Work Book- DMRS- SCTIMST

SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY

Thiruvananthapuram – 695011

SUMMARY OF PROCEDURES DONE

WORK BOOK

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PROGRAMME : DIPLOMA IN MEDICAL RECORDS SCIENCE

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PREFACE

This workbook, I have done as a part of my training in the Medical Record Department for the **DIPLOMA IN MEDICAL RECORDS SCIENCE (DMRS)** course at **SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCENCES AND TECHNOLOGY.** Through this book, I would like to present some details about medical records, its value, organization and administration of medical records department and its functions. It also includes my observations and work that I have performed during my training period.

DMRS is a two years full time residential programme for graduate in biology or statistics. Selection is done through national level entrance examination followed by interview and medical examination. At present the institute offers only two seats. The aim of this course is to prepare well-qualified personnel to handle medical records and thereby help to improve the quality of medical care that we are providing.

Our syllabus includes subjects like Anatomy and Physiology, Medical Terminology, Medical Coding, Medical Record Science, Biostatistics and Computer science. Clinical Subjects and Hospital Administration. The course schedule consist of theory classes, practical training and observation to other department as well as to other Institutes and test papers. During training programme we are assigned to medical record department as well as Out Patient Departments. The computerization in both places enables us to make things fast. Diploma is awarded after the written test and viva-voce, conducted at the end of the second year.

CERTIFICATE

I, Miss. ASHA KRISHNA R.O. hereby declare that I have actually performed all the procedures listed/carried out the project under report.

Place: Thiruvananthapuram

Date: 30-11-2006

Signature: AshaKrishnaR.O

Name: ASHA KRISHNA R.O

Forwarded: She has carried out the minimum requirement of training programs.

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I thank, the director of the institute Dr. K. Mohandas, Medical superintendent Dr. Douglas Linsby, Dean Dr. K. Radhakrishnan, and Registrar Dr. A.V. George, for their advice and kind attention towards me. I am also very thankful to Dr. Krishna Kumar Nair, Dr. Sharma. I extend my heart full thanks to all Staff members of our MRD. I extend my heart full thanks to all Staff members of other departments for their help during my training period in this institute.

I would like to convey special thanks to Medical Records Department of JIPMER Hospital, Pondicherry and Department of Anatomy- Medical College, Thiruvananthapuram.

Finally I would like to acknowledge my sincere thanks to my colleagues, seniors and juniors for their help in performing my duties successfully.

THE INSTITUTE

Sree Chitra Thirunal Institute for Medical Science and Technology, Thiruvananthapuram is an institute of national importance under Department of Science and Technology, Government of India. The Institute is empowered to grand medical degrees, diplomas and other such distinctions. Such titles are recognized to the Indian Medical Council Act in 1956 as per circular MCI-24 (1) 8-med (491) dated 11 may 1998. It is one of the common wealth universities in India. This Institute has connection with World Health Organization also.

The institute has completed Silver Jubilee celebration in 2002. This Institute is established with the great help from royal family of Travancore and govt. of Kerala. This Institute has a hospital wing which is a tertiary referral center providing advanced facilities for cardio-thoracic and neurological disease. A bio-medical technology wing is situated in Poojappura, aimed to promote bio-medical technology research. The research wing co-operates with various companies and agencies and makes various types of biomaterials. A center for public health science studies is working near to the hospital complex. The institute offers various degree, diplomas, certificate programmes and training programmes.

CONTENTS

INTRODUCTION

The Medical Records Department is that part of a necessarily complex organization which is concerned not only with the custody and processing of a variety of clinical documents but also a wider range of administrative procedure associated with patient activity in hospitals including such things as inpatients admission and discharge, maintenance of waiting lists, out patients appointments and reception, registration follow up procedures and statistics as well as training of Medical Record personal.

The Medical Record is an orderly written report consisting of the patient's complaints, the diagnostic findings, treatment given, progress of the disease or complaint and finally the end results of the treatment. Medical Records are important tool in the practice of medicine. They serve as a basis for planning patient care, provide means of communication between the physician and other groups contributing to the patient care, documentary evidence of the course of the patient's illness and treatment, and serve as a basis for review, study evaluation of the medical care. They are legal documents too.

DEFINITION OF MEDICAL RECORD

Medical record is defined as a clear, concise and accurate history of patient's life and illness written health professional contributing to patient care.

Mrs. Edna K. Huffman defined it as Medical Record is the compilation of facts of patient's life and health history including past and present illness and treatments written by health professionals contributing to patient care.

Dr. McGibbony defined Medical Record as a clinical, scientific, administrative and legal document relating to patient's care in which recorded sufficient data written in sequence of events to justify the diagnosis and warrant the treatment and end results.

Kipling Stalwaarts defined Medical record as Who, What, Why, When and How of patients care during hospitalization.

MEDICAL RECORD – VALUES AND USES

The Medical Record is a compilation of pertinent facts of a patient's life and health history, including past and present illness and treatment, written by health professionals contributing to that patients care. The medical record practitioner should ensure that the medical record is complete and useful. The task entails a thorough knowledge not only to the medical record and its content but also ancillary information concerning purpose, ownership, values, uses and responsibility for medical record.

PURPOSE

The main purpose of the medical record is to accurately and adequately document a patient's life and health history, including past and present illness and treatment with emphasis on the events affecting the patient during current episode of care. Main purposes of the medical records are following.

- Provides communication between a physician and other health care professionals.
- It helps to plan in the patient care.
- It is a documentary evidence of the course of patient care in the hospital.
- For scientific analysis, evaluation and study of the patient care.
- For medico- legal purpose.
- For research information.
- For 3rd party claims like life insurance employees state insurance etc.

OWNERSHIP

The medical record developed in the hospital or other health care facility is considered to be the physical property of that facility. The information contained herein, however is the property of the patient and the must be available to the patient upon appropriate request.

VALUES

A good medical record is valuable in the following ways:

1. ***To the patient:*** Because patients forget and records remember, it helps the patient in the following manners.
    a. Continuity of medical care in case of re-visits.
    b. Repetition of tedious examination, expensive and risk-some tests can be avoided, thus saving the time and life also.
    c. Saving expenditure.
    d. For the purpose of certificate.

2. ***To The Doctor:*** It is useful to the doctor in the following ways:
    a. To continue treatment.
    b. Evaluation or results of new drugs, treatment etc
    c. Compare the results with similar results obtained throughout the country for a period.
    d. To record medico – legal involvement.
    e. To review all cases he had during a particular period.

3. ***To the hospital:***
    a. To justify the results of the treatments.

b. Serves as a measuring instrument for judging the quality and quantity of work done by Doctor, Nurses and Paramedical staff.
c. For medico-legal purpose.
d. Whether the service rendered where according to the set standards.
e. Utilization of the data compiled from records for planning of services, budget, staff, equipment etc

4. ***Medical research:*** Research can be done only on the basis of written data. Case studies supply practical and reliable source of material for advancement of medical science. Group studies show varying results and reasons for these differences.

5. ***Teacher and student:*** Teacher can present all the symptoms of a disease. The student should learn the art of writing of the medical records.

6. ***Public Health Agencies:*** (National and International) : Complete statistical data on disease from discharge records and out-patient records:
   a. District health services (state level)
   b. Director General of Health Services (national)
   c. World Health Organization (international)

7. ***For research purpose.***

8. ***For use of third party claims like life insurance, Employees State Insurance etc.***

CHARACTERISTICS OF MEDICAL RECORDS

An adequate medical record indicated adequate care: on the other hand a poor medical record indicates poor care. A patient may have received adequate care, which is poorly documented. For continuity of care, it may be necessary to refer to the original record. Characteristics of adequate medical record documentation are the following.

1. ***Complete:*** To be complete the medical record must contain sufficient data written in sequence of events to justify the diagnosis and warrant the treatment and end results.

2. ***Accurate:*** the contribution of all the staff concerned (Doctors, nurses, paramedical staff) should be thoroughly checked and the opinion given by them be spotted by findings.

3. ***Adequate:*** The physician and his assistants should mark the progress note as often necessary till the patient is discharged. We can judge the medical record standard through the qualitative analysis performed by the medical record department.

4. ***Appropriate Documentation:*** the quality of medical records depends on information entered by those professionals authorized to provide care and responsible for documenting that care. It is further required that the record contain the originals of all report. The record shall be sufficient to enable the attending physician to provide effective continuing care to determine the patient's

condition at any given time. Additionally the record shall provide pertinent information for utilization review and quality assessment purpose.

5. ***Proper Authentication:*** Those professionals providing care to a patient must document the care they provided and date the entry. They also verify this care was given by signing the entry. I hospitals with house staff, the attending physicians must countersign at least the history, physical examination and discharge summary written by the house staff. Any entry, which required countersignature of the attending physician must be defined in the medical staff rules and regulations.

6. ***Abbreviations:*** Abbreviations and symbols are to be used only when they have been approved by the medical staff and when there is an explanatory legend available to those authorized to make entries in the record and to those who must interpret them. Each abbreviation and symbol should have only one meaning. The final diagnoses are recorded without abbreviations.

7. ***Timeliness:*** The entries regarding patient care can be made as close as possible to the time of occurrence of the event being documented. Current records (the history, physical examination and laboratory and x-ray data etc) are those which should compiled within 24-48 hours after admission. Upon discharge of the patient, the record is to be completed with in 15 days.

8. ***Legibility:*** The usefulness of the record depends on the part of legibility, when it is economically feasible and appropriate medical entries be typed.

9. ***Correction of errors or omissions:*** One should give special attention to avoid errors and omissions in the medical record. Errors are corrected by drawing a single line through the mistake, writing the word "error" near it and recording correct information. The corrected person should be erased or painted. If an entry is omitted, the entry is made after the last entry of that day with an explanation regarding the omission. If an entry is made in another day, it is added between the lines on the proper day with the date of entry and sign. The errors and omissions should be corrected and entered before the facts about the patient were forgotten.

10. ***Low data redundancy:*** On close observation we ca found that the same data items are recorded in several places in the same record. This leads spending more time unnecessarily, and the information is stored and microfilmed cause great expenditure of money. Eliminating data recorded more than once in the medical record from design will reduce data redundancy.

11. ***Reliability:*** Reliability means consistency. For example a discharge abstract compiled on a patient today and the discharge abstract compiled on the same patient two months later should be identical. For this the data recorded by various members is clear and accurate.

RESPONSIBILITY FOR MEDICAL RECORDS

The primary function of the hospital is to provide adequate care and treatment of patients. It is the responsibility of the facility to provide a record for each and safeguard the record and its content. The responsibility is scattered on all who engaged in the care of the patient. It can be studied under the following headings.

a) ***Governing body:*** Each hospital has a governing body aims at the management of hospitals. As a final authority, it is legally responsible for determining that patient receives high quality medical care, documented by a complete and accurate medical record.

b) ***Hospital administration:*** The administrators of hospital ensuring that the medical staffs adopt rules and regulations providing for maintenance of timely completion of medical records.

c) ***Medical Records committee:*** The major function of this committee is to change of form/formats of a medical record if necessary. Insure that details are recorded in proper manner to accommodate sufficient data about a patient. Insuring that there is proper filing, indexing, storage and availability of medical records. Advising and developing policies with the aid of legal counsel to guide medical staff, medical record director etc.

d) ***Medical staff:*** Medical staffs are the heart of the hospital. They have the responsibility to contribute to medical records. Accurate

recording of them helps to run the patients course in the hospital smoothly.

e) ***The physician:*** The major responsibility for an adequate medical record lies with the physician. Recording of information like history, physical examination, discharge summary etc written by interns, residents and other house staff must be reviewed, corrected and countersigned by attending physician. If the medical record is inaccurate, incomplete or insufficient, the patient, physician and the hospital are affected.

f) ***The nursing staff:*** In the absence of doctors, nurses are the care provider to the patient. Accurate recording of their observations helps the physician in taking decisions. The nursing staff should document what they did for the patient.

g) ***The Medical Record Personnel:*** The medical record practitioner works with medical staff for good medical records. The medical record personnel assist the physician in reviewing the recording for completeness. This analysis checks for omission and discrepancies and insure that the medical record comply with policies and standards established by the hospital. The medical record staff should pay special attention to store and retrieve files in most secured manner and providing to whom in need of medical information.

MEDICAL RECORD - ITS CONTENTS:

There are certain basic essential forms, which must be included in the medical record of the patient. These forms are necessary in the majority of the records regardless of the type of the patient.

BASIC FORMS:

1. ***Admission Record:*** This form is also called the social history record, the social data record, identification sheet or face sheet. It contains information of identification nature and space for provisional diagnosis, final diagnosis, secondary diagnosis, result, signature of the chief physician and the backside for authorization for treatment and operation etc

   Provisional diagnosis is an opinion given with incomplete knowledge of the case. Final diagnosis is defined as a statement of opinion arrived at after extensive study of the case. It should be complete and accurate. This wording of the diagnosis should confirm to the accepted terminology of the international classification of diseases. Secondary diagnosis is the secondary diagnosis is a diagnosis produced by a primary or one disease following a previous disease.

2. ***Case summary and discharge summary:*** This is a brief note of the entire Medical Record of a patient. It is valuable aid for the attending physician on re- admission of a patient or follow-up treatment at the OPD. He can quickly scan the report to have a clear picture of the patient's illness, treatment and advise at the time of discharge. The

Discharge Summary should be concise and contain only essential information regarding the patient's illness, investigations and treatment. It should also include the recommendation given regarding further visits to the hospital. It is usually filed immediately under the face sheet. The discharge summary sheet should be signed by the attending physician or the chief of the unit.

The discharge summary is useful in the following manner: It can be used to make photocopies to send to insurance companies or other purposes, thus saving the time of making the abstract. A copy shall be kept in the Outpatient Record for easy reference when patient reports for follow-up treatment. A copy may be sent to the referring physician or consultant for his official records. Copies may be made for the residents who wish to keep a record of the case at which they have assisted for their study purposes.

3. ***History Record:*** The primary purpose of a history and physical examination is to assist the physician in establishing a diagnosis and decide the further care and treatment of the patient. The history and physical examination records be prepared to fit the case rather than to have to fit the records through stereotyped form. The essential facts should always be recorded within 24 hours in a concise and progressive manner an condensed into the briefest reports consistent with the presentation of all essential details required for proper case of the patient in the present illness and if needed for reference in future illness.

4. ***Physical Examination Record:*** This is the result of a thorough examination of the patient by the physician and is a statement of his

observation and findings supplemented by diagnostic aids. At the conclusion of this examination, a brief summary is recorded and the doctor's impression ie. the working diagnosis of written. In a major teaching hospital it can be recorded by the intern, residents and approved by the attending physician.

