

**Summer Training at
Sir Gangaram Hospital,
New Delhi**

**Process Flow of Medical Record Department and its Role in Obtaining
Hospital Statistics in a Tertiary Care Hospital**

**By
Apurva Varma**

**Under the guidance of
Dr. Seema Mehta**

**MBA Hospital and Health Management
2015-2017**



**The IIHMR University, Jaipur
2016**

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Dr. Apurva Varma**, student of **MBA Hospital and Health Management** from the IIHMR University, Jaipur has undergone summer training at **Sir Gangaram Hospital, New Delhi** from 1st April to 31st May, 2016.

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

The Internship is in fulfilment of the course requirements.

I wish him all success in all his future endeavours.



Col. (Dr.) Ashok Kaushik
Dean (Academics & Student Affairs)
The IIHMR University, Jaipur



Dr. Seema Mehta
Associate Professor
The IIHMR University, Jaipur



GRIPMER



The Ganga Ram Institute for Post-graduate Medical Education & Research
GRIPMER Academic Complex, 6th Floor

Sir Ganga Ram Hospital, Rajinder Nagar, New Delhi-110060

Tel: 011-42251667, 42251668, website: www.sgrh.com

e-mail: academics@sgrh.com

This is to certify that

Ref.:ACAD/FN. 816

Dr. APURVA VARMA

*has successfully completed his/her internship / Fellowship / Observership / Training
in the Department of Hospital administration*

Sir Ganga Ram Hospital, New Delhi

w.e.f. 1st April 2016 to 31st May 2016

During the above period his/her work & conduct has been found satisfactory.

Date...31st May 2016
Place...New Delhi...

Sunda
Head of the Deptt.

Dr. Sunita Sunda
Medical Superintendent (Offg.)
Sir Ganga Ram Hospital
New Delhi-110060



h

Dr. S. Nundy
Dean, GRIPMER

Prof. S. Nundy
Dean, GRIPMER
(The Ganga Ram Institute for PG
Medical Education & Research)

ACKNOWLEDGEMENT

I take this opportunity to express my profound sense of gratitude and indebtedness to all those who helped me throughout the duration of the project.

I am highly obliged towards Dr. Sunita Sunda, Medical Superintendent, for allowing me to pursue my summer training from Sir Gangaram Hospital, New delhi and without whom this training would not have been completed whose kind co-operation and constant encouragement helped me in the completion of the project in the hospital.

I would sincerely like to thank Mr. M.K Dhar, Senior Medical Record Officer, for his guidance and constant training in providing necessary information regarding the project despite his preoccupation and busy schedule.

Also I would like to express my gratitude toward Dr. shalini, Assistant Medical Superintendent, and other staff members for being helpful and making this summer training an unforgettable experience.

A special thanks to Dr. Seema Mehta, Associate Professor, IIHMR University, for guiding me throughout my training and answering the queries that came along the way. I would also like to thank my Institution and faculty members without whom this project would have been a distant reality.

TABLE OF CONTENTS

S.NO	TITLE	PAGE NO.
1.	Hospital Profile	1
	- Introduction	3
	- Mission	3
	- Quality Policy Of The Hospital	4
	- Awards	4
2.	Project Report Introduction	6
3.	Research Questions	7
4.	Objective	7
5.	Literature Of Review	7
6.	Theory	9
	- Hospital Statistics	10
	- Inpatient Census Data	10
	- Inpatient Bed Occupancy Rate	11
	- Bed Turnover Rate	12
	- Average Length Of Stay	12
	- Hospital Death Rates	13
7.	Functions Of Medical Record Department	16
	- Purpose	16
	- Scope	16
	- Responsibility	17
	- Objectives	17
8.	Process Of Creating Medical Records	20
	- Identification	20
	- Medical Section	21
	- Nurses Section	22
9.	Flow Of Medical Record From Admission To Post Discharge	22
10.	Midnight Census	25
11.	Confidentiality And Integrity Of The Record	25
	- Retrieval / Accessibility Of Medical Record	25
	- Retention Policy	27
12.	Methodology	28
13.	Selection Of Sites	30
14.	Data Sources	30
15.	Findings	34
	- Structure Of MR Department	34
16.	Hospital Statistics	36
17.	Interpretation	42
18.	Recommendations	42
19.	Conclusion	43

HOSPITAL PROFILE



NEW DELHI

INTRODUCTION

(SIR GANGARAM HOSPITAL, NEW DELHI)

Sir Ganga Ram Hospital is a 675-Beded multi-specialty state-of-the-art Hospital in India. It provides comprehensive Healthcare India services, and has acquired the status of a premier medical institution. It is the only hospital in the private sector that has maintained nearly 100% bed occupancy due to its reputation of providing the highest level of medical services to patients from Delhi and neighboring states.

