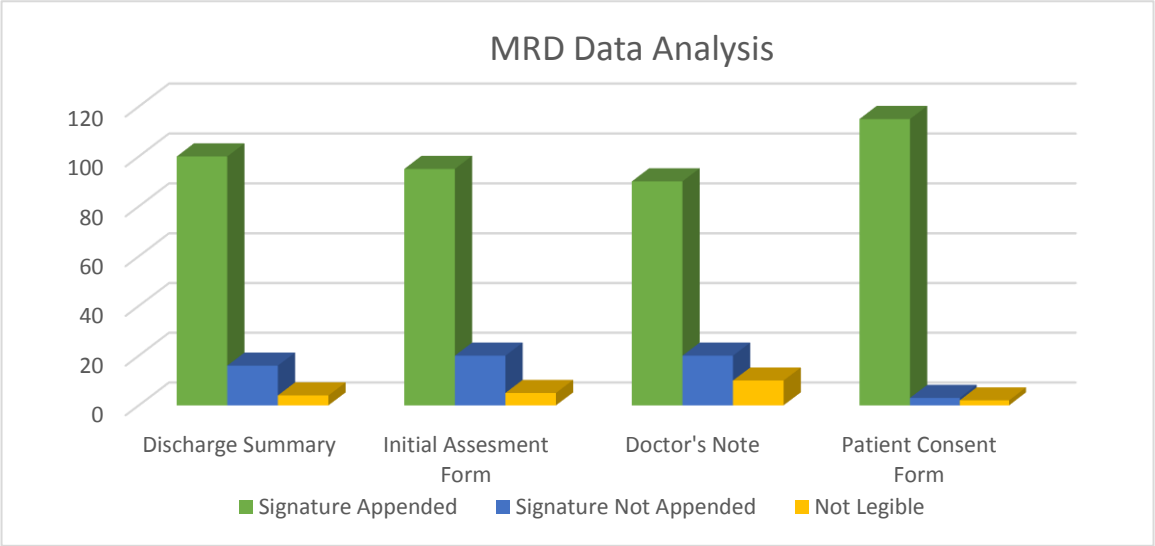
Fig 15 Colour Coding

PART III

1. Research Methodology

a. ***Sampling Method:*** Simple random sampling technique was used to get desired sample size.

Fig 16 MRD Data Analysis



Incidents	Signature Appended	Signature Not Appended	Not Legible
Discharge Summary	100	16	4
Initial Assessment Form	95	20	5
Doctor's Note	90	20	10
Patient Consent Form	115	3	2

b. ***Sample Size:*** 120 files were studied and assessed to check the MRD standard.

c. ***Tools and Techniques:*** Explorative study of 04variables (Discharge Summary, Initial Assessment Form, Doctor's Note with Time and Signature and Patient Consent Form) were selected to be checked in the files.

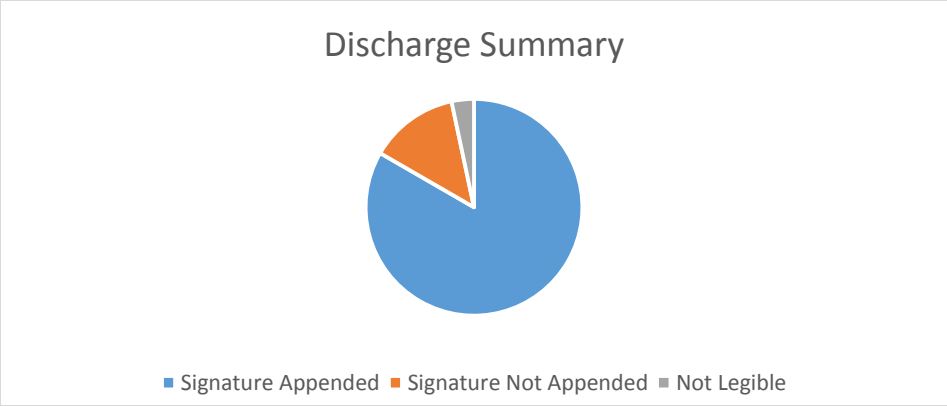


Fig 17 Pie Chart of Discharge Summary

d**. Discharge Summary documentation must include the following:**

- Problem list, including significant illnesses and medical conditions
- Medications
- Adverse drug reactions
- Distribution of copies to the referring physician and/or family physician
- Any history of alcohol use or substance abuse
- Biographical or personal data
- Pertinent history
- Physical exams
- Documentation of clinical findings and evaluation for each visit
- Laboratory and other studies that signify review by the ordering provider
- Working diagnoses consistent with findings and test results
- Brief summary of the management of each of the active medical problems
- Date for return visits or a follow-up plan for each encounter
- Previous problems addressed in follow-up visits
- Current immunization record
- Follow-up instructions and specific plans after discharge