5. ***Laboratory Report master*:** Laboratory examinations are ordered by or under the direction of the attending physician. These reports are prepared by the Medical Technologists and send to the ward where these are included in the Medical Record of the patient.
    - Original reports are pasted on the master sheet that becomes a part of the medical record of the patient. In some hospitals the reports are copied on to the master sheet.
    - The reports should be pasted in chronological order according to the date or investigations ordered.
    - Columns for reports are used for easy identification and location.
    - All reports must be checked for accuracy of hospital number, name, date and signature of the technologist.
    - Similar procedures should be adopted in case of ECG, EEG etc

6. ***Progress Record***: Progress notes are specific statements written by the physician or his assistants. They provide a summary of the condition of the patient on admission and a chronological record of the patient's progress written every day, or even few hours during a critical condition. They are very important in the day-to-day care of

the patient and in medico-legal need. The attending physician or his assistants must sign them.

7. ***Physicians Orders***: This is a record of all orders given by the physician and it is also known as treatment record. All orders should be written on this order sheet and signed by the physician. Orders are sometimes given orally or on telephone and his assistant or nurse to the order sheet transcribes this. The physician countersigns them on his next visit, in order to establish his responsibility for the given orally or on telephone.

8. ***Nurses Bed Side Record***: The nurses, record their observation and treatment and services rendered to the patient during the absence of the physician on the nurses beside record. It serves as a means of communication between the doctor and nurse, as the nurse change shifts and do not always see the doctor. It serves 4 major purposes.
    - As a record of the patient's condition during the absence of the physician.
    - As a time saver and an eliminator of errors.
    - As a proof of work done.
    - To complete the medical record.

    All nurses' notes should be signed by the nurse who rendered the service. Because of the frequent change of nurses on duty, it becomes necessary at times to identify who has given certain treatment.

9. ***Graphic Chart***: This record is started on admission of the patient to the ward at the same time the nurse bedside record is started. It helps

the physician to have a quick picture of the temperature, pulse and respiration of the patient. It also provides space for recording the stools, column of urine and blood pressure.

These forms themselves do not guarantee accuracy and adequacy of Medical Record unless:

- Forms with proper space for recording essential data are used.
- The physicians carefully record the information.
- Head entries on each form must be completed as soon as the patient is admitted.
- Titles given right hand corner or coloring of forms are to facilitate identify and location, when searching through a record.

Besides these basic forms there are some special forms are also available which varies from patient to patient depending upon the case of illness. The important ones are.

- **Anaesthesia Record**
- **Operation Record**
- **Histopathological Record**
- **Labour Record**
- **Neonatal Record**
- **Consultation Record**
- **Blood Transfusion Record**
- **Intake and output chart**

MEDICAL RECORDS – FORMAT TYPES

Hospital standards are revised periodically to reflect changes in the delivery of health care services and with advances in medical care. The hospital shall maintain Medical Records that are documented accurately and in a timely manner, that are readily accessible, and that permit prompt retrieval of information, including statistical data. Medical Record information can be structured in three ways.

- Problem Oriented Medical Records (POMR)
- Source Oriented Medical Records (SOMR)
- Integrated Medical Records (IMR)

1. **Problem Oriented Medical Records (POMR):** The Problem Oriented Medical Records was introduced by Lawrence L. Weed in the 1960s. The POMR places the major emphasis on the specific problems that patients have. It provides a systematic method of documentation to reflect logical thinking on the physicians directing the care of the patient. The physician defines and follows each clinical problem individually and organizes them for solution. POMR has four basic components.

   a. The data base
   b. The complete problem list
   c. The initial plans
   d. Progress notes

The element of the data base include the chief complaint, present illness, patient profile and related social data, past history and reviews, physical examination and baseline laboratory data.

The problem list has problems that require management or diagnostic workup, including medical social and economic and demographic problems. The problem should be titled and numbered as a table of contents. Thus it contains the statement of a symptom, an abnormal findings, a physiological finding or a specific diagnosis conditions suspected or ruled out are not included.

The initial plans describe what will be done to learn more about the patient's condition, treat and conditions and educate patient about the conditions. Plans fall into 3 categories.

a. More information for diagnosis and management.
b. Therapy and
c. Finally the patient education

Progress notes are the follow up for each problem. Each note is preceded by the number and title of the appropriate problem and it consist of the following elements: subjective (symptomatic), objective (measurable, observable), assessment and plan statements. This process is SOAP and the writing of progress notes in the POMR format is often referred to as "soaping". This method recording has many followers because it is easier to follow the course of treatment and the resolution of a problem.

2. **Source Oriented Medical Records:** Traditionally, the hospital medical record is organized in sections according to the patient care departments which provide the care and the data, thus the term "sours oriented" medical records. Within each section the forms are arranged according to date. The major advantage of the source oriented format is that, it organizes the reports from each source together, Thus making it

easy to determine the assessment, treatment and observation a particular department has provided. Conceptually the physician integrates the data from the various sources by means of progress notes and it should provide an assessment of existing problems, reasons for therapeutic decisions, and course of illness or stay in the hospital. Critics of this system state it is not possible to determine all the patients' problem with this format. It is also difficult to determine all the treatment being provided for the patient at a given time. They often cite lack of consistent organization

3. **Integrated Medical records:** In integrated format, the information is organized in strict chronological order. The forms from various departments are intermingled. To do this, blank pages are used on which notes, report or test results are placed in sequence as they are written or received. Thus the history and physical examination may be followed by a progress note, a nurse's note, an x-ray report, a consultation and so on.

The advantage of the integrated format is that all the information on a particular episode of care is together. This provides a clear picture of the patients' illness and response to treatment. The disadvantage is that it is difficult to compare similar information in different admission time.

There may be varying degrees of integration of information. The most common variation allows for integrated process notes, with all providers recording on the same on the same (s) sequence. All other reports are maintained in sections. Advantages of the integrated progress notes are:

1. A patient's progress can be determined easily

2. It is unlikely that one professional will overlook the documentation made by another professional, because all the information is concentrated in one place.

3. The number is specialized record forms may be reduced, thus reducing the bulk of the record.
4. The team concept among health professional is encouraged.
5. Progress notes are recorded promptly to maintain chronological sequence.
6. Unwarranted destruction of significant observation made by nursing staff is prevented.

Disadvantage of this type of integration are the following:

1. Only one individual can document or review progress notes at a given time.
2. It may difficult to identify the profession of individual making a particular entry unless notes are always followed by a title of recorder.
3. Physicians often feel their documentation requires highlighting in some manner to differentiate it from that of the other.
4. Special training sessions for concise and appropriate documentation by non-physician professional staff are necessary.

MEDICAL RECORDS DEPARTMENT-NEED AND ITS FUNCTIONS

Medical Records library is the pool and storehouse of health information. Every health care facility should have a proper place for lodging the medical records for storage and security.

The location of medical records department

The medical records section should be logically located in the most approachable part of the hospital by which facilitates easy transport of records. The location of department should be in proper place to provide medical information to health care providers quickly.

The medical record library should have adequate space for accommodating the office and for storing records. Based on the storage of records there are two types of medical records libraries.

Centralized and Decentralized: Centralization refers to filing of patients files in one area. If outpatient clinic care is regularly provided in a hospital, a unit record is most practical. In decentralization filing system, files of different sections filed in different areas.

The medical record department identifies some specialized branch of hospital administration. It is concerned not only with the processing of a variety of clinical documents but also a wider range of administrative procedures associated with patient activity in hospitals including such things as inpatient admission, discharge, maintenance of waiting list, outpatient department management, reception, registration, follow up

procedures and statistics as well as training of medical records personnel are involved in the duties of medical records department.

AIMS AND OBJECTIVES

1. To maintain detailed record of patient's history, physical examination, investigations, treatment and diagnosis.
2. To provide training to medical students in the science for taking full medical history of patients and do complete examination to arrive at a provisional diagnosis.
3. To prevent the loss of records.
4. To centralize all records in the medical records department thus making records promptly available to doctors for research.
5. To maintain methodically, patients sociological data on "Alpha Index Cord", so that even when a patient loose his/her hospital numbers, the record could be easily located and made available.
6. To make laboratory, X-ray and other investigation reports permanently available in original in the records.
7. To ensure economy without sacrificing efficiency.

The major functions of the medical records department include the following.

1. ***Registration of the patients:*** Each and every patient who came in a health care facility should be registered before consulting with medical care providers. The important registration details usually recorded are name of the patient,

father's/husband's/wife's/guardian's name, age, sex, religion, marital status, full postal address, occupation of the patient, facility or specialty in which he is registered, referral doctor's name and address, referral diagnosis etc. The medical records start in the registration office. An identification number is given to the patient at the time of registration, usually becomes the hospital number of that particular patient.

2. ***Admission:*** In the majority of the cases, the patient's first and all important contact is with the staff of the medical records department. The admission service is a division of the medical records department. To a great extent the reputation of this department and also the institution depends on the good well established at this point. Hence the efficiency of the staff is very much required. Various procedures of admission are the following:

    - Prepare admission records for all the patients including new born
    - First prepare preliminary admission advice taking all the required particulars from the patient or accompanying relatives. Record change of address if any in the OP case sheet.
    - Allot MRD number to all the patients to be admitted.
    - Record hospital number, name, age, sex, religion, ward, unit, date, and time of admission and address in the admission register.

- Check up with the patients and check OP case sheet whether the patient is being admitted for the first time to the hospital. In case the patient was admitted previously right in the readmission column YES and send the admission advice same time to MRD.
- In all admissions, authorization for treatment and operation, the signature or thumb impression of the patient or nearest relative to be obtained.
- While preparing admission record for new born cases, care should be taken to record Mother's hospital number in the new born case sheet and new hospital number in the Mother's case sheet.
- Prepare daily admission list and hand over to the census clerk next day.
- Prepare the geographical distribution statement of the admitted case every day.
- Keep proper account of new and old admissions.

After completing the formalities in the admission room send the patients to the cloak room for changing the dress before sending to the ward.

3. ***Census:*** The hospital inpatient Census is the number of patients occupying beds in the hospital at the given time. The census taking hours is generally specified as midnight because this period is usually the time of least activity in the admission and discharge of patients. If midnight is not a practical time, any other specified hour may be designated, but it should be the same hour for each day. The census may be compiled by the admitting/ registration

department; nursing service, business office or medical records department; and it may be collected manually or by computer. If the census is done by computer, the necessary data like admissions, discharges, and transfers are entered into the computer as they occur. During manual method of census report from each nursing unit is sent to the department responsible for combing them into a complete master census. Thus the procedure done by the medical record department includes the following:

a. Collect daily admission list from central admitting office.
b. Collect from the sister-in-charge of the ward (I) daily census report (II) discharge case sheets whether complete or incomplete (III) any investigation and lab reports received by the ward sister's after the discharge of the patient.
c. Check the number of admissions and discharges with the actual number of admissions list and discharged records.
d. Change the units and wards in case of transferred cases; note the same on the admission record.
e. In case of transfer correct the ward numbers on patient index cards in admission and reception office and medical records department.
f. Hand over all discharged records and ward census reports to the assembling and deficiency check desk.
g. Prepare consolidated daily census repot and forward the same to the discharge analysis desk along with admission list.

h. Change the census figure in the daily census board.

i. Cross-index the MRD number with the hospital number in the "Cross Reference Register".

j. Separate the outpatient and inpatient charts from discharged case sheets.

k. Hand over inpatient charts to assembling and deficiency check desk and outpatient charts to coding and indexing desk (OP).

l. Give a tick mark against the number in the "Incoming Register" for number of case sheets received.

m. Hand over all the laboratory investigation and other reports to the Incomplete Record Control desk.

The newborn infant census is reported separately. The newborn nursery census is the number of newborn inpatients occupying hospital newborn bassinets. Census is one of the tools for statistics.

4. ***Analysis:*** The medical records are to be analyzed for accounting daily admissions and discharges, age-wise, sex-wise and department-wise classification of patient, age group classification, paying bed and non-paying bed classification, treatment result, percentage of bed occupancy, bed turnover rate, average stay of patient, mortality rates etc

5. ***Assembling and deficiency check:*** The assembling and deficiency checking section collects the census and discharged records of the previous day and make entries in the respective registers. Arrange the records in the standard order and the deficiencies are marked. All the

deficiencies are pointed out in the deficiency check sheet. The check sheet helped the doctor to complete the record during his weekly visit to the department with his team of doctors. The deficiency check sheet is destroyed when the record is complete. The procedures in deficiency checking are the following:

- Receive the discharged records along with the ward census clerk and admission advice from the admitting office.
- Handover the ward census report to discharge analysis desk.
- Enter the case sheets due from ward in the pending register.
- Stick of loose reports such as lab reports, ECG etc
- Assemble records in the standard order and date wise.
- Staple deficiency checks slip in all the records which are incomplete.
- Prepare case sheets folder with inpatient number, patient name and treating unit.
- Receive and prepare master index cards of admitted cases from permanent index card cabinet.
- Transmit records to discharge analysis desk.
- Enter daily admission and discharge particulars in inpatient accession records register.
- Re-admission advice forms to be sent to complete records control desk for sending old case sheet to ward if a demand is received.

- Inform the medical records supervisor about the due case sheets.
- Record hospital days and initial the column 'deficiency checked by'.

6. ***Coding:*** Diagnostic and procedural data can be classified in many ways, depending on the purpose of the classification system and use being made of it. The most efficient classification system for hospitals is one that yields adequate information about large numbers of inpatients and ambulatory care patients and permits retrieval of the maximum number of patient medical records with review of the minimum number of records. A perfect design for classifying diagnoses, surgical procedures and pertinent non-surgical procedures would anticipate every request for health data information and patient record retrieval in all hospital that use. Such a system has not been designed and may be impossible to attain.

Classification systems presently used in the health care field range from those statistical in nature to those that area catalogue of terms for describing and recording clinical, pathological or procedural terms. Although one classification system predominates in hospitals, medical record practitioners should familiar with the existence and purpose of other classification and listing systems designed for use in the health care field.

The International Classification of Diseases (ICD) is a publication of the World Health Organization. Revisions are scheduled every ten years, and the ninth revision (ICD-9) is nowadays used in hospitals. But the tenth revision is also introduced in some

super specialty hospitals. The ICD-9, Clinical modification (ICD9-CM) is used in hospitals and state and federal agencies responsible for preparing vital statistics on births, deaths, and foetal deaths.

Medical coding is the transference of verbal descriptions of diseases, injuries, procedures and surgeries into numerical designations, which is an exact translation of the meaning of diagnosis according to some established criteria. Placing of a diagnosis in a class or group of diagnoses related to each other is called classification.

Classification systems are used to organize the heath care data for easy and meaningful retrieval. Coding is performed to meet internal and external demands for medical information. Third party payers and outside agencies use this information to forecast health care data, evaluate utilization of health care facilities and the appropriateness of health care costs and conduct epidemiological studies.