The hospital was founded initially in 1921 at Lahore by Sir Ganga Ram (1851-1927), a civil engineer and leading philanthropist of his times. After the partition in 1947, the present hospital was established in New Delhi on a plot of land approximately 11 acres. The foundation was laid in April 1951 by the then Prime Minister of India Shri Jawaharlal Nehru and inaugurated by him on 13 April 1954.

Sir Ganga Ram Hospital in India continues to maintain its charitable character in accordance with to the wishes of its founder. Funds generated from the hospital services are partially utilized for providing free health care to the poor and needy patients. All development activities of the hospital are financed from internal resources, with no financial assistance provided by the government or other external agencies.

The Sir Ganga Ram Hospital is committed to make available 20% beds of total strength for admission of indigenous and financially weaker section of the society. On these beds all facilities (boarding, lodging, investigations, medicine and operative procedures are free.

In addition to that they are running regular OPDs for all disciplines where patients are seen free of charge. 40% of all the investigations is the OPD patients are free of charge. These facilities are provided strictly on a first come, first serve.

MISSION

Sir Ganga Ram Hospital is committed to provide world class healthcare, teaching, training and research by a team of highly qualified doctors, dedicated nurses, para-medical and non-medical staff with the help of state-of-the-art diagnostic, therapeutic services in a comfortable, caring and safe environment at an affordable cost to all sections of society including free treatment to the economically weaker section as per vision of the founder.

QUALITY POLICY OF THE HOSPITAL

Sir Ganga Ram Hospital is a tertiary-care charitable general hospital that has all broad and super-specialties, with firm commitment towards excellence in providing quality, ethical and affordable healthcare to all sections of the society with equal stress on integral components of medical education and research.

These are achieved by:

- Attracting medical professionals of eminence who develop each specialty as a Centre of Excellence in its field.
- Treating patients with respect, compassion and dignity.
- Providing free in- and out- patient medical facilities to the economically weaker sections of the society and organizing community outreach programs and camps.
- Conducting research, promoting academics and providing structured training to medical and paramedical professionals and postgraduate students.
- Complying with all legal requirements.
- Ensuring occupational health and safety standards and protecting our environment.
- Complying with requirements of NABH, NABL (ISO 15189:2007), ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007.
- Working towards continuous quality improvement, patient safety and patient satisfaction.

AWARDS –

- 2013 – NABH Accreditation for blood bank transfusion services.
- 2012 – Adjusted among top 10 hospitals of India: ‘The week’
- 2011 – C II-Exim bank award for Business Excellence; Adjusted among the best hospitals in the NCT of Delhi by The week
- 2010 – Adjusted among the top 10 hospitals of the country by the week magazine; Amity leadership award for business excellence for leveraging IT in healthcare sector by Amity University, Noida for its IT services
- 2009 – Best information and communication Technology (ICT) hospital award
- 2008 – Overall best hospital – Non corporate by Express Healthcare Excellence Awards
- 2006 – Asia hospital management award by Singapore Government

PROJECT REPORT

PROCESS FLOW OF MEDICAL RECORD DEPARTMENT & ITS ROLE IN OBTAINING HOSPITAL STATISTICS IN A TERTIARY CARE HOSPITAL

INTRODUCTION

The medical record is a clinical, scientific, administrative, and legal document relating to patient care in which are recorded sufficient data, written in sequence of events to justify the diagnosis, warrant the treatment and the results.

The medical records department maintains all inpatient records. Among a host of activities, its main functions involve filing, storing, indexing & coding of medical records for easy retrieval & future reference & also as a backup.

Medical record is not a single record but it is a collection & compilation of various documents relating to the same patient. It is a legal document. It contains patient personal data, past & present health history, family history & investigation & treatment details.