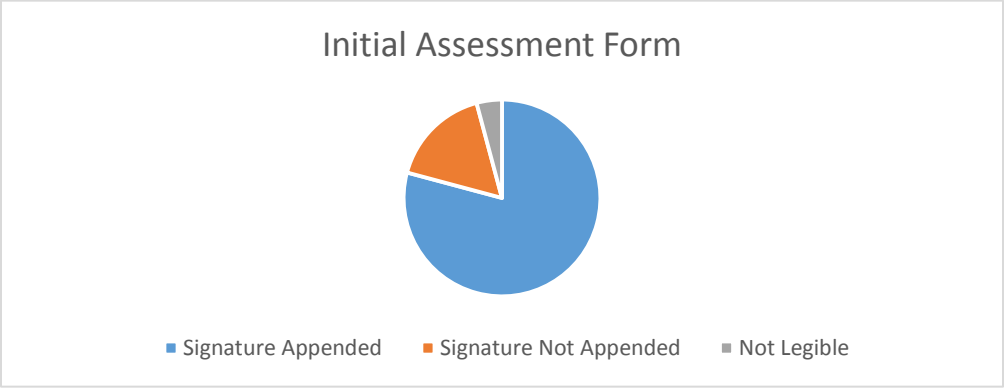


Fig 18 Pie Chart of Initial Assessment Form

e. **Initial assessment form must enter the following details:**

No.	Process	Responsibility	Supporting Document
1	All patients who come to the emergency department shall be assessed.	EMO/Treating Doctor /Staff nurse	Medical record
2	The following parameters shall be assessed in detail: • Chief complaints • History of illness • Allergies or any associated disease • Temperature, Pulse, Blood Pressure, and Respiration • Physical examination	EMO/Treating Doctor /Staff Nurse	Medical record
3	In case of mass casualties, triage shall be completed first, and then followed by assessment.	EMO/Treating Doctor /Staff Nurse.	Medical record
No.	**Process**	**Responsibility**	**Supporting Document**
	Initial assessment of admitted patient		
1	Initial assessment is made and documented in medical record with name, time, date and signature.	Treating Doctor/ Doctor on Duty	Medical record
2	The assessment shall include the following parameters: • Temperature, Pulse, Blood Pressure and Respiration. • Physical examination.	Treating Doctor	Medical record
3	The initial nursing assessment is done in the prescribed format.	Staff Nurse	Medical record

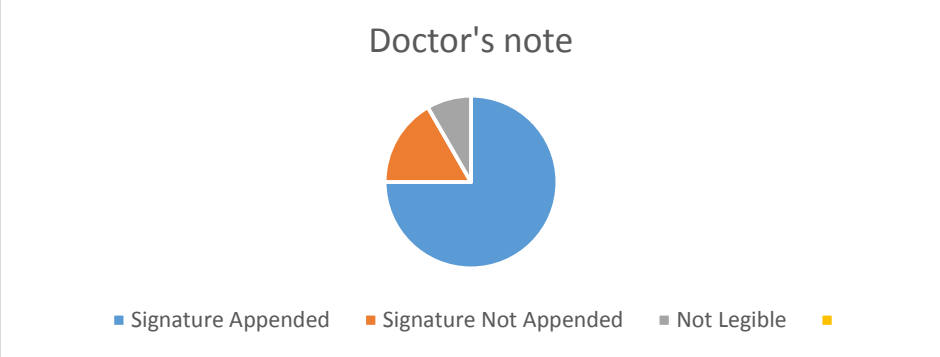


Fig 19 Pie Chart of Doctor's Note

f. **Doctor's note should have:**

- The contacts of the doctor that is his/her name, their address as well as the phone number
- The date and time of generating the document
- The user's name
- The reason as to why one chose to consult a medical doctor
- A certificate of medical consultation
- Documentation of the Patient Encounter
- A detailed review of the problem originally consulted on and any response to therapy
- A detailed physical examination related to the system/problem
- A review of any laboratory reports, consultation reports, reports of investigations performed
- A summary of conclusions, recommendations, and follow-up plans