7. ***Indexing:*** Hospital maintain various indices and registers so that patient medical records and other information can be located and classified for patient care purposes, case studies, utilization management and other administrative purposes and for compliance with state regulations or licensure requirement. The various indices are the Master Patient Index (MPI), Disease and Operation Index (DOI), Physician Index (PI), other special indices etc.

8. ***Hospital Statistics:*** Registration, Admission, Birth and Death register etc should be maintained properly. The details as to length of

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8. ***Hospital Statistics:*** Registration, Admission, Birth and Death register etc should be maintained properly. The details as to length of

stay, average percentage of bed occupancy, autopsy rate, age and sex of the patients, death rates, operation figures, X-ray and lab examinations, Medico-legal cases, daily bed census and diagnosis classification.

9. ***Assistance to Medical Staff:*** Medical records should be retrieved and issued to medical staff for specific studies in their field and help them in preparation of statistical tables, group studies, work sheets, follow up questionnaires and alike.

10. ***Advisory Services:*** Research and follow up projects, research workers should be assisted in developing method of collecting data and making statistical tables etc.

11. ***Training:*** Training should be imparted to personnel of the medical records department on the subject of Anatomy and Physiology, Medical Terminology, Fundamentals of Clinical sciences, Procedures of General and Hospital statistics, Proper compilations and presentation of reports, Designing of Medical Record forms, Numbering and filing systems and maintenance of various indices.

12. ***Correspondence:*** The medical records department does a huge correspondence with the patients for issue of certificate for birth, death, sterilization, disability, medical fitness certificate, certificate for hospital treatment in reimbursement bills, issue of documents concerned to medico-legal aspects to police authorities and court of law etc.

13. ***Central Admitting office:*** The organization of Central Admitting Office in a hospital is essential from where all admissions are routed

to various wards and it plays a vital role in the hospital. The central admitting office is called as the nerve center of the hospital and it is also the face of the hospital and the success and functioning of Medical Records Department depends on this office because of 100% control of admissions and discharges can be achieved through its office and in the absence of this important instrument, the hospital orchestra would fail to give a fine performance.

14. ***Medical Record Forms Design:*** The medical record committee is responsible for designing of medical record form. Before implementing a form, check the use and validity of that form. Forms should carefully design to satisfy the need of documentation and saves much time. Color coding of forms facilitate easy accession.

15. ***Conducting Medical Audit:*** The medical audit is account for or to evaluate the performance of those engaged in the care of patients. It is an objective method for applying a yardstick to the quality of professional performances. It is an analysis of clinical work. It is a systematic review of professional work in a hospital. It is an attempt to assess the quality of the care provided by the staff. Medical audit simply means that it is a systematic and objective way of evaluating the quality of care rendered by the medical care team.

Medicine is advancing at ever- increasing pace and it demands the higher standards of those engaged in it. Every patient entering a hospital expects a high quality of medical care. He has the right to demand it and it is the responsibility of every hospital to provide it. But most often it is not given owing to various reasons. So there is a long gap between the quality of treatment than "can be given" and the

treatment "actually given". Especially when today's health care is so complex in nature it calls for continued professional evaluation. The hospital can guarantee the best medical care to the patients only if there is periodical evaluation of the work of the medical care team. This kind of periodical evaluation enables the hospital administrators to see whether the efforts of the physicians supplemented by the hospital facilities are in accordance with the reasonable expectations of present day scientific medicine. Because the society has doubts and even resentment about the standards of medical care, especially when huge sums are spent after years of medical and public health budgets. Medical audit is necessary to give an assurance to the public that there is some monitoring of the clinical standards. It is necessary to evaluate the quality of care to see that standards of excellence are maintained and actions taken to improve those standards that fall below accepted levels. The hospitals those are responsible for the proper treatment of patients entrusted to their care, must have a medical audit for the efficient performance of the obligations.

16. ***Handling Medico-legal cases:*** Hospitals and health care institutions are required to maintain medical records. These requirements are found either in statutes or administrative regulations in every state. The medical records serves as a secondary and important purpose and being a legal document, is as such, affected by laws, rules, regulations and institutional policy. The medical record is the property of the health care facility, while the personal data contained in the record is considered confidential communication, which must be protected in the interest of the patient. The record is

compiled, preserved and protected from unauthorized inspection for the benefit of the patient, the facility and the physician, as required by law in some states, and by administrative practice in others.

Since the medical record is frequently used as a legal evidence regarding the patient's care, it can serve as a protection facility for the physician and patient, only when it clearly shows the treatment given to the patient, by whom and when. It must show that the care and service given by the hospital and by the physician were consistent with good medical practice. By the same token, the record may prove to be a potent weapon against the physician in any action by the patient when these standards are not met.

The medical record must be maintained to serve the patient, the health care providers and the institution, in accordance with the requirements of legal, accrediting and regulatory agencies. The release of information should be closely controlled with well-laid procedures. A properly completed and signed authorization should be required for the release of all health information.

17. ***Certificates:*** The medical record department issued certificates for financial assistance from various sources, wound certificates, certificates for medical attendance, train concession certificates etc.

MEDICAL AUDIT:

The word "Audit" means to take into account or to check. Medical audit is to account for or to evaluate the performance of those engaged in the care of patients. It is an objective method for applying a yardstick to the quality of professional performances. It is an analysis of clinical work. It is a systematic review of professional work in a hospital. It is

an attempt to assess the quality of care provided by the staff. Medical audit simply means that it is a systematic and objective way of evaluating the quality of care rendered by the medical care team.

Why Medical Audit?

Medicine is advancing at ever-increasing pace and it demands higher standards of those engaged in it. Every patient entering a hospital expects a high quality of medical care. He has the right to demand it and it is the responsibility of every hospital to provide it. But most often it is not given owing to various reasons. So there is a long gap between the quality of treatment that can be given and the treatment actually given. Especially when today's health care is so complex in nature it calls for continued professional evaluation. The hospital can guarantee the best medical care to its patients only if there is periodical evaluation of the work of the medical team. This kind of periodical evaluation enables the hospital administrators to see whether the efforts of the physicians supplemented by the hospital facilities are in accordance with the reasonable expectations of present day scientific medicine. Because the society has doubts and even resentment about the standards of medical care, especially when huge sums are spent after year on medical and public health budgets. Medical audit is necessary to give an assurance to the public that there is some monitoring of the clinical standards. It is necessary to evaluate the quality of care to see that standards that fall below accepted levels. The hospital, which is responsible for the proper treatment of patients entrusted to their care, must have a medical audit for the efficient performance of the obligations. Another alarming fact is that Consumer Protection Council questions the negligence of treating persons in various chambers. Medical audit reports are well valued by

consumer courts for the judgments. It was in 1918 that Dr. George Gracyward a noted gynecologist at the Women's hospital, New York City gave consideration to the medical audit in a systematic review analysis of all patients going through his service. The following items are discussed in the medical audit committee.

a. Discussion about the negligence, if any, in death cases.
b. Prolonged stay in the wards and ICUs.
c. Hospital infection
d. Hospital statistics
e. Complaints or suits

MEDICAL RECORD DOCUMENTATION ANALYSIS:

The medical record is the permanent, legal document, which must contain sufficient information to identify the patient, justify the diagnosis and treatment and record the results. As such it must be accurate and complete. But because documentation in the medical record is performed by a variety of health care providers- physicians, nurses, therapists and others and because it is performed as a secondary activity following the rendering of patient care, documentation may not always be as accurate or complete as necessary and desirable. Regular analysis of the documentation in the medical record should be performed to manage the content of medical record so it fulfils its purpose.

Types of medical record documentation analysis:

In quantitative analysis medical record practitioners use a list of recording requirements to identify deficiencies in medical record documentation. Medical record practitioners may also identify inconsistencies that are incomplete or inaccurate. This is quantitative analysis. Qualitative analysis applies a knowledge of disease process and the policies and standards established by the health care administrators.

Quantitative and qualitative analysis should be distinguished from quality assurance. Quantitative and qualitative analyses are reviews of documentation in all medical records designed to provide assistance to health care providers in improving their documentation. Quality assurance is a programme performed by per groups of health care providers designed to ensure that the health care delivered is optimal within the available resources of the health care facility and consistent with achievable goals. The analysis provides background information for the focused studies of documentation problems, which is a part of quality assurance. The function of quality assurance programme is to evaluate the quality of patient care.

Features of Quantitative Analysis:

a. Identity obvious that is incomplete or inaccurate.
b. Use a prescribed list of recording requirements
c. Applies a knowledge of medical record content to the analysis
d. Performed by a person trained for this job.

e. Result is a list of deficiencies which can be completed by the health care providers in the normal course of facility procedures.

Features of Qualitative Analysis

a. Identifies inconsistencies and omissions that may potentially be incomplete or inaccurate.
b. Performed by application of general principles of documentation or specific criteria.
c. Applies knowledge of medical record content, disease process and policies and standards established by the facility administration and medical staff and various licensing, accrediting and certifying agencies to the analysis.
d. Performed by credentialed medical record practitioner.
e. Results include:

    i. A list of deficiencies which can be completed by the health care provides in the normal course of facility procedures.
    ii. Identification of patterns of poor documentation practices for which improvements should be sought through individual discussions, referral to quality assurance programme or by educational means.
    iii. Identification of potentially compensable events to be reported to the faculty's risk management, quality assurance programme or legal counsel as applicable for further review.

QUANTITATIVE ANALYSIS:

Definition: Quantitative analysis is a review of prescribed areas of medical record for identifying specific deficiencies in recording. Because the analysis is specially prescribed, it may be performed by specially trained clerical level employees.

Purpose: The purpose of the quantitative analysis is primarily to identify obvious and routine omissions that can be easily corrected in the normal course of hospital procedures. This procedure makes the medical record more complete for future patient care reference, for protecting legal interest of the patient, physician and hospital and for meeting, licensing, accrediting and certifying requirements.

Results: The result is the identification of specific deficiencies. These should be corrected by health care provider within a short time of their identification. Medical record department personnel may also aid in completing the medical record through assembling all medical record forms, through filing late reports and by recording patient identification on all forms which obviously belongs to a particular record.

Components of Quantitative analysis: It includes a review of medical record for:

1. Correct patient identification on every form.
2. Presence of all necessary reports
3. Required authentication on all entries
4. Good recording practices.

By ensuring that all forms are present in the correct arrangement and that all entries are authenticated and reflect minimum standards of good recording practices, quantitative analysis is an important part in improving the accuracy and completeness of medical records.

QUALITATIVE ANALYSIS:

Definition: Qualitative analysis is review of the content of medical record entries for inconsistencies and omissions, which may signify that the medical record is inaccurate or incomplete. Such an analysis requires a medical terminology, anatomy and physiology, fundamentals of disease process, medical record content, and standard of licensing, accrediting and certifying agencies. It is usually performed by a qualified medical record of practitioner.

Purpose: Purpose of qualitative includes making the medical record complete for reference in patient legal interests, and meeting regulatory requirements. It also contributes background or supporting information for quality assurance and risk management activities. Quality assurance also assists in diagnosis and procedure coding specificity and sequencing which is important for ongoing medical research, administrative studies and reimbursement.

Result: The result may be identification of correctable deficiencies, patterns of poor documentation practices and potentially compensable events. Where qualitative analysis identifies patterns of poor documentation or potentially compensable events, neither of which can be corrected after the fact, the documenting health care provider should

made aware of the faulty documentation and offered assistance or suggestions for the future improvement.

Components of qualitative analysis:

1. Complete and consistent recording of diagnostic statements.
2. Consistency in entries by all health care providers.
3. Description and justification for the course of the patient's hospitalization.
4. Recording of all necessary instances of informed consent.
5. Application of good documentation practices.
6. Occurrence of potentially compensable events.

Incomplete Medical Record Control:

The result of quantitative and qualitative analysis is the identification of specific deficiencies, patterns of poor documentation, and potentially compensable events.

Medical records with specific deficiencies that can be completed by a health care provider are termed incomplete medical records. When the incomplete medical record has remained incomplete after the defined time for completion has expired, the incomplete medical record is referred to as a delinquent medical record. The type of delinquency is still another factor. Delinquencies due to missing history and physical examination reports or operative reports are more than delinquencies due to missing discharge summaries or signatures. The completion period will also affect the delinquency rates, especially when comparing rates across hospitals.

Deficiency Notification

Health care providers need to know they have incomplete medical records and what deficiencies they contain. When concurrent analysis identifies, the deficiencies can be noted directly on the medical record, commonly by a form inserted within the medical record. The next time the provider documents in the record, in the record, it is expected the deficiency will be corrected. In addition to that the health care facilities have different ways of getting medical records completed. In some facilities health care providers are expected to routinely visit the medical record department to attend to deficiencies. In other facilities, providers may be notified in writing that they have incomplete medical record and to and to visit medical record department or, in other facilities, to request the records to be brought to a specified location within the facility.

Filing of Incomplete Medical Records

When incomplete medical records are kept in the medical record department, they may be filed in one of three ways; in the permanent file, in a separate incomplete file by a provider name, or in a separate incomplete file by medical record number. Filing incomplete medical record in permanent files makes them less accessible to providers but saves retrieval time if the medical records are very active after discharge. The means of filing which is most accessible to providers is in separate file by provider name. Filing incomplete medical record in a separate file by number is a compromise between filing them in a permanent file and separately by provider name.

Computerized incomplete systems can be very helpful for controlling all aspects of incomplete medical records. One specific deficiencies are into the computer, several outputs can be generated.

NUMBERING, FILING, STORAGE AND RETENTION OF MEDICAL RECORDS

Numbering

In considering methods of numbering the first point to determined is the kind of numbers to be used in filing medical records, that is whether it may be admission numbers or discharge numbers. Filing by discharge numbers generally proves to be unsatisfactory, because other important records or registers generated in the facility are concerned exclusively with admission numbers. So the lose of indices card, makes difficult to locate the record. For this reason alone admission number is preferred for filing of records. If the filing based on admission number, even if the patient's index card is lost, the admission number could be obtained either by knowing the patient's name or admission number.

Regardless of which of these systems is a utilized medical record requiring new numbers should have them assigned chronologically, and this number should be common to all departments of the hospital. The important systems are:

1. ***Serial Numbering:*** In this method, the patient revives a new number on each time he is admitted or treated by the hospital. The use of serial number for filing patients records results in the filing of records in one or more places in the file rack. So the medical record personnel should have to spend much time in gathering a patient's

medical record. All the number assigned to a patient must be recorded in the master index card.

2. ***Unit Numbering:*** In this method the patient receives a number during his first admission or visit to a hospital. He retains that number on all subsequent admission or treatments. This method automatically attains a unit record. All admissions records are filed together in one folder and under one number.

3. ***Serial Unit Numbering:*** In this system filing all the records of previous admission of the patient are brought forward and filed under the latest admission number. The empty chart folder marked with a referral to the new number is a satisfactory out-guides to indicate the number under which the old record is filed.