Hospital statistics represents the activities in connection with hospital events i.e admissions, duration of stay and discharges or death and are calculated in rates or percentages. These statistics are the indicators of utilization of hospital services and operational efficiency.

Discharges are very important for any hospital as most of the statistical analysis of hospital activities are carried out on the basis of hospital discharges because the number of admissions does not represent the complete picture of the hospital's activities with regard to a particular patient.

Hospital statistics involves **average daily census, bed occupancy rate, bed turnover rate, turnover interval, average length of stay, death rate**, etc.

These statistical data are maintained in the medical record department of the hospital. Various steps are involved in the department in order to record and maintain these data.

The aims and objectives of Medical Record Department are achieved with the concerted team efforts. The inpatient files, once brought to the MRD, are checked and reviewed thoroughly. Once complete, the files are labeled and coded as per ICD X coding system.

The statistical data for the hospital is provided on a monthly basis to the management. All the concerned departments are informed in this regard and the data is obtained by the last day of every month. It is compiled and then sent to the respective authorities. The regulatory requirements of the hospital include reporting to the Municipal regarding the deaths and statistics.

RESEARCH QUESTIONS

- How effective is the process flow of medical record department in a tertiary care hospital?
- Role of medical record department in obtaining monthly hospital statistics?

OBJECTIVE

To study the process flow of medical record department and its role in obtaining monthly hospital statistics in a tertiary care hospital.

LITERATURE OF REVIEW

General

Information has become one of the commanding heights of power in the modern world. Access of information was first held as the privilege of the rich, then used as a driving force of political change and accepted as a bare necessity for economic survival. In short information has become one of the richest resources (An information agenda 1980s 81 : 1)

We are talking of information, whatever the medium, 'medical record' is the source of information for many purposes. Medical record management has all essential elements of an information system; a source; a user; a means of access; and a process discipline or technique which controls the source in interest of the user. (Newton 1986 : 79)

Records may be termed as any information and documents kept in a systematic, scientific and easy ways that help to receive the required data at the time of necessity.

Similarly, Medical record is also a organized way of storing the data, information and other relevant documents with the objective of making easy availability of important data at the time of its need.

Information is of obvious importance for the appropriate treatment of patients. The true cost of generating information to support modern management is not always quantifiable, its value in this particular case is not measurable. So medical record management is essential to ensure that patient information sources are so maintained and ordered so that when technological systems are applied or data bases constructed from such sources, they provide a solid foundation not a quick sand. (Newton 1986 : 82)

Medical record consists of name of patient, address, age, sex, occupation, disease, modes of diagnosis and recommendations made the after by the concerned doctor in course of undergoing treatment. It helps patients to acquire the right and appropriate treatment. Moreover, it acts as a tool for the doctor who is looking into the patient.

Medical record is an important primary tool in the practice of medicine and the whole idea behind it is to provide better care of the patient through careful recording of every detail having to do with his case.

The medical record is the 'who' 'what' 'when' 'why' 'where' and 'how' of the patient care during hospitalization.(Huffman 1963 : 34)

Medical record is the only history of achievement , the only measurement of work being done by the medical and nursing staff, the only record of progress of the patient, and it is the source of information for many purposes.

Because patient forget and records remember; the record is of value to the patient; the hospital; the physician; and for research and teaching. (Huffman 1963 : 129)

When we talk of the development of medical record, we have to go back to the seventeenth century. In 1752 A.D. Benjamin Franklin set up a incorporated Hospital in Philadelphia in United State of America. This hospital is presently known as Pennsylvania Hospital. He introduced medical record by preparing file of special cases on which patients' name, admission date, discharge date etc. were written. In the same way, another hospital was opened in Boston in 1821 A.D. where a typical method of keeping relevant data was initiated. Separate files were opened for different individual patients in order to keep records. This process proved to be more helpful in finding the necessary data regarding the patients. Besides this, it helped in acquiring important facts that could make easier to take care for patients and to conduct the proper research work.

High levels of inpatient bed occupancy have been used as a tactic to achieve the goals of high service levels while containing costs. Bagust et al. [2] used simulation to examine factors affecting hospitals daily bed requirements.