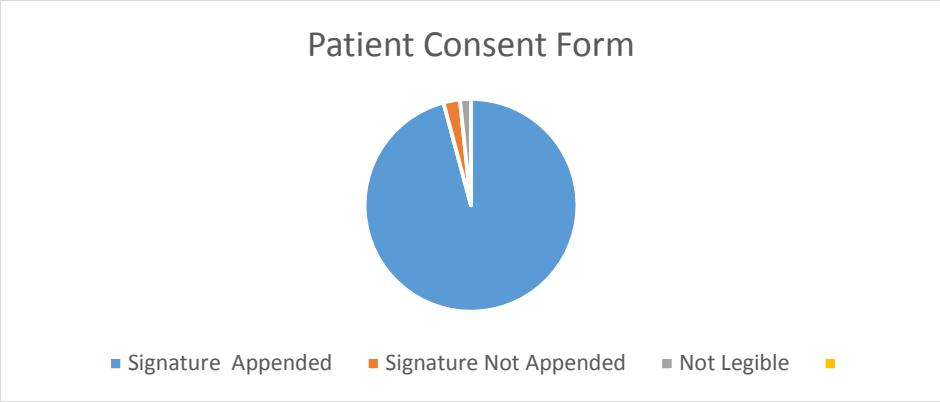


Fig 20 Pie Chart of Patient Consent Form

g. **Patient Consent Form:**

- Name and signature of the patient, or if appropriate, legal representative
- Name of the hospital
- Name of procedure(s)
- Name of all practitioners performing the procedure
- Risks & Benefits
- Alternative procedures and treatments and their risks
- Date and time consent is obtained
- Statement that procedure was explained to patient or guardian
- Signature of person witnessing the consent
- Name and signature of person who explained the procedure to the patient
- The diagnosis, if known
- The nature and purpose of a proposed treatment or procedure
- The risks and benefits of proposed treatment or procedures
- Alternatives (regardless of costs or extent covered by insurance)
- The risks and benefits of alternatives
- The risks and benefits of not receiving treatments or undergoing procedures

2. Results and Findings

a. In the nascent and adhoc MRD of Cantonment General Hospital the registers are available, maintained properly and kept on the racks.

b. The OPD files are kept according to the UHID nos and the IPD files as per IP nos.

c. The location of the MRD on the first floor along with the admin block is correctly planned for location for movement of patient files.

d. There is the requirement to install and upgrade the computer system with EMR and HER software for proper functioning of the nascent and adhoc MRD.

e. Proper documentation of patient files helps in conducting clinical trials under the supervision of the clinical head.

f. On an average there are 05-07 patients for admission and all the files are kept in the emergency/ICU and sent to the admission room of the respective wards once admission is confirmed.

g. Nutritional assessment by a dietician for all IPD patient is a must and should be endorsed in the patient file and not for the seriously ill and VIP patient.

h. The MRD complex should have adequate space for storage and complement of staff to maintain the huge medical records of patients with colour coding.

j. The IPD case sheets are required to be countersigned by Clinician or HODs.

k. There should be adequate amount of ward boys to carry the files to MRD on discharge of the patients.

l. *Tracer Record Card* plays a very vital role in the filing area.

i. It contains the record nos, Consultant's name and Date of retrieval.

ii. The cardinal rule in the filing area is that no record can be removed from the rack without being replaced by a tracer card.

3. Movement of Files

If a patient reports in the OPD and file is in any other department, there can be a delay in delivery of the patient file. The OPD should maintain a movement register. However to speed up the process and make searching of files faster, it is necessary to enter data in software for easy access and prevent misplacement of files.

4. IPD Files

All IPD files should be completed within 72 hours and forwarded to the MRD properly arranged and signed. The MRD should carry out checks for completion of *progress notes, consultations, informed consents, pre& post Anesthesia evaluation* along with *discharge summary*.

5. Assembly of Medical Records

The patient files should be assembled and arranged in a prescribed standard format :-

a. Patient Admission Slip and Master Patient Index(MPI)
b. History Sheet
c. Plan of Care
d. Nursing Initial Assessment
e. Nutrition Assessment Form
f. Progress Card
g. Investigation Record
h. Observation Chart
i. Lab Reports and Imaging Tests
j. Consent Form
k. OT Notes
l. Patient briefing form
m. Blood Bank services
n. Discharge Summary

6. Medical Council of India guidelines on Medical Records: Display of

The issue of medical record keeping has been addressed in the Medical Council of India Regulations 2002 guidelines answering many questions regarding medical records. The important issues that have been addressed are as follows:-

i. Maintain indoor records in a standard proforma for 3 years from commencement of treatment (Section 1.3.1 and Appendix 3).
ii. Request for medical records by patient or authorized attendant should be acknowledged and documents issued within 72 hours (Section 1.3.2).
iii. Maintain a register of certificates with the full details of medical certificates issued with at least one identification mark of the patient and his signature (Section 1.3.3)
iv. Efforts should be made to computerize medical records for quick retrieval (Section 1.3.4).

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