FILING

There are three types of numeric filing system commonly used for filing of medical records.

- Straight numeric filing
- Terminal digit filing
- Middle digit filing

1. ***Straight Numeric Filing:*** The straight numeric filing system of medical records is the strict chronological order of filing according to the hospital number in an ascending order. This is very simple method to adopt and easy to operate, easy to train a new staff and the retrieval of records are also easy. The disadvantage of this system is all the records need to arrange serially before filing. Otherwise the chances of misfiling are more. The highest numbers, which are the most recent, represent the greatest amount of retrieval and filing

activity. Therefore, more activity and personnel will be concentrated in one part of the file area.

2. ***Terminal digit filing:*** Terminal digit filing is a method that provides equal distribution of medical records in filing units through out the file area. By providing an equal occupancy rate for shelving the records, terminal digit also permit more even workflow pattern. It is simple speedy and accurate method of filing based on the mathematical principle. In this system six digit number is used and divided into three parts, each part contain two digits. The last two numbers on the right hand side is known as primary digit the middle numbers are middle digit or secondary digit and the first two numbers on the left side are tertiary digit.

   In the terminal digit file section there are 100 primary sections ranging from 0 to 99. When filing records the filing clerk considers the primary digits first, taking the record to the corresponding primary section. Within each primary section, groups of records are matched according to secondary digits. After locating the correct secondary digit section the record is being filed in numerical order by tertiary digits. The following sequence will occur in a terminal digit filing.

Example

00-01-84	00-02-84	00-03-84
01-01-84	01-02-84	01-03-84
02-01-84	02-02-84	02-03-84
03-01-84	03-02-84	03-03-84
04-01-84 and so on.	04-02-84 and so on.	04-03-84 and so on.

A file area will require a guide for every secondary in each primary section (10,000 guides). Thus there will be one guide for every secondary number, 00,01,02,03 etc in each terminal digit section. For example in particular section for primary number 84, the guide would read 00/84, 01/84, 02/84 etc.

The advantage of this method is the records are evenly distributed among 100 primary sections. Only every 100th primary section of the file and the distribution is perfect and extensive.

The work allocation to each clerk is proper and the supervision is easy and also effective. Misfiling substantially can be reduced. The disadvantages are training a new staff may takes long period of time that straight numerical system.

3. ***Middle Digit Filing:*** In this system the filing clerk files according to pairs of digits as in terminal digit filing. However, the primary, secondary and tertiary digits are in different positions. The middle pairs of digits in six-digit number are the primary digits, the digits on the left are the secondary digits, and the digits on the right are tertiary digits.

The sequence of a middle digit file will be as following

Example

56-78-96	99-78-96
56-78-97	99-78-97
56-78-98	99-78-98
56-78-99	99-78-99
57-78-00	00-79-00 etc

From the first example, it is seen that blocks of 100 records are in straight numerical order (567890 through 567899). This has several advantages. It is simple to pull up to 100 consecutively numerical system to a study purpose. Conversion form a straight numerical system to a middle digit system is much simpler than conversion to a terminal digit system. Middle digit filing provides a more even distribution of records than straight numerical filing. The misfiling is reduced as in the terminal digit filing.

STORAGE

The medical record department must include sufficient space and equipments to store patients' records so they are easily accessible when requested. Adequate filing equipment, lighting, temperature control, supplies, and attention to safety in the file room all contribute to the productivity of filing clerks.

Open-shelf file units and five drawer filing cabinets are the most commonly used storage units for medical records. Open shelf units are recommended over cabinets for the following reasons:

1. They are less expensive than filing cabinets
2. Personal can file or pull records faster because there is no opening or closing of drawers
3. Most importantly, open shelves accommodating more records in a given floor areas, as well as requiring less airless space

Guides should be placed throughout the files to expedite the filing and finding of records. The number of guides needed depends upon the

thickness of the majority of the medical record in the file. There are two basic methods of filing records-centralized and decentralized.

Centralization means that all materials and information about a patient are funneled into a single file held in a central location. A centralized file usually means that the patient, ambulatory care and emergency records are filed in a single central location.

Decentralized files result when certain parts of a record are filed in another location away from central file area. In hospitals this usually means the emergency record of a patient is filed where emergency records are stored, or ambulatory care records are filed in the ambulatory care area. Centralization has many advantages, some of which are listed here.

- There are less duplications of effort with record regard to creation, maintenance and storage of records.
- There is less overall expenditure on space and equipment.
- A composite record containing all available information is of greater help to the health care team than one in which parts are scattered in several places.
- Procedures and policies for record activity are standardized.
- Personnel may become more proficient in various file room functions and procedures.
- Record control and security are easier to maintain.
- Supervision of file room personnel is more consistent.

However when clinic patients are being seen frequently on an outpatient basis; so it is easier and more efficient to store the record in

the clinic. Another situation in which decentralization might be justified is when a health facility operates from several building or locales, and decentralized record system would require far less transportation time and effort.

Routine requests for records should be delivered to the medical record department by a specific time of day established by the hospital administration or medical staff policy. The exact time set for the deadline is dependent on (1) the volume of requests received daily and (2) the number of filing room personnel available to pull requisitioned records.

RETENTION POLICES

The length of time a medical record can retained in active and inactive storage will greatly depend on type of the health care facility and the activity of the medical staff. In developing a record retention policy, a health care institution must be guided by its own patient care and research activities, taking into consideration the possibility of future legal actions by patients.

A definite plan for handling inactive records must be established in order to provide filing space for a continuously expanding active file, if there is no more space for active record storage, an effort should be made to systematically retire older records to inactive status at the same rate as new records are being added. Inactive records can be stored in another area of the facility; they can be microfilmed; they can be commercially stored; or they can be destroyed in compliance with record retention statues.

Since a hospital or other health care institution is seldom requested to produce medical records older than ten (10) years for clinical, scientific, legal or audit purposes, it is ordinarily sufficient to retain the medical records of cases ten years after the most recent patient care usage in the absence of legal considerations. After the retention period inactive records may be destroyed provided that the institution.

1. Retains the basic information such as dates of admission and discharge, names of responsible physicians, record of diagnoses and operations, operative reports, pathology reports and discharge resumes for all records so destroyed.
2. Retains complete medical records of minors for the period of minority plus the applicable statue of limitations as prescribed.
3. Retains complete medical records of patients under mental disability in like manner as those of patients under disability of minority; and
4. Retains complete patient medical record for longer periods of time when requested in writing by one of the following:
   - An attending or consultant physician of the patient.
   - The patient or someone acting legally in his behalf.
   - Legal counsel for party having an interest affected by the patient medical records.

INDICES AND REGISTERS

Hospitals maintain various indices and registers so that patient medical records and other information can be located and classified for

patient care purposes, case studies, utilization management and other administrative purposes, and for compliance with state regulation or licensure requirements.

Mainly there are four types of indices that are maintained in medical records department.

- Patient alpha index
- Diagnostic index
- Operation index
- Surgeon index

PATIENT ALPHA INDEX

The patient alpha index is an alphabetical arrangement of cards according to names of the patients admitted to the hospital either as outpatient or inpatient. This is very important index and considered as the key for locating the medical record of all patients. This is a card with 5 inch x 3inch in size in which the sociological data of the patient is typed. These cards are filed in strict alphabetical order because these cards are the only source to find out the patients' record if the patient looses the identity card. Patient alpha index should contain sufficient information to identify a patient and that patient's medical record number.

The minimum data set for patient identification are follows:

- Hospital number
- Last name, First Name and middle initial

- Date of birth
- Sex
- Address by house name, place, street, city, state and pin code.
- Date of registration or admission
- Name of attending physician
- Diagnosis
- Unit etc

DIAGNOSTIC INDEX

Diagnostic index, not only the key to locate the records of patients with various diseases for study and research purposes but also is useful in compiling certain statistics about medical care given the hospital. Although this index can be used to answer to simple statistical question, its primary functions are to produce records according to diagnosis and treatments, rather than detailed statistical information. Detailed statistics should be obtained through the medical records themselves, and the index should be used to locate them. The size of the diagnostic index is usually 8 inches X 5 inches and separate card is prepared for each disease.

OPERATION INDEX

This is an account of all operations performed in the hospital. For various types of operations in a given period can easily be accounted with a short time. It is also in collection and compilation of operation

statistics for research or study. The size of the index card is 8 inch X 5 inches. Basic data for any type of disease and operation index include the disease, injury, and procedures classification code, the patient's medical record number, sex and age of the patient, identification of physician by code number or name, dates of admission and discharge or year with length of stay in days.

SURGEON INDEX

A surgeon index is kept to provide a means of locating the records of patient's operated by the individual surgeon or as a list of patients operated by him. This index arranged alphabetically by names of surgeon and others who assisted the operation. The size of the surgeon index is 8 inch X 5 inches.

REGISTERS

The need to maintain certain types of registers or logs may be determined by the requirements for record control measures or by state regulations imposed on the hospital.

The patient register or admission register is a chronological list of patient names by date of admission as inpatients. Minimum data items required are date of admission, time of admission if needed, patient name and medical record number. Additional items may include room assignment, sex and attending physician's name. If the admitting or medical record department prepared a daily list of admissions and hospital births, a copy may be filed to serve as an admission register. In some states, the hospital licensing laws may include requirements for a patient registration log (admission register).

It is important to maintain a control register or log of medical record number assignments. This register is a chronological list of medical record numbers with the name of the patient to whom each number was assigned. This control measure ensures that two or more patients have not been assigned the same medical record number. Immediate steps must be taken to correct errors in medical record number assignments.

The operating room register is a chronological list all operative procedures performed in the hospital's surgical suite. It is usually maintained in the operating room suite area and contains the date and time of the procedures, the name of the patient, the type of procedure performed, the type of anesthesia used, and the name surgeon and the anesthesiologist. The operating room register may be required by state regulations; however it serves the hospital as a valuable reference for certain types of statistical data on utilization of services and human resources.

A chronological list is maintained on all hospital births. This birth register may be kept in the delivery room or obstetrical area or in the medical record department. It may be simple or detailed, depending on the needs of the obstetrical service and the hospital. The minimum data would be date and time of birth, sex of newborn, whether baby was born live or still born, name of the mother, name of the physician or staff member in attendance at the time of delivery, and date when birth certificate was mailed to the register of vital records. A birth register may be required for state vital record law.

A death register may be maintained in the medical record department, pathology department, or admitting office. It is a chronological list of all patients who dies in the hospital or who were dead on arrival at the hospital. It contains the date of death, name of deceased person, name of physician who completed the medical portion of the death certificate and the name of the mortician, coroner or medical examiner who removed the body from the hospital. The mortician has the responsibility for completing the remainder of the death certificate and filing it with the register of vital records. When the body is removed by the coroner or medical examiner for examination the medical portion of the death certificate is completed by the examiner.

A register is maintained in the emergency department to record patient's encounters by date. The minimum date items to be entered in the emergency service register are the date and time of arrival, name of the patient, and means of transportation to the emergency service, treatment or advice given, disposition and time of departure.

The emergency department register does not preclude the need of an emergency service record on every patient treated. An entry in the emergency department register is needed on all dead on arrival cases, but an emergency service record is not opened when medical care is not given. Statistical data can be compiled monthly from the emergency department register to gauge utilization of emergency service.

Hospitals with computerized programs of processing admitting, discharge and health care data should be able to produce most of these registers or logs. When registers or logs can be handled as a part or product of health data system, manual registers should be eliminated.

CANCER REGISTRY

The cancer registry requires maintaining an index of patient names and address for follow up studies on the outcome of malignancy, a statistical index on the type and site of malignancy with cross referencing to the patient's medical record and a patient's record of history and treatment, when applicable. A hospital that has no formal cancer program need not maintain a cancer registry. In some states the cancer registry program is carried out at the state level and hospitals cooperate by submitting abstract data from patient medical record.

FORMS DESIGN AND CONTROL

Medical record practitioners are responsible for assisting in the design and implementation of effective forms for data collection and use. Well-designed medical record forms are important communication tools and ready references inpatient care and in review of care provided. Good forms can accomplish several purposes. They can 1) reduce writing time and avoid duplication of information and 2) standardize the information that is provided. Well-designed forms are also easier to complete.

The medical record practitioner assists the forms committee and hospital department by

a) Making available the various requirements and status that may control the form in a particular state.

b) Being Knowledgeable about rules governing forms design such as quality of paper, spacing, printing styles, logical sequence of material and

- Suggestions made by the operating staff

FORMS COMMITTEE

The authority to enter information in medical records granted by the medical staff, medical record forms should be approved by a representative group of medical staff, usually the medical record committee. A hospital forms committee may be appointed to maintain an effective forms design and control program. The medical record director may serve as chairman of the forms committee or co-ordinate all the tasks involved.

The committee should review the forms, recommended changes in content, make changes in design to conform to an established basic record format and eliminate forms for which there is no need. A forms numbering system is necessary for easy identification and stock control. Samples of all editions of approved forms should be kept on file and each form should be accompanied by a brief statement of its purpose and use. The form number, the approval date and the number ordered should be printed on each revision to ensure identification. In the development of new forms, it is advisable to have only a small supply of form prepared for trial use. Forms should be kept simple and the variety few in number, to provide flexibility and reduce record bulk.

A form should be designed to meet the requirements of the system for which it is to be used. The design should be clear and the form easy to complete to save on clerical labor and to increase office efficiency.

PRINCIPLES OF FORMS DESIGN

Five major components usually exist on all forms. They are as follows:

- ***Heading:*** Include the title and form number
- ***Introduction:*** Explain the purpose of the form. Sometimes the purpose is identified in the title.
- ***Instruction:*** Include items on have to fill in the form and what to do with the form.
- ***Body:*** Consist of the grouped or sequenced items for specified information desired.
- *Close:* Space for approving signatures.

The following principles are basic to good form design

1. A uniform size of paper should be used. Standard size is 8.5 inch by 11 inch.
2. A uniform binding edge should be maintained.
3. A uniform margin should be maintained. Chart holders on the nursing unit should accommodate the uniform margins.
4. Depending on the whether the forms are to be typewritten, handwritten, line spacing as forms should be designed.

5. The quality and weight of the paper should be selected according to the expected life of the record, the amount of use it will receive and whether both sides are to used.
6. Colored forms should be selected carefully because problems can occur in photocopying or microfilming colored sheets.
7. Whether feasible, the use of a rubber stamp as an existing form can be used to eliminate the need for a special form that is not regularly.

The following principles are basic forms development:

1. The study the purpose and use of the form and design it with the user in mind.
2. Design the form as simple as possible omit unnecessary information and lines.
3. Items should be listed in logical sequence
4. The horizontal space allowed for typewritten entries should accommodate the type size.
5. All forms should have the identification of the patient in a standard location.
6. When uniform placement is possible, there should be a uniform sequence of common items on related forms.
7. Use standard terminology for wording instructions.
8. Form that requires recopying from other parts of the record should be avoided.
9. The name of the hospital should be pre-printed on all forms.