Over the years, healthcare researchers have developed several models to forecast bed occupancy. Farmer et al [3] used Autoregressive Inductive Moving Average (ARIMA) modelling to predict the number of surgical beds required at a UK hospital. Further, McManus describes the use of Queuing Theory to predict monthly responsiveness to changing bed demand [4]. This led to development of alternative models [5, 7] that are able to predict daily bed occupancy. Using ARIMA modelling, Jones and Joy [5] found that the daily number of occupied beds due to emergency admissions is related to both air temperature and influenza illness rate. It was found that a period of high volatility, indicated by GARCH errors, would result in an increase in waiting time in the A&E department.

Harrison et al. [8] developed compartment models to analyze the flow of patients through notional time related compartments. Their model accurately describes length of stay distributions and assumed a stable system. Subsequently, Mackay and Lee [6] improved on Harrison et al's modelling approach by analyzing appropriateness of the level of model complexity and the ability to use the compartment model for generalization and forecasting.

One major limitation of the compartment models is that the model produces single numbers rather than range of values and is deterministic in nature [9].

With the passage of time Medical record has been a backbone for developing a new dimension in the health sector in each of the countries in the world.

THEORY

The medical record is a legal document procuring a chronicle of a patient's medical history and care. Physicians, nurses and other member of the health care system may make entries in the medical record.

The medical record embraces a variety of types of "notes" entered over time by healthcare professionals, recording observations & administration of drugs and therapies, orders for the administration of drugs and therapies, pathological test results, x-rays, reports etc.

Hospital Statistics

Hospitals collect data for both inpatients and outpatients on a daily basis. They use these statistics to monitor the bulk of patients treated daily, weekly, monthly, or within some other specified time of frame. These statistics give health care administrators the information they need to plan facilities and to keep eye on inpatient and outpatient revenue streams. For these reasons, health information management (HIM) professionals should be proficient in data collection and reporting methods. Because most of data collection and reporting are now automated, it is important to get to know the underlying concepts from which these data are generated.

Inpatient Census Data

Even though much of the data collection process has been automated, an ongoing responsibility of the HIM professional is to verify the census data that are collected daily. The census reports patient activity for a 24-hour reporting period. Included in the census report is the number of inpatients admitted and discharged for the previous 24-hour period as well as the number of intra-hospital transfers.

An intra-hospital transfer is a patient who is moved from one patient care unit (for example, the ICU) to another (the surgical unit). The usual 24-hour reporting period begins at 12:01 a.m. and ends at 12:00 midnight. In the census count, adults and children are reported separately from newborns. However, before compiling census data, it is important to understand the related terminology. The **census** refers to the number of hospital inpatients present at any one time. For example, the census in a 300-bed hospital may be 250 patients at 2:00 p.m. on May 1, but 245 only one hour later. Because the census may change throughout the day as admissions and discharges occur, hospitals designate an official census-taking time. In most facilities, the official count takes place at midnight.

A unit of measure that reflects the services received by one inpatient during a 24-hour period is an **inpatient service day**. The number of inpatient service days for a 24-hour period is equal to the daily inpatient census, that is, one service day for each patient treated.

Inpatient service days are compiled daily, weekly, monthly, and annually. They reflect the volume of services provided by the health care facility—the greater the volume of services, the greater the revenues to the facility. Daily reporting of the number of inpatient service days is an indicator of the hospital's financial condition.

As mentioned earlier, the daily inpatient census is equal to the number of inpatient service days provided for a single day. The total number of inpatient service days for a week, a month, or some other period of time can be divided by the total number of days in the given period to get the average daily inpatient census.

$$\frac{\text{Total number of inpatient services for a given period}}{\text{Total number of days in the same period}}$$

In calculating the average daily census, adults and children (A&C) are reported separately from newborns (NBs). This is because the intensity of services provided to adults and children is greater than it is for newborns.

Inpatient Bed Occupancy Rate

Another indicator of the hospital's financial position is the inpatient bed occupancy rate, also called the percentage of occupancy. The **inpatient bed occupancy rate** is the percentage of official beds occupied by hospital inpatients for a given period of time. In general, the greater the occupancy rate, the greater the revenues for the hospital. For a bed to be included in the official count, it must be set up, staffed, equipped, and available for patient care. The total number of inpatient service days is used in the numerator because it is equal to the daily inpatient census, or the number of patients treated daily. The denominator is the total number of bed count days. **Bed count days** are calculated by multiplying the number of days in the given period by the number of beds available during the time frame of interest.