10. Forms should be designed to provide instructions on completion, which are placed on top whenever possible.

11. Answer boxes can save time in completing the data for a form and can reduce errors as well as provide uniformity of statistical items.

SOME FEATURES OF EVERY FORMS

1. **Titles and subtitles:** The title may appear in one of several places like top left, top right, left or right bottom or at the top central.

2. **Form number:** The lower right margin or lower left margin is the best location for the form number and edition date.

3. **Edition date:** The edition date should appear on each form. This date assists the user in determining whether the current edition is being used.

4. **Page identification:** When there is multiple page of a form, page number should be given in a numerical or alphabetical order. If pages are continually added during treatment courses, the forms should be provided with space for entering page number.

5. **Instruction:** General instruction should be brief and placed at the top of the form. The user should be able to determine immediately, how many copies required, who should submit the form, and where, when and to whom copies should be sent.

6. **Working area and arrangement:** It is part of the form that is devoted to the substantive work of the form. If different persons are to enter data on the same form, the data to be completed by each person

should be grouped. Related items should be placed in a sequence, which will eliminate unnecessary writings. Data on the forms should be arranged to facilitate the flow of writing from left to right.

7. **Margins**

8. **Spacing**

9. **Box design**

Features to be avoided:

1. Heavy ruled lines.
2. Line that bleed of the edge.
3. Narrow margins.
4. Crowded entries.
5. Lack of symmetry.
6. Mixture of design styles.
7. Unconventional type of styles
8. Type too large or too small.

MEDICAL CODING

Coding is transferring verbal description of diseases, injuries procedures and surgeries into numerical designations, which are the exact translation of the meaning of the diagnosis according to some established criteria. Placing a diagnosis in a class or group of diagnoses related to each other is called classification.

Classification systems are used to organize health care data for easy and meaningful retrieval. The most efficient classification system for hospitals is one that yields adequate information about large numbers of inpatients and permits retrieval of the maximum number of patient medical records with review of the minimum number of records. A perfect design for classifying diagnoses, surgical procedures and pertinent non-surgical procedures would anticipate every request for health data information and patient record retrieval in all hospitals that

a. tain.

Classification system presently used in the health care field range from those statistical in nature to those that are a catalogue of terms for describing and recording clinical, pathological or procedural terms. Although one classification system predominates in hospitals, medical record practitioners should be familiar with the existence and purpose of other classification and listing systems designed for in the health care field.

During the Sauvagean period, a person named Francic Bossier De Lacorix attempted to classify disease systematically and treatise was published under the title " Nostalgia Methodoica". In the 17th century Capt. John Grant of London began directing the attention of the world to morbidity and mortality statistics in his " London Bills of Mortality". This was the first real attempt to study diseases from statistical point of view. In 1837, Farr, Registrar general of England and Wales worked to achieve better classification and international uniformity in the use of statistics. This has survived as the basis of international cause of death.

GENERAL PRINCIPLES OF DISEASE CLASSIFICATION

A statistical classification of diseases must be confined to a limited number of mutually exclusive categories able to encompass the whole range of morbid conditions. The categories have to be chosen to facilitate the statistical study of disease phenomena. A specific disease entity that is of particular public health importance or that occurs frequently should have its own category. Consequently, throughout the classification, there will be residual categories for other and miscellaneous conditions that cannot be allocated to the more specific categories. It is the element of grouping that distinguishes a statistical classification from a nomenclature, which must have a separate title for each known morbid condition. A statistical classification can allow for different levels of detail it has a hierarchical structure with subdivisions. A statistical classification of diseases should retained the ability both to identify specific disease entities and to allow statistical presentation of data for broader groups, to enable useful and understandable information to be obtained.

ERNATIONAL CLASSIFICATION OF DISEASES –9TH REVISION

The ICD- 9th revision was published in 1979. ICD-9 is primarily a universal classification system for grouping illnesses. Its secondary purpose is for use in hospitals disease indexing. The 9th revision of the ICD contains an innovation in that there are two codes for certain

diagnostic descriptions which contain elements of information both about a localized manifestation or complication and about a more generalized underlying disease process. On of the codes marked with a dagger (+) positioned in the part of the classification in which the diagnostic description is located according to normal ICD principles, that relating to the underlying disease, and the other marked with an asterisk (*) is positioned in the chapter of classification relating to the organ system to which the manifestation or complication relates. Thus tuberculous meningitis has its dagger code in the chapter for infectious and parasitic diseases, and its asterisk code in the nervous system chapter.

The necessity for this arose from the desire of specialists and those concerned with statistics of a medical care to have certain manifestations which medical care problems in their own right classified chapters relating to the relevant organ system.

The dagger and asterisk categories are in fact alternative positioning in the classification for the relevant conditions, enabling retrieval or statistical analysis from their view point. It is, however a principle of ICD classification that the dagger category is the primary code and that the asterisk code is secondary, so it is important where it is desired to work with the asterisk code, and both are used, to use some special mark or a predetermined positioning in the coded record, to identify which is the dagger, and which the asterisk, doe for the same entity.

- **Infectious and parasitic diseases (001-139).**
- **Neoplasm (140-239).**

- **Endocrine, nutritional and metabolic diseases and immunity disorders (240-279).**
- **Diseases of blood and blood forming organs (280-289).**
- **Mental disorders (290-319).**
- **Diseases of nervous system and sense organs (320-389).**
- **Diseases of circulatory system (390-459).**
- **Diseases of respiratory system (460-519).**
- **of digestive system (520-579).**
- **Diseases of genito-urinary system (580-629)**
- **Complications of pregnancy, child birth and puerperium (630-676)**
- **Diseases of skin subcutaneous tissue (680-709).**
- **Diseases of musculo-skeletal system and connective tissue (710-739).**
- **Congenital anomalies (740-759).**
- **Certain conditional originating in perinatal period (760-779).**
- **Symptoms signs and ill defined conditions (780-799).**
- **Injury and poisoning (800-999).**

Supplementary scheme are as follows:

a. Supplementary classification of external causes of injury and poisoning (E800-E999).

b. Supplementary classification of factors influencing health status and contact with health services (V01-V82).

The volume II consists of alphabetical index. The alphabetical index is essential to the tabular for clear coding. Alphabetical index consists of three sections. Section first is the index of diseases, syndromes, pathological conditions, injuries, signs symptoms, problems and other reasons for contact with health services (including 001-999 and V01-V82). Section two is the index of external causes of injury that is (fire, explosion, fall, assault, collision, submersion etc- E800-E999). Section three is the index of drug and other chemical substances giving rise of poisoning and other adverse effects.

STRUCTURE OF CODE NUMBERS

The basic number of digits applied to a disease condition is three such as 410 acute myocardial infarction. In many instances, the code number is expanded by use of a decimal digit, .0 to .9 to amplify or permit greater detail in the classification of disease. Some codes are further subdivided into fifth digit classification resulting in a code number with a maximum of five digits.

Operative procedures are assigned two digits, such as 32 excisions of lung and bronchus. Here also decimal digits .0 through .9 are assigned to describe the precise procedures such as 32.5 pneumonectomy complete. An additional decimal digit is assigned for designated procedures, creating a maximum four digit procedure number.

OTHER FEATURES

In addition to the code numbers for disease and operative procedures, the ICD-9 contains other options designed to display valuable statistical data for those desiring this information. A supplementary classification of factors influencing health status and contact with health service is provided to record patient visits for

y. Admission in a hospital for voluntary sterilization only is not a disease or injury and therefore is coded by using the supplementary classification. These codes are commonly referred to as V-codes, since the code number itself is always preceded by the letter 'V'. The E code classification of external causes of injury and poisoning (E800-E998) are used in conjunction with a disease or injury code number, as they only provide supplemental information to further explain the precipitating incident. Four additional appendices are provided in volume first for reference purposes and coder information. ICD-9-CM is required for statistical reporting purpose by the national center for health statistics of the United States. For this reason, it is used extensively by hospitals and other health care facilities, storing and retrieving health care data.

ICD-ONCOLOGY

One area requiring specific detailed information on the effectiveness and out come of treatment is the study of tumors or neoplasm known as oncology. For adequate statistical information and follow-up of patients, a detailed classification has to be devised to record the numbers and types of tumor.

The ICD-O is divided into three sections. The site or location in the body which contains the tumor is assigned a code number (four digit code numbers which run from 140.0 to 199.9). The morphology numerical list Contains code numbers which are used to specify the type of tumor found and its behaviour. The morphology terms have five digit code numbers which run from 8000/0 to 9990/6, the first four digit indicate the specific histological terms and the fifth digit after the slash is a behaviour code. An optional sixth digit may be added to the morphology code number which indicates differentiation of the tumor mass.

DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (DSM)

This classification is used in many psychiatric institutions and psychiatric units of hospitals for indexing records by mental disorders and for compiling statistical data on patient care. Since ICD-9-CM is required for use in medicare and Medicaid reimbursement reporting, medical record practitioner in psychiatric institutions and hospitals with psychiatric units need working knowledge of both ICD-9 and DSM.

TION OF DISEASE – 10TH REVISION

The ICD-10 comprises 3 volumes:

Volume 1 contains the main classification.

Volume 2 provides guidelines to users of the ICD.

Volume 3 is the alphabetical index to the classification.

Most of the volume I is taken up with the main classification, composed of the list of 3characters and the tabular list of inclusions and 4 character subcategories. The "Core classification"– the mandatory level for reporting. This core classification also list chapter and block titles. The tabular list giving the full detail of 4 character level is divided into 21 chapters. Volume 1 also contains

nomenclature regulations.

CHAPTERS: The classification is divided into 21 chapters. The first character of a code is a letter, and each letter is associated with a particular chapter, except for the letter D used in both chapter II (Neoplasm) and chapter III (Disease of the blood and blood forming organs) and the letter H, which is used in both chapter VI (Disease of the eye and adnexa) and chapter VIII (Disease of the ear and mastoid process). Four chapters (I, II, XIX, XX) use more than one letter. Each chapter contains sufficient 3 character categories, not all available codes are used, allowing space for future revision and expansion.

Chapter I to XVII relate to disease and other morbid conditions and chapter XIX to injuries, poisoning and certain other consequences of external causes, Chapters XVIII covers symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified. Chapter XX, external causes of injury and poisoning. Finally chapter XXI, factors influencing health status and contact with health services.

The chapters are subdivided into homogenous "block" of three character categories. Within each block some of the three characters are of single conditions, selected because of their frequency, severity or

susceptibility to public health intervention, while others are for groups of disease with some common characteristic.

Although not mandatory for reporting at the international level, most of the three character categories are subdivided by means of a fourth, numeric character after a decimal point, allowing up to ten subcategories. Where a 3 characters category is not divided, it is recommended that the letter "X" to be used to fill the fourth position so that the codes are of a standard length for data processing. The fourth character .8 is generally used for other conditions belonging to the three character category, and .9 is mostly used to convey the same meaning as the three character category title, without adding any additional information.

The fifth and subsequent character levels are usually sub classifications along a different axis from the fourth character. They are found in chapter XIII, chapter XIX and chapter XX.

Code U00 - U49 are to be used the provisional assignment of new disease of uncertain etiology. Codes U59-U99 may be used in research.

Chapter 1: Certain infectious and parasitic disease (A00-B99)

Chapter 2: Neoplasm (C00 D48)

Chapter 3: Diseases of the blood and blood forming organs and certain disorders involving immune mechanism (D50-D89).

Chapter 4: Endocrine, nutritional and metabolic disease (E00-E99).

Chapter 5: Mental and behavioral disorder (F00-F99).

Chapter 6: Diseases of the nervous system (G00 – G99).

Chapter 7: Diseases of eye and adnexa (H00 – H59).

Chapter 8: Diseases of ear and mastoid process (H60-H95).

Chapter 9: Diseases of the circulatory system (I00 – I99).

Chapter 10: Diseases of the respiratory system (J00 – J99).

Chapter 11: Diseases of the digestive system (K00 – K93).

Chapter 12: Disease of skin and subcutaneous tissue (L00 – L99).

Chapter 13: Diseases of the musculo-skeletal system and connective tissue (M00 – M99).

Chapter 14: Diseases of the genitor - urinary system (NOO – N99).

Chapter 15: Pregnancy, childbirth and peurperium (O00 – O99).

Chapter 16: Certain conditions originating in the perinatal period (P00 – P96).

Chapter 17: Congenital malformation, deformation, chromosomal abnormalities (Q00 – Q99).

Chapter 18: Symptoms, signs and abnormal clinical and laboratory findings. Not elsewhere classified (R00 – R99).

Chapter 19: Injury, poisoning and certain other consequences and external causes (S00 – T98).

Chapter 20: External causes of morbidity and mortality (V 01- Y 98).

Chapter 21: Factors influencing health status and contact with health services (Z00- Z99).

ORGANISATION OF MEDICAL RECORDS DEPARTMENT

Organizing is the management function of distributing or allocation resources towards the accomplishment of the objectives defined in the plans. Organizing requires an understanding of the concepts of staffing and work distribution. Organizing, however, also includes the allocation of material , machine and space resources. Organization of a good, smooth running and efficient department is very hard task. Before starting a department there should be proper perception about the hospital and its coming future. Following are very important matters in the case of organization of department. There should be a medical record manager for guidance and supervision. The following points to be considered regarding the organization of the medical records department.

- Planning
- Organizing
- Directing
- Staffing
- Controlling
- Evaluation
- Assessment and modifications

Planning: Planning is the most important function, yet often the most neglected. Planning may be simple and informal. There should be

proper planning about its location, facilities, staffing etc. the centralized medical record department is more preferred. The department should be in a logically locate to facilitate the transport of files to various sections. The out patient department must be organized near the reception.

All the investigations, accounting facilities etc. should be available near the out patient department. There should be proper guidance to near the out patient department. There should be proper guidance to patients for which name boards should be placed. In the medical record department, there should be enough space to files the records properly and its easy retrieval. The racks must be arranged in such a way that the filing. clerks can pull out records without using .a ladder, which saves time and work. Adopt filing methods to satisfy hospital needs. Before starting a department, the nature of filing and numbering pattern etc. should be understood. Plan a department is based on the need of a hospital.

Organizing: There should be adequate staff for the smooth running of the department. The department needs more staffs if the out patient departments case files are also used. Based on the out patient departments the number of staffs increases. Computerization reduces staff strength and filing works. During work into sections and then coordinating the sections is one of the aspects of organizing. Each section must be assigned responsibility for certain tasks and be given the authority to see tasks to their completion.

Directing: The directing function of management involves getting all members of a work group to contribute effectively and efficiently to the achievement of the organization objectives. The scientific approach of directing, using pools of work simplification or methods engineering, and the humanistic aspects of actuating, including, leadership, motivation, communication, appraising employee performance, developing employee skills and appropriately compensating productivity and performance.