The occupancy rate compares the number of patients treated over a given period of time to the total number of beds available for that same period of time. The general formula for the inpatient bed occupancy rate is:

$$\frac{\text{Total number of inpatient service days for a given period} \times 100}{\text{Total number of inpatient bed count days for the same period}}$$

As with the average daily census, the inpatient bed occupancy rate for adults and children is reported separately from that of newborns. It is possible for the inpatient bed occupancy to be greater than 100%. This occurs when the hospital faces an epidemic or disaster. In this type of situation, hospitals set up temporary beds that are not normally included in the official bed count.

Bed Turnover Rate

The bed turnover rate is a measure of hospital utilization. It includes the number of times each hospital bed changes occupants. The formula for the bed turnover rate is:

$$\frac{\text{Total number of discharges (including deaths) for a given time period}}{\text{Average bed count for the same period}}$$

Average length of Stay

The length of stay (LOS) is calculated for each patient after he or she is discharged from the hospital. It refers to the number of calendar days from the day of patient admission to the day of discharge. When the patient is admitted and discharged in the same month, the LOS is determined by subtracting the date of admission from the date of discharge. For example, the LOS for a patient admitted on May 12 and discharged on May 17 is five days ($17 - 12 = 5$).

When the patient is admitted in one month and discharged in another, the calculations must be adjusted. One way to calculate the LOS in this case is to subtract the date of admission from the total number of days in the month the patient was admitted and then add the total number of hospitalized days for the month in which the patient was discharged. For example, the LOS for a patient admitted on May 28 and discharged on June 6 is nine days, $(\text{May } 31 - \text{May } 28) + \text{June } 6$.

When a patient is admitted and discharged on the same day, the LOS is one day.

A partial day's stay is never reported as a fraction of a day. The LOS for a patient discharged the day after admission also is one day. Thus, the LOS for a patient who was admitted to the ICU on May 10 at 9:00 a.m. and died at 3:00 p.m. the same day is one day. Likewise, the LOS for a patient admitted on May 12 and discharged on May 13 is one day.

When the LOS for all patients discharged for a given period of time is summed, the result is the **total length of stay**. If five patients are discharged from the pediatric unit on May 9, the total LOS is calculated as follows:

Patient	LOS
1	5
2	3
3	1
4	8
5	10
Total Length of Stay	27

In the preceding example, the total LOS is $5 + 3 + 1 + 8 + 10 = 27$ days. The total LOS is also referred to as the number of days of care provided to patients discharged or died, or the discharge days. The total LOS divided by the number of patients discharged is the average length of stay (ALOS). Using the data in the previous example, the ALOS for the five patients discharged from the pediatric unit is $27/5 = 5.4$ days. The general formula for calculating ALOS is:

$$\frac{\text{Total length of stay for a given period}}{\text{Total number of discharges (including deaths) for the same period}}$$

As with the other measures already discussed, the ALOS for adults and children is reported separately from the ALOS for newborns.

Hospital Death Rates

The **death rate** is based on the number of patients discharged—alive and dead—from the facility. Deaths are considered discharges because they are the end point of a period of hospitalization. In contrast to the rates discussed in the preceding section, newborns are not counted separately from adults and children.

The **gross death rate** is the proportion of all hospital discharges that resulted in death. It is the basic indicator of mortality in a health care facility. The gross death rate is calculated by dividing the total number of deaths occurring in a given time period by the total number of discharges, including deaths, for the same time period. The formula for calculating the gross death rate is:

$$\frac{\text{Total number of inpatient deaths (including NBs) for a given period} \times 100}{\text{Total number of discharges, including A\&C and NB deaths, for the same period}}$$

The **net death rate** is an adjusted death rate. It is calculated in the belief that certain deaths should not “count against the hospital.” It is an adjusted rate because patients who die within 48 hours of admission are not included in the net death rate. The reason for excluding them is that 48 hours is not enough time to positively affect patient outcome. In other words, the patient was not admitted to the hospital in a manner timely enough for treatment to have an effect on his or her outcome. However, in view of currently available technology, some people believe that the net death rate is no longer a meaningful indicator.