Staffing: The number of staffs required for the medical records department depends on the nature of tasks taken by it. The allocation of work among staff has evenly distributed. There should be enough staff for the smooth functioning of the department. Computerization reduces staff strength and it needs computer experts. The staffs should be courteous with all other staffs and supervisors. It is the responsibility of the supervisor to evaluate the performance of the staff and gave instructions whenever necessary. For 500 bedded hospital, there requires one supervisor, two assistants and one filing clerk, one coding and correspondence clerk and one helper. The staffing pattern differs from hospitals to hospitals according to the need of the medical record department.

Controlling: Controlling is the feed back mechanism for planning. Controlling is determining whether the planning has been effective, whether objectives have been met and taking steps to ensure that objects are met. Controlling requires an understanding of what is necessary to meet the standards defined in the objectives.

Evaluation: The hospital management committee and the medical record committee should evaluate the functioning of medical record department. For effective management, the result of evaluation must be studied and take necessary action in consultation with health care director.

Assessment and Modification: The medical record manager should constantly monitor the effectiveness of the medical records department frequently in order to take steps to improve it. For the betterment of the department necessary modifications can be made without hurt other functions of the department.

The important things to be discussed with hospital administrators and various department heads before organizing a medical record department for the following

- Nature of the department- centralized or decentralized.
- Type of record to be maintained- source oriented, problem oriented or integrated.
- Whether outpatient records were kept or not.
- Numbering systems – unit, serial or serial unit
- Is any emergency service or medico legal case service
- Retention period and destruction of records
- Coding and indexing
- File control
- Record completion

- Admission and discharge formalities
- Request for medical record
- Forms design
- Registration
- Birth and death registration
- Census
- Correspondence and reimbursement or claims
- Statistical data needed by the hospital
- Any ancillary service like certificate issue, medical, social work service etc
- Staffing and their dress
- Interdepartmental, intra departmental, inter hospital disciplinary manners.

PRIVACY AND CONFIDENTIALITY

The primary purposes of the medical record are to document the course of patient's health care and to provide a medium of communication among health care professional for current and future patient care.

Medical records containing information, which is both sensitive and confidential. Individuals have differing perceptions of the sensitivity of the information about themselves. For some an address may be sensitive, for others it may be the nature of their illness. It is generally accepted that information exchanged between patient and doctor should be confidential and there is an ethical expectation that doctors will

respect confidentiality. If either the patient or the doctor suspects that the record may not remain confidential, the quality of the medical record and hence the quality of care may be suffer. Patients may be unwilling to divulge sensitive information that could compromise care decisions and put them at a risk. Clinicians may hold back from recording sensitive data so as to protect the patient care in some circumstance themselves.

In order to fulfill these purposes, significant amounts of data must be revealed and recorded. The patient must be assured that the information shared with the health care professional should remain confidential, otherwise, the patient may with hold critical information, which could affect the quality of care, provided, the relationship with the provider and the reliability of the information maintained. Health record are used to provide a medium of communication for current and future patient care for a variety of legitimate reasons.

The medical record is used as a personal document and as an impersonal document.

AS A PERSONAL DOCUMENT:

The patient's record is a form of document, a historical record, the contents of which is not only for diagnostic purpose but it has a legal value too. As a confidential and privileged communication, The patient has a personal interest on the record and therefore it is not available to outside agencies such as insurance companies, compensation carriers or any other similar organizations except upon receipt of an authorization signed by the patient. Neither relatives or friends nor husband or wife

have any right to review the record of the patient unless authorization received from the patient.

If the patient should be hospitalized under the care of another physician the second physician, should be allowed access to the record of previous hospitalization. If the patient subsequently admitted to another hospital, a summary may; be sent upon request from the hospital. In such instance an authorization is not generally considered as information is being released in the best interest of the patient. When a patient personally requesting information, it is not always in the best interest of the patient to know all details concerning his illness. In such instance a wise policy is to consult the attending physician before releasing any information to the patient.

AS AN IMPERSONAL DOCUMENT:

When a medical record is used for the study research it is considered as an impersonal document. In such instance the medical record personnel need not exercise such caution as when it is used as personal document. Moreover only the physicians and other medical staff, students, use it, all of them are bound by the code of professional secrecy.

While compiling monthly hospital statistics the medical record staff use the medical record as an impersonal document an impersonal document in compiling case reports and the physicians use it for research. The users of the information may not divulge any information of the personal nature acquired by them in the practice of their profession. If the record is being studied for publication, the permission of the attending physician may require the data for his own publication.

Regardless of use or users, the patient must be assured that the information shared with health care professional will remain confidential.

Health care facilities receive and respond to numerous requests for information from the health records in their custody. The requests may be written, by telephone or in person, from a broad spectrum of users. The responses are frequently summaries or photocopies of patient records or verbal information given emergencies, or on-site review of the record. Clinical information that is considered confidential and requires the patient's written permission to release. These data include all items in the record relating to the patient's diagnosis and treatment and it is highly confidential.

The identification data consists of entries in the record, which do not specifically relate to the patient's diagnosis or treatment, such as admission to a facility, sex, spouse. Many health care facilities consider due information as confidential and needs permission from the patient for the release.

Secondary health information as previously defined includes patient identifiable information abstracted from the medical record for indices and statistics. As with clinical information, this information is considered confidential and release must be granted by permission from the patient or by law.

The goal of obtaining the patient's fully informed authorization to release for information on patients currently under treatment shall be directed to the health record department. Release of information from the health record department. Release of information from the health

record shall be carried out in accordance with all applicable legal, accrediting and regulatory agency requirements, and accordance with written institutional policy. All information contained in the health record is confidential and the release of information will be closely controlled. A properly completed and signed by authorization is required for release of all health information except the following.

- As required by law.
- For release to another health care provider currently involved in the care of the patient and for medical care evaluation.
- For research and education in accordance with conditions specified below

In keeping with the tenet of informed consent, a properly completed and signed authorization to release patient information shall include at least the following data.

- Name of the institution that is to release the information.
- Name of individual or institution that is received the information.
- Patient's full name, address and date of birth.
- Purpose and need of information.
- Extent or nature of information to be released, with inclusive of treatment.

- Specific date, event or condition upon which authorization can be revoked but not retroactive to the release of information made in good faith.
- Signature of patient of legal representative with date.

Information released to authorization individuals/ agencies shall be strictly limited to that information required to fulfill the purpose stated on the authorization. Authorizations specifying any and all information or other such broadly inclusive statements shall not be honored. Release of information that is not essential to the stated purpose of the request is specifically prohibited.

Following Authorized release of information, the signed authorization will be retained in the health record with notation of the specific information released, the date of release and the signature of the individual who released the information.

Public attention to confidentiality and privacy of health information at an all time is high. But though most would agree the private health information should be handled appropriately, there is much disagreement over what that really means. For example, when families gather at a hospital where an elderly parent has been admitted, it is common for the adult children to assume that they should have automatic access to any and all health information about their parent. However, if that parent is competent, he or she should be deciding what information, if any, is shared with the children. There are operational difficulties in protecting the confidentiality of health information. In a medical practice, all employees of practice might have potential to the

information. In computerized health information systems, the system's design sometimes does not bar unauthorized staff from accessing a particular patient's information.

IMPACT OF INFORMATION TECHNOLOGY ON CONFIDENTIALITY

The growth of computerized health information systems brings a new urgency to the need to assure patient confidentiality. One of the benefits of computerizing that information is easier and more rapid to access and also possess a potential threat to confidentiality. In the manual record keeping environment, the labour involved in retrieving information from paper records served as a deterrent of sorts. To gather information on a group of patients would require manually retrieving the records poring through the data and recording or copying what was needed. In an electronic system without carefully designed access and audit controls, retrieving data on a group of patients may be accomplished almost instantaneously and invisibly. Few would argue that the risks of computerization outweigh the benefit. Still, careful thought must be given to the design of safeguards for computerized patient so that these systems enhance rather than detract from security and confidentiality of health information.

The growth of information technology is not only for affecting societal concern for privacy and confidentiality in health care. The growth of integrated delivery systems, in which previously independent health care providers and facilities are grouped under corporate umbrella, has resulted in certain health information being compiled in corporate

databases for management purpose. For example some integrated delivery systems collect data on unusual occurrences or incidents at their member facilities for use in detecting patterns and trends that may indicate the need for new procedures, policies, or staff training. Patients are rarely aware that the details of their treatment could end up in a home office database across the country from where they received their treatment.

The deepening penetration of managed care into the health insurance marketplace has also created new demands for information. New instead of merely receiving a coded bill for service already provided, utilization management staff at the managed care organization is contacting the health care provider while treatment is under way; requesting information to justify that treatment, and in many cases, influencing the actual treatment provided. How much information enough to justify payment of the bill? This is a problem many health care case managers are struggling with as they attempt to protect the patient's privacy while avoiding a payment denial.

LEGAL ASPECTS OF MEDICAL RECORDS

A great change has come about the attitude of the public towards hospitals and doctors in recent years and they have an increasing tendency to sue. For this reason the medical record officer and the medical record committee must analyse each medical record carefully to see that it substantiates all aspects of medical record. Because the medical record has both medical and legal aspects the medical record

officer and the medical record committee and others employed in the care and safekeeping of medical record, should be familiar with the principle and administration of low applicable to them.

Indian evidence act of 1872, page 22 chapter 5 clarifies the admissibility of medical record as a medical, legal and confidential document and it can be produced as documentary evidence whenever necessary. In this act, "document" means any matter expressed or described upon by substance of means of letters, figures or marks or by more than one of those means intended to be used for the purpose of recording matter.

TYPES OF CASES USING EVIDENCE FROM MEDICAL RECORDS

- **Insurance cases.**
- **Workman's compensation cases.**
- **Personal injury suits.**
- **Malpractice suits.**
- **Will cases.**
- **Criminal cases.**

INSURANCE CASES

If patient knowingly concealed his medical history and the insurance company, having learned of the fraud, sues to void the contract, the patients history is usually used as a proof of the duration and character of his prior to disability. Medical record are also used in

cases were actions are brought against an insurance company to collect for disabilities or medical expenses or personal accident liability policies.

WORKMEN'S COMPENSATION CASES

In most states a person injured in the course of his duties and while acting with in the scope of his employment is entitled to compensation for badly injury and disability. The medical record such an instance is used as evidence before the state industrial commission to show the date of injury, the type and severity of injury, period of disability and the prognosis.

PERSONAL INJURY SUITS

In this type of suit the plaintiff in a personal injury suit claims to have been injured through the fault or neglect of another and brings his suit to recover damage thus sustained. The defendant to show how the plaintiff contended the injury was sustained when giving his history on admission to the hospital may use the medical records here. The patient may show the extent of the injuries, the treatment rendered and the duration of the case required.

MALPRACTICE SUITS

In a suit of this kind the plaintiff claims damages from a physician, a hospital, or the nurses for negligence in rendering care or for giving improper treatment. The record here used to show whether there was negligence and that treatment rendered was not adequate and proper.

WILL CASES

A patient might have made a will during his hospital stay. After the death of the patient an attempt may be made to set the will aside by seeking to prove the patient was mentally incomplete. The record is used here as evidence in such a case of show the mental state of the patient at the time of making the will.

CRIMINAL CASES

All cases of accidents, assaults, serious injuries, suicide, homicide, poisoning, rape, drowning etc. are considered as medico-legal cases. These cases whether brought by police or not, must be registered as medico-legal cases.

Hospital records have been used in the following types of criminal cases.

- In murder cases to show that death did or did not result from natural causes.
- In assault cases, to prove the viciousness of the assault and extent of the injuries sustained.
- In rape cases, to prove the condition of the prosecutor or admission and also here history as related on admission.
- In mischievous acts cases, to prove the history given by the patient on admission and the character and extend of the injuries sustained.

- In certain cases, to prove a difficult mental condition and to show that the defendant should be confined in an institution for the mentally ill or feeble minded rather than imprisoned in a penal institution.
- In conspiracy case, to show that a fraud as perpetrated on a person being used for damages.

PROCEDURE FOR MEDICO LEGAL CASES.

- When the medico-legal case sheets and medico-legal reports are received from the casualty, affix the MLC rubber stamp. Check the medico-legal report duly filled in.
- Send the medico-legal information to the police along with one copy of the medico-legal report.
- Inform the police station regarding the admissions, discharges and deaths.
- Attend the court after obtaining permission from hospital authorities and produce records in the court of law as and when summons are received. In case, records have to be produced, make entry in the prescribed register, regarding number of sheets, number of laboratory investigation reports and other investigation reports, summon number, asked by whom how dispatched etc
- Keep all the medico-legal document in the safe custody under the lock and key. The lock should be sealed and the key should be deposited with the medical record officer.

HEALTH CARE STATISTICS

Statistical care facts set down as figures. Preparing statistical involves the collection, analysis, interpretation and presentation of facts as numbers. Statistics are as accurate as the original documents from which they are obtained. The medical record practitioner must decide whether or not the content of the medical records meet statistical needs. The hospital administration and governing board uses statistics to compare current operations with the past and as guide for future planning. The medical staff uses statistics to appraise its own performance. Reports complied for outside agencies and organizations on a local, state and national level are used accredit, license and approve hospitals and other health care facilities and distribute funds.

The important statistical data prepared are follows:

- Registration
- Admission
- Discharges including death
- Hospital death
- Hospital birth
- Autopsy
- Surgery/procedures
- Bed occupancy

- Average length of stay
- Hospital infection
- Investigations

COMMON HOSPITAL PERCENTAGES AND RATES

The hospital death rate is defined as the proportion of inpatient hospitalization that end in death, usually expressed as a percentage. Counts of death occurring both within 48 hours and those over 48 hours of admission are currently needed. Deaths are included in discharges because, like discharges because, like discharges death are termination of inpatient hospitalization.

Patients who are dead on arrival (DOA) are not included when figuring these rates. Patients who die in the emergency room where there has been no administrative decision to provide them with room, board or continuous nursing are not included when figuring this rate. When such administrative decision has been made and the patient dies when receiving life services in any unit of the hospital other than the emergency unit, this patient is considered as a hospital patient and therefore hospital deaths are not included in the death rate.

a) **Gross Death Rate:** The proportion of inpatient hospitalization that end in death, usually expressed as a percentage.

$$\text{GDR} = \frac{\text{No.of inpatient death in a period X 100}}{\text{No.of discharge in the same period}}$$

b) **Net Death Rate:** The ration of total number of deaths for a period occurring in the hospital 48 hours or more after admission to the total number of discharges and deaths in 48 hours and over that period.

$$\text{NDR} = \frac{\text{Total deaths- those under 48 hrs X 100}}{\text{Total discharges-death under 48 hours}}$$

c) **Post Operative death rate:** The ratio compares the deaths within ten days after surgery to the total number of patients operated upon for the period.

$$\text{Formula} = \frac{\text{Total no.of deaths within 10 days post operative period X 100}}{\text{Total no.of operations done upon for the period.}}$$

d) **Maternal Death Rate:** This ratio represents maternal deaths for a period to the total number of obstetrical patients discharged. It includes only patient whose death is a result of an obstetrical complication of pregnancy, labour or the puerperium or from interventions, omissions or treatment. This is called direct obstetrical deaths.

$$\text{MDR or MMR} = \frac{\text{Total No.of direct maternal death X 100}}{\text{Total No.of obstetrical discharges}}$$

e) **Neonatal Death Rate or Infant Mortality Rate:** This ratio reflects the deaths of infants born in the hospital to the number of infants discharged. Foetal deaths are included because they are not newborn inpatients. Infants both outside of the hospital and admitted should be recorded as child inpatients.

$$\text{NDR or IMR} = \text{Total No.of new born death X 100}$$

Total No.of new born infants discharged

f) **Anaesthesia Death Rate:** This is the ratio of deaths caused by anaesthetic agents for a period to the number of anaesthetics administrated for the period. An anaesthetic death is defined as a death that takes place while the patient is under anaesthesia or which anesthetics or other agents cause used by the anaesthetist or anaesthesiologist in the practice of his/her profession.

$$\text{ADR} = \frac{\text{Total No. of deaths caused by anaesthetic agents X 100}}{\text{Total No. of anaesthetics administrated for the period.}}$$

g) **Foetal Death Rate or Still Birth Rate:** This ratio computes the number of foetal deaths to the total number of births in a given period.

$$\text{FDR or SRT} = \frac{\text{Total No. of intermediate foetal deaths X 100}}{\text{Total No. of births (intermediate and late foetal deaths)}}$$

h) $$\text{Goss autopsy rate:} = \frac{\text{No. of inpatient autopsies X 100}}{\text{No. of inpatient deaths}}$$

i) $$\text{Net Autopsy rate:} = \frac{\text{No. of inpatient autopsies X 100}}{\text{Inpatient death – unautopsied coroner}}$$

j) $$\text{Inpatient bed occupancy rate:} = \frac{\text{Total inpatient service days X 100}}{\text{Total inpatient bed count X No. of days}}$$

k) $$\text{Average length of stay:} = \frac{\text{Total length of stay}}{\text{Total discharges}}$$

l) $$\text{Average Daily Inpatient Census:} = \frac{\text{No.inpatient service days}}{\text{No of days}}$$

m) **Infection Rate Post. Op: =No of Infection in Post op.Cases X 100**

No. of surgery

n) **Admission Rate: = No. of Patients Admitted X 100**

Total Registration + Reviews

o) **Caesarean Section Rate: = No. of Caesarean Performed X 100**

No. of Deliveries

MEDICAL RECORD DEPARTMENT IN SCTIMST

One advance medical record department with Bradma Card Viyer Retrieval system was organized at SCTIMST in 1975. It plays an important role in the hospital management and it is one of the busiest department in the institute in its inception. Anything concerning the sick and injured is noted through this department, which is quite independent in its functioning. Good care generally speaks of good medical record and an inadequate medical record generally speaks of poor medical care. SCTIMST, Thiruvananthapuram provides good medical care to the patients because of a well-organized MRD. At this institute, the doctors are able to organize and develop their own professional Knowledge much better because good MRD reminds them several things they are liable to forget.

The MRD of SCTIMST is performing the following functions:

- Screening of referral letters
- Registration
- Admission
- Appointments for review

- Maintenance of accurate medical record
- General statistical reports
- Assisting doctors for their study
- Offering training programme in Medical Record Science.
- Issuing certificate for financial assistance, estimate for advance etc.
- Forms control
- Death reports to corporation
- Medical audit

Additional functions done by MRD

- Monthly family income assessment of patients for categorization those into different classes based on income of the patients. Usually there are 5 classes.
- Preparation of essentiality certificate
- Cardiac Surgery scheduling
- Funds
- Other state's patients treatment
- Central typing

General information

The functioning of the institute was started officially in 1976 with 60 bedded inpatient medical centers as a referral hospital. The Medical

Records department has registered the first patient Mr. Baburaj, of hospital No. 0001 under cardiology department on 11.09.1975 with diagnosis of Rheumatic Mitral stenosis, and still also he is one of the patient here doing his routine checkup here. At first the numbering system started as straight numerical. In 1986, numbering system had changed to annual system and the first two digits of 7digit system denote the year. Example 9800023 is a hospital number of the patient who had registered here in the year 98 then in beginning of the year 2000 the institute started hospital numbers from 180001 and it is now running through 260000, and this is also straight numbering system.

.The number of registration, admission, discharges, surgery and interventional procedures has been increased tremendously. The current staff position of MRD is below.

- Senior Medical Record Officer – one
- Medical Record Officer – one
- Assistant Medical Record Officer-one
- Medical Record assistance –ten
- Medical Records science students - five
- Unit helper – one
- Cleaner – one

ROLE OF MEDICAL RECORD DEPARTMENT IN SCTIMST

Screening of Referral letters.

In SCTIMST the role of MRD starts in the registration counter. As a referral hospital and a researching institute only cardiology neurology,

radiology and neurosurgery patient can registered here. Accident cases and other emergency cases are avoided. So here is no casualty and When a patient here to registration he must bring referral letter to this institute from a MBBS doctor. He must write the patients name, age, sex, detailed diagnosis or symptoms doubts about patient's illness, patients present condition and why the patient is referred to here, Doctor's name hospital/doctor's address etc. If the patient is sending the referral letter to the institution by post, then all the referral letters are passed to senior medical record officer, he then screened the letters and makes the arrangements for sending an appointment to all the selected patients with time and date for registration and examination by post or email. This avoids the unnecessary repeated arrival of patients and over crowding in the OPD's.

Registration:

New patients with appointment date and without appointment date first reports to Medico Social Worker with MRD's appointment letter in separate counters for Cardiology, Cardio-Thoracic-surgery, Neuro-medical (Neuro-medical includes Epilepsy cases, Kerala Registered Epilepsy pregnancy cases, Movement Disorder cases etc.). Neuro-surgery, Neuro-radiology etc.

The medico-social worker supplies a social data form to the them from which contains Patient's full name with initial, Correct age at registration time, Sex, Religion, Occupation, Name of father name of husband/wife, Name of guardian (if applicable) Permanent postal address (House name, Place, Post office, District, State, Postal pincode), Monthly family income from all sources, Nationality, Telephone

number/mobile number, Eligibility for medical benefits if any, PAN number if tax payment, Driving license number, Passport number (must for foreign patients) Previous illness & Details of treatment, Name and hospital address /e-mail id of the doctor who referred you here. The patient or his close relative fills the registration data form and returned to medico social worker. Then MSW assess the patient about his socio-economic status. After assessment MSW categories the patient into paying and non-paying group. The non-paying group is A and many poor patients comes under "A" group (all surgery and review charges some investigations are free payment for them). Many patients or their relatives deliberately hide their original economic status. But our MSW and MRD people will brilliantly find out their original status. Some times old patients of non- paying group are changed to paying category during their review in this way. Most of the staff in SCTIMST will aid MSW and MRD for making proper assessment by giving valuable information about the patient. This is because institute has not enough money to give free treatment for all patients. This system of categorizing is very helpful to poor patient.

Responsibility and duty of a Medical Record Assistance or Medical Record Trainee in the OP desk:

The MSW gives the patient his registration number, which is permanent to the particular patient then MSW passes the patient to MRD (there are three MRD sub division near to opds). The MRD's assistant

feed the socio-economic details of the registered patients to the computer in correct for opening a new medical record. An identification card is given to the patient which includes Patient's registration date, Patient's name, age sex, category, and address with an instruction to bring the card on every visit. Then an out patient record, referral letter, assessment sheet, social data form and patient's op small stickers are kept together in a green folder (which indicates that it is an op file only) and send to concerned OPD's. Doctors record the physical examination findings, diagnosis, investigation, and disposition of the patient in time. The patient must take next review date from the MRD after their check-up. Such medical records are analyzed by the MRA's to know the deficiency if any. Incomplete charts are separately kept in the class room in MRD for completion. Reminders are sent to the concerned persons to complete this within a week. International coding is done for diagnosis and procedure for out patient's record which is done only in 3-4 institutions in India.

Review : As explained the patients who need only further follow-up after an interval of particular period according to the severity of diagnosis are given a follow-up appointment by MRA as per the availability in the computer as programmed below. Appointment dates are given by staggered basis to avoid over crowding in OPD's. The appointment dates can be postponed when there is reasonable request from patients. MRO also postponed future admission dates for procedures and surgery in the same way.

Patients with appointment date first inform to the MSW for entering the they have to do payment (for payment category only) for

review. Then they have to report to MRD with appointment date computer print card. MRA receives the card and then asked them to wait in the OPD's. The concerned files then send to concerned OPD's. Although there is a definite number of appointments in each OPD's, but the patients may come in with out appointment date on emergency they are considered as without appointment cases. The doctors in OPD's must say whether the patient is sick or not, then they writes the with out slip, then the procedure is as same as that of with cases, that is the patient is send to the payment then asked them to inform the without issue to the information counter. The OP procedures starts just like the with appointment cases.

Admission : All the patients registered may not require hospitalization on the day of registration. Due to limited bed strength, only serious patients are admitted on the same day and others will be given a date after an interval according to the seriousness of the disease. The patients to be admitted must inform to the MRA with their Admission Discharge form, MRA gives a MRD number to the patient and asked the payment category to do payment. Then the patient/relative is asked to get signed in admission record to get their concern to do all necessary treatments including surgery to them. Then the Inpatient procedure is started. MRA should gather the changed patient data ie his present age at the time of admission and address. Additional information viz. telephone number of the bystander's, nearest police station etc. are collected by MRA from the patient or relatives because no relatives are (except babies or small children) permitted to stay with patients in the ward. All information is fed to the computer.

The MRA's issues 2 permanent passes for 7 days to the bystanders, if the patient is admitted more than 7 days they have to renew pass. At a time from 4pm-6pm 2 bystanders can visit the patient

- The MRA's then will collect all the new files and old files which are sent to the review

Then he has to check the return files and send them back to filing desk in main MRD.

Filing Section : Four medical record assistance are assigned in the filing section. All the files from OPD's, wards (discharged files in patient's files), Files after studying purpose and others are collected together. Here is one important thing is that the files are checked by an MRA, and sorted and serialized them in ascending order of their number. Then entered it in computer then filed. During filing, the chances of missing files are more. As a result that chart cannot be traced out when the patient has come for review, so filing should be very careful and vigilant. In our institute we are following unit numbering system. Hence the chance of misplaced files are low. Some times thin charts may be incorporated with large one accidentally. Such charts cannot be traced out easily. Some times charts may be misplaced due to the negligence OPD people. But in our institute chance of misfiling is very less. The medical record assistance in filing desk duty should also take the next days with appointment files from the filing racks, and should sent them to the OPD's after sorting into clinic wise (Cardio-medical, CVTS, Neuro-medical, Neuro-surgery). And they must issue with out date files to the concerned OPD's.

Inpatient chart checking desk

Here IP files after discharge are given to the MRA. Adequacy, Accuracy, Reliability, Responsibility, Confidentiality are result in ideal health care system. Good medical record means good patient care. The quality of medical care rendered is checked only through medical records. For maintaining accurate medical records, the following things are very important.

Check all medical records qualitatively and quantitatively and note the deficiencies. Then he has to code the file based on ICD-9 for diagnosis and procedure. MRA should write all deficiency of that chart on a check list then keep it in front of the IP file. Only completed medical records where stored in incomplete filing racks and respective personal upon call by Medical Records Officer completed it. If anybody seems to be disagree with the completion of files, first reminders was sent through corresponding heads of each departments, second through the Medical Superintendent and finally by Director. After completion the IP files are taken to then filing procedure.

Pruning : Old files are taken and get pruned them by removing all unnecessary papers and make them thin. Files which are not taken for review within 10 years except the active files are taken to biomedical medical wing of SCTIMST (Pujappura), and stored it there.

HOSPITAL STATISTICS

(A) ***Daily ward census:*** Daily ward census i.e. Number of patients present each day for given time is prepared by nursing staff

in the ward census reporting form. The census taking time is at midnight. Reporting forms are collected by night supervisor on duty and are handed over to MRD. The data contained is processed in the computer by medical records staff and a daily report is generated and presented to authorized concerned.

(B) ***Monthly and annually reports:*** The monthly and annually statistical reports are generated by MRD and are circulated to hospital administrators and head of the departments. These reports provided comparative figures, which are valuable to the concerned to evaluate its own performance and the hospital administrators as a picture of professional performance of the hospital and medical staff. The aspects highlighted in the reports are:

- Service-wise classification
- Sex-wise analysis
- Age-wise analysis
- Paying and non-paying analysis
- Geographical analysis
- Service-wise death rate analysis
- In patient service-wise analysis
- In patient bed turn over rate
- Religion-wise analysis

(C) A detailed list of death cases with cause of death and other data is required is prepared monthly and circulated among all members of hospital management committee. The cause of death and other factors are discussed in the meeting and necessary measures are taken then and there. Statistics in relation to diagnosis, operation, operating surgeons, interventional procedures and other aspects demanded by residents, consultants, administrators and para- medicals are provided at requirement.

Assisting Doctor's study: Post graduate students need the support of MRD for their study and thesis presentation. It is the duty of medical record personnel to make the charts available for them according to diagnosis wise etc. and issuing necessary statistical information to them from the medical records. An average 10,000 are retrieved for this purpose every year. MRD saves the doctors, institution from the consumer protection council. Doctor-MRD does patients correspondence.

Training programme: MRD is a formal and informal training center to many hospitals. 350 medical records personnel were offered informal medical record training before our PGDMRS training was started in 1999.

Patient's certificates: Except Doctors Medical certificates for leave, all the following certificates are issued by SMRO.

- Financial assistance from Prime Minister's fund.

- Financial assistance from Chief Minister's fund.
- Financial assistance from organizations.
- Estimate for advance from departments.
- Train concession certificate.
- Treatment certificate for telephone, electricity etc.
- Attendance certificate.

Standardized forms control: MRD maintains all medical record forms in a stock room an issue to the wards, ICUs and OPD's once in a month. Medical records committee's approval is required whenever a new form is to be introduced. MRO who controls the consumption of it prepares annual indent. He issues the forms to all ward and OPDs once in a week according to the convenience of everybody.

Death reports to the corporation: Each and every hospital is responsible to send birth and death reports to corporation/municipality/panchayat in the scheduled period of 14 days for birth and 21 days for death. Thiruvananthapuram Corporation has supplied very detailed forms for sending those death reports to corporation. A cause of death certificate is given to patient's relatives for taking the dead body from this institute to their place. Recently corporation has introduced a new format in Malayalam additionally which shows the patients detailed data. Our MRD sends the death reporting forms promptly once in every 15 days with the signature of Medical Superintendent.