The formula for calculating the net death rate is:

$$\frac{\text{Total number of inpatient deaths (including NBs) minus deaths} \\ < 48 \text{ hours for a given period} \times 100}{\text{Total number of discharges (including A\&C and NB deaths) minus deaths} \\ < 48 \text{ hours for the same period}}$$

The **newborn death rate** is the number of newborns that died in comparison to the total number of newborns discharged, alive and dead. To qualify as a newborn death, the newborn must have been delivered alive. A stillborn infant is not included in either the newborn death rate or the gross or net death rates.

A **fetal death** is a death that occurs prior to the fetus' complete expulsion or extraction from the mother in a hospital facility, regardless of the length of the pregnancy. Thus, stillborns are neither admitted nor discharged from the hospital. A fetal death occurs when the fetus fails to breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or movement of the voluntary muscles.

Fetal deaths also are classified into categories based on the fetus' length of gestation or weight:

- **Early fetal death:** Less than 20 weeks gestation, or a weight of 500 grams or less.
- **Intermediate fetal death:** At least 20 but less than 28 weeks gestation, or a weight between 501 and 1000 grams.
- **Late fetal death:** 28 weeks gestation, or a weight of more than 1000 grams.

A **maternal death** is the death of any woman from any cause related to, or aggravated by, pregnancy or its management, regardless of the duration or site of the pregnancy. Maternal deaths resulting from accidental or incidental causes are not included in the maternal death rate. Maternal deaths are classified as direct or indirect. A **direct maternal death** is the death of a woman resulting from obstetrical complications of the pregnancy, labor, or puerperium (the period lasting from birth until six weeks after delivery).

Direct maternal deaths are included in the maternal death rate. An indirect maternal death is the death of a woman from a previously existing disease or a disease that developed during pregnancy, labor, or the puerperium that was not due to obstetric causes, although the physiologic effects of pregnancy were partially responsible for the death.

The maternal death rate may be an indicator of the availability of prenatal care in a community. The hospital also may use it to help identify conditions that could lead to a maternal death.

FUNCTIONS OF MEDICAL RECORD DEPARTMENT

1. Daily receipt of case sheets, pertaining to discharge from various wards, their checking and assembly.
2. Daily compilation of hospital census report.
3. Maintenance and retrieval of medical records for patient care and research study.
4. Completion and procession of hospital statistics and preparation on different periodical reports on morbidity and mortality.
5. Issuing birth and death certificates.
6. Online registration of vital events of birth and death.
7. Dealing with medico-legal cases and attending the courts on call.
8. Arrangement and supervision of enquiry and admission office.
9. Arrangement and supervision of OPD registration.
10. Management of disability boards.
11. Assistance to hospital administration.

A. Purpose:

To provide guideline instructions & process of Management of Medical Records with the aims that

- Medical Records are readily retrievable, and
- Feedback loop is established for continuous improvements of Health Indicators.

B. Scope:

It covers all patient medical records in the hospital.

C. Responsibility:

Senior Medical record Officer and Junior Clerk – Medical Records officer is responsible for maintaining records.

D. Objectives:

The Primary objective of the Medical Record Department is to develop good Medical Records containing sufficient data written in sequence of events to justify the diagnosis, treatment and end result of all patients treated in a hospital, keep them under safe custody and make the readily available as and when required for

- The Patient.
- The Doctor
- Hospital Administrators.
- Medico Legal Purposes.
- External Reporting.

1. For Patient, it

- Serves to document the clinical history and processes of patient treatment.
- Serves to avoid omission or repetition of diagnostic and therapeutic procedures.
- Assists in continuity of Care even in future diseases whether it requires attention in or out of the Hospital.
- Serves as evidence in Medico-legal Cases.
- Give necessary certification for employment reasons.

2. For The Doctor, it

- Assures quality and accuracy of diagnostic and therapeutic measures undertaken.
- Serves as an assurance of continuity of medical care.

- Evaluates proper Medical Practices.
- Provides Protection in litigation.

3. For Hospital Administrator

- To document the quality and quantity of work undertaken and accomplished.
- To evaluate proficiency of Medical Staff for administrative and clinical purposes.
- To evaluate the services of the hospital in terms of accepted norms and standards.
- To serve as an Administrative record and Performance.
- To assist in futures Programmers for Planning and developments of hospital.