Discussion about the negligence, if any in death cases: Department heads prior to this meeting peruses the death charts. On the day of meeting, HOD explains the various reasons for each death happened in their department. Professor of pathology explains about the autopsy details if it has done associated with HOD's. There will be cross questions from everybody for which the HOD's replies. If the death is due to negligence of anybody, the committee submits the report to the Director for disciplinary action against the culprit. It is done in the good interest of the institution for offering better treatment with the advanced facilities. The accurate medical record maintained in the MRD are the tools for evaluation the quality care rendered to patients. So far 150 medical audit are conducted in SCTIMST successfully

Prolonged stay in the ward and ICUs: HOD of the concerned department explains about the reasons for the prolonged stay of patients who are lying in the ward or ICUs more than 30 days.

Hospital Infection : The Professor of Microbiology who is the chairman of the infection committee explains the infection rate and the remedial steps taken.

Hospital Statistics: The Senior MRO explains the monthly hospital statistics viz. admission, discharges, mortality rate, length of stay etc. in each service.

Complaints and Suits: The complaints or suits against to doctors or institute if any, will be brought to the notice of the committee members by SMRO and discusses in detail for necessary action.

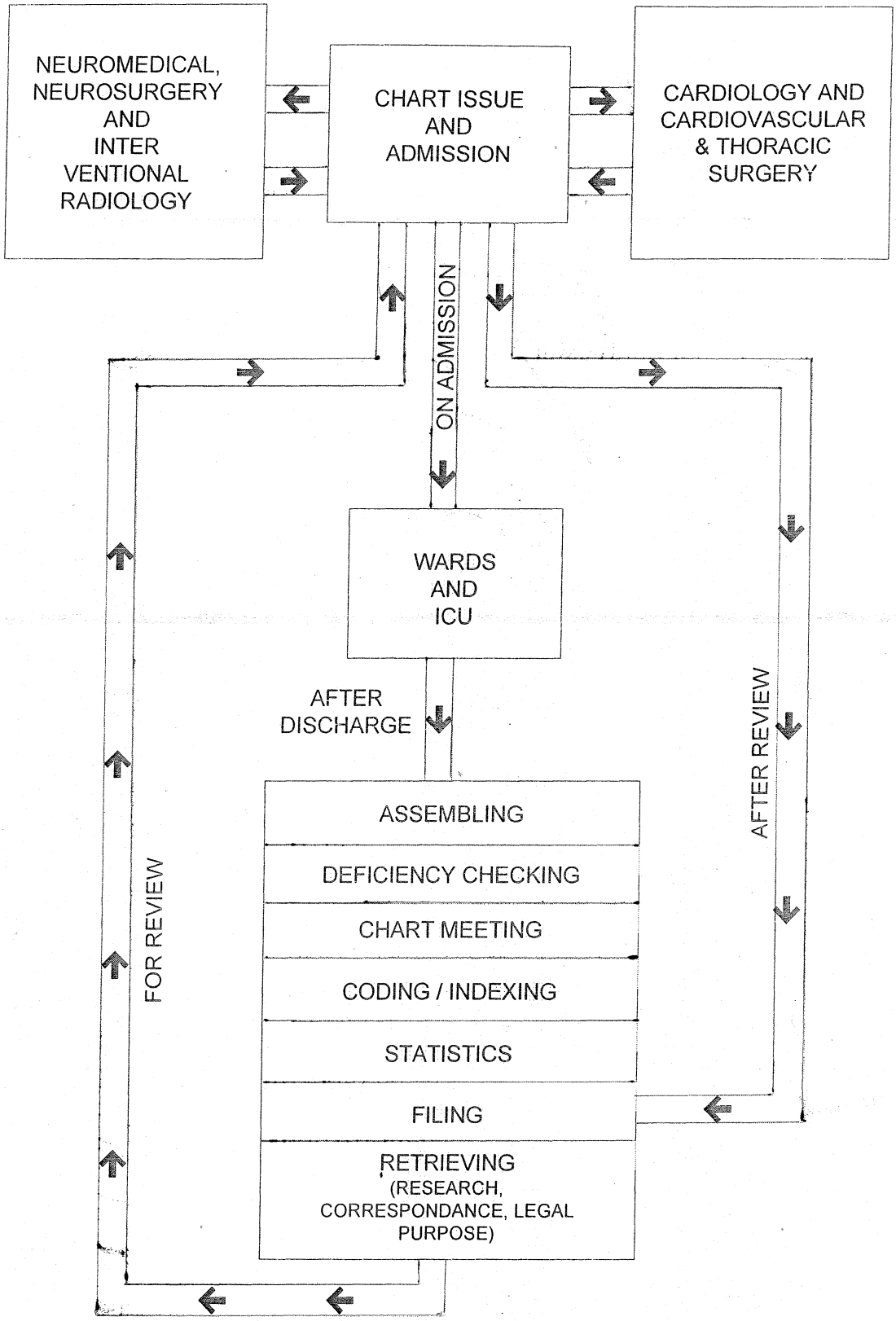
ADDITIONAL FUNCTIONS OF MEDICAL RECORD DEPARTMENT

Family Income Assessment: There was no assessment system when the institute was started. The income assessment duty was given to MRO, who designed a format and successfully carried out this system upto 1987 by assessing 87000 patients. MSW were trained by MRO and offered this work to them.

Other State Patients Surgery: When the success rate of open heart surgery of our institute was spread throughout India in 1980, there was a queue of patient from North India for open heart surgery in our institute. A policy decision was taken to accept one patient from North India per week and the MRD was offered this work, which is still continuing.

Centralized typing: Typing of discharge summaries, operation records, sophisticated investigations, histopathological reports, autopsy reports and other medical certificates were typed and corrected errors by typists, MRO and concerned doctors in wards and ICUs. The corrected reports were printed and kept in medical records after the discharge of the patient.

AN OVERVIEW ABOUT THE FLOW OF MEDICAL RECORDS IN SCTIMST



MY TRAINNING PERIOD AS STUDENT IN MRD OF SCTIMST

I joined here on 1st January 2005 as trainee student in diploma in Medical Records Science. I got rigorous training in all fields and work places of the medical records department of SCTIMST, which includes

- Outpatient management
- Admitting office management
- .Census preparation and analysis.
- Qualitative and quantitative analysis.
- Statistical data preparation and presentation.
- ICD coding
- Delinquent record control.
- Filing area management
- Pruning and assembling of disoriented medical record forms.
- Registration of vital events
- Medical certificate typing
- Medical record retrieval and retention
- Various correspondence
- Computerized appointment system with automatic token system
- Inactive record control and space management

- Incomplete control and reminders
- Surgical and procedural date scheduling
- Income group assessment for emergency admissions during night.
- Medical record forms control

DUTY ALIGNMENT FOR TRAINEE STUDENTS

The Senior Medical Record Officer is the Head and Guide of our department authorized to give rotation duty every month for staff and students. The duty list was published to before 25th of every month for the incoming duty. The duties are evenly distributed among staff and students. The duties are assigned as listed below.

OUT PATIENT DEPARTMENT

In SCTIMST, Thiruvananthapuram, the out patient department is well organized and it is divided into (1). Cardio-medical (2). Cardio-surgery (3). Neuro-surgery. The patient first visit MSW's assessment. The MSW gives the patient his registration number, which is permanent to the particular patient then MSW passes the patient to MRD (there are three MRD sub division near to OPD's). The MRD assistant feed the socio-economic details of the registered patients to the computer in correct for opening a new medical record. An identification card is given to the patient, which includes Patient's registration date, Patient's name, age sex, category, and address with an instruction to bring the card on every visit. Then an out patient record, referral letter, assessment sheet, social data form and patient's op small stickers are kept together in

a green folder (which indicates that it is an op file only) and send to concerned OPD's. Doctors record the physical examination findings, diagnosis, investigation, and disposition of the patient in time. The patient must take next review date from the MRD after their check-up. Such medical records are analyzed by the MRA's to know the deficiency if any. Incomplete charts then presented to MRO. International coding is done for OP diagnosis for out patient's record which is done only in 3-4 institutions in India.

Review: As explained the patients who need only further follow-up after an interval of particular period according to the severity of diagnosis are given a follow-up appointment by MRA as per the availability in the computer as programmed below. Appointment dates are given by staggered basis to avoid over crowding in OPD's. The appointment dates can be postponed when there is reasonable request from patients. MRO also postponed future admission dates for procedures and surgery in the same way.

Patients with appointment date first inform to the MSW for entering then they have to do payment (for payment category only) for review. Then they have to report to MRD with appointment date computer print card. MRA receives the card and then asked them to wait in the OPD's. The concerned files then send to concerned OPD's. Although there is a definite number of appointments in each OPD's, but the patients may come in with out appointment date on emergency they are considered as without appointment cases. The doctors in OPD's must say whether the patient is sick or not, then they writes the with out slip, then the procedure is as same as that of with cases, that is the patient

is send to the payment then asked them to inform the without issue to the information counter. The OP procedures starts just like the with appointment cases.

Admission: All the patients registered may not require hospitalization on the day of registration. Due to limited bed strength, only serious patients are admitted on the same day and others will be given a date after an interval according to the seriousness of the disease. The patients to be admitted must inform to the MRA with their Admission Discharge form, MRA gives a MRD number to the patient and asked the payment category to do payment. Then the patient/relative is asked to get signed in admission record to get their concern to do all necessary treatments including surgery to them. Then the Inpatient procedure is started. MRA should gather the changed patient data i.e. his present age at the time of admission and address. Additional information viz. telephone number of the bystander's, nearest police station etc. are collected by MRA from the patient or relatives because no relatives are (except babies or small children) permitted to stay with patients in the ward. All information is fed to the computer.

The MRA issues 2 permanent passes for 7 days to the bystanders, if the patient is admitted more than 7 days they have to renew pass on----. At a time from 4pm-6pm 2 bystanders can visit the patient

- The MRA then will collect all the new files and old files which are sent to the review

Then he has to check the return files and send them back to filing desk in main MRD. As a trainee student I have got the chance to do OPD duty

for 6 months. I am given the chance to manage very rush cardiology, neurology, neuro-surgery and cardio-thoracic-surgery OPD'S.

Filing: Four medical record assistance are assigned in the filing section. All the files from each OPD, wards (discharged files in patient's files), Files after studying purpose and others are collected together. Here is one important thing is that the files are checked by an MRA, and sorted and serialized them in ascending order of their number. Then entered it in computer then filed. During filing, the chances of missing files are more. As a result that chart cannot be traced out when the patient has come for review, so filing should be very careful and vigilant. In our institute we are following unit numbering system. Hence the chances of misplaced files are low. Some times thin charts may be incorporated with large one accidentally. Such charts cannot be traced out easily. Some times charts may be misplaced due to the negligence OPD people. But in our institute chance of misfiling is very less. The medical record assistance in filing desk duty should also take the next days with appointment files from the filing racks, and should sent them to the OPD's after sorting into clinic wise (Cardio-medical, CVTS, Neuro-medical, Neuro-surgery). And they must issue the with out date files to the concerned OPD's. With in these two years of my training program, I was in filing duty 8 months. I had filed about more than fifty thousand files.

Inpatient record analysis: The IP duty is divided into 3- Cardio-medical, Neuro-medical & Neurosurgery and Cardiovascular thoracic surgery & Neuro-radiology. Assistant Medical Records Officer feed the

census in computer. The list of discharged patients has been taken from the computer and receives the records from respective wards/ICUs. The medical records are come in MRD with in 72 hours after discharge.

After receiving the inpatient charts, the medical record personnel arrange the forms in the manner of a basic record. In SCTIMST, the format of a basic record is printed inside the IP folder. This is very easy to train a new staff. After arrangements specific deficiencies are to be checked. As far as the deficiencies are concerned, the consent of the patient or close relative is very important. So first of all the medical record assistant has to check whether the general and informed consent is present or not. Once it is missed it can't be corrected again like other deficiencies. After noting specific deficiencies, the IP charts are gone to coding section. In SCTIMST coding of diseases is based on ICD-9. After coding these charts are kept for completion by concerned authorities. Then after completion, these charts are checked by AMRO and later these charts are gone for filing. During my training programme, I was in IP record analysis duty 3 times.

Pruning : Pruning/ thinning is the part of space management. Each record is examined and unimportant papers are removed. Most of the forms in OP records were kept like OP face sheet, continuation sheets, important lab reports, socio-economic data sheet and referral letter. In IP, the admission record discharge summary, operation records, important procedure records, histopathology records, scanning records, death certificates and autopsy records were kept.

In SCTIMST, file retention period is 10 years. The records before 10 years are kept in our research center ie. Biomedical Technology

Wing, situated in Poojappura. When such patients are come to the hospital with out taking prior appointment, their records are taken from BMT Wing. We had maintained a pruning register so that we can easily identify pruned files. Pruning provides necessary space so that we can file latest records. During my training period I was put in pruning duty once and I had pruned about 450 charts.

Relieving: Due to the absence of any of the staff, the reliever has to do their duty. Relieving duty may be in filing area or in OPD's. The other duties of reliever includes typing of various certificates, death reporting, correspondence, active and inactive separation, forms issue etc.

Emergency Night Call Duty: All night call duties are given to medical record department students. All the registration formalities, admission formalities, file issuing formalities are done by the student on duty at night. At emergencies, the Receptionist on duty calls the student.

As I am a trainee of Diploma In Medical Records Science, I know the essentiality of such a department in a hospital. In this work book, submitted as a part of my study programme I mentioned about the medical records and medical records department shortly in connection with the Medical Records Department of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram. I got an excellent training from this Institute. I am familiar with the organization and management of MRD in a hospital. This Institute provides high degree of theoretical and well practical knowledge. I should try to enhance the training programme for the betterment of this field and shall make trained professionals.

OTHER ACADEMIC ACTIVITIES

Seminar Programme

During our academic section a seminar was conducted by Medical Records Department of SCTIMST. We presented topics on "Registration, Admission, Appointment system and Maintenance.", "Chart checking, Analysis and Quality Maintenance.", "Filing and Retrieval." We concluded the seminar with a discussion about the importance and rectification of exciting problem of MRD.

Training programme in JIPMER Hospital, Pondicherry.

As a part of our academic curriculum we visited JIPMER Hospital for a training programme that gave us more ideas about planning, organizing, and maintenance of Medical Records Department. We are able to understand manual procedures carried out in the routine works of MRD.

In JIPMER, we observed major sections such as

1. Registration counter's
2. OPD's
3. Admission office
4. Birth and Death registration section.

5. Daily census work section
6. Statistics section
7. Causality and Medico legal cases
8. Certificates
9. IP analysis Desk
10. Filing section etc.