4. For Medico Legal Purposes, it serves

- As a documentary evidence
 - To dispose claims of the Insurances.
 - For Patient's WILL to indicate if the patient was of normal mental state or not.
 - Malpractice Suits.
 - Authorization for operation etc. signed document for consent for operation will prove that the Patient / Relative have allowed the performance of such Procedure.
- Criminal cases – as a Potential Document.

5. Development Of Hospital Performance Statistics

Statistical and epidemiological Data are needed to implement and manage medical care planning and to obtain Health Indicators to monitor and evaluate their effectiveness for Hospital Management as follows:

- Bed Occupancy Rate
- Average No. of Out Patients

- Average No. of Admissions
- Sex wise Admissions
- Average Length of Stay of Patients.
- Gross and Net Death Rate.
- Number of Types of Operations performed (Major & Minor)
- Number of X-ray / C.T.Scan, Ultra Sound etc.
- Laboratory Tests.
- Information about Institution Deaths (Deaths occurring over 48 hrs.)
Non Institution Deaths (Deaths occurring under 48 hrs.)
- Total Number of Babies born in a hospital.
(Sex wise distribution / sex ratio/ Still Births.)
- Daily Census of the Hospital.

6. Reporting to Health Authorities

This is the responsibility of the department to submit the following Diagnostic Reports to Health Agencies like D.H.S , CMO and other departments under the ambit of Health & Family welfare department ,Government of Uttar Pradesh

- Daily / Weekly / Monthly Malaria and Dengue Fever cases to the Chief Medical Officer.
- All Communicable Diseases to the D.H.S
- Notifiable diseases are reported immediately to control room to Chief Medical Officer
- Monthly Leprosy Cases to the D.H.S
- Morbidity / Mortality Statistics to the D.H.S., on yearly basis or as and when required by the Directorate of Health and Family Welfare Department Government of Uttar Pradesh

PROCESS OF CREATING MEDICAL RECORD

Medical Record contains different sections for recording the information as

- Identification Section
- Medical Section
- Nurses Section.

All entries made in the medical and nursing section of the patient record are entered by authorized care providers who authenticate the entries made so as to facilitate identification of the particular author of patients medical records.

1. Identification

Initially patient has to fill up the Bio Data / Socio economic data / Patient Identification Data at the time of Registration and Admission.

OPD file is generated at OPD registration counter; on Request of the Consultant doctor, In patient Admission record is prepared. Personal data for following particulars are needed at OPD registration and Admission counter by the Patient / Relatives.

- Name of Patient
- Father's / Husband's Name
- Age & Sex
- Occupation
- Permanent / Emergency Address.
- Telephone / Mobile Numbers
- Nationality
- Religion
- Medico Legal Case if any.

These details are fed in the register manually and the patient is given a unique identification number which is entered in the designated area of the patient.

2. Medical Section

The Medical Section is filled up by the Attending Consultant, and corresponds to History, Physical examination, Treatment / progress of the patient, if operation has to be performed, then Operation notes are also recorded, the information is recorded in the following Medical Record Forms, keeping in view two types of forms – Basic + Special

Basic:-

- Initial diagnosis Record Sheet
- History Record Form
- Reasons for Admission
- Physical Examination Record Form
- Progress And Treatment Record Form
- Consultation Record Forms (special)
- Different Investigations Report Forms

In Special cases- Consent Forms, Operation Record Form.

Discharge summary is given in case of Discharged – cured , LAMA , Discharge on request or Death. A copy of the same is preserved in the patients medical record.

- i. In case of death ,Medical certification of cause of death forms is to be filled up by the attending consultant or emergency medical officer according to Registration of Birth and Death Act 1969. A copy of the death certificate is preserved in the patient's medical records file.

3. Nurses Section

The Nurses Section is responsible for filling up the following

- Medication Record Forms
- T.P.R. Chart.
- INTAKE and OUTPUT Record Form.
- Diet sheet

Discharge summary is given in case of discharge cured, LAMA, DOR or death

FLOW OF MEDICAL RECORD FROM ADMISSION TO POST DISCHARGE

1. Smooth flow of Medical Record is ensured by the medical record department of patients from the day of his admission to the day of his discharge and onward maintenance till the retention period.
2. Admission request form is filled by the consulting doctor of the patient. Formalities for admission of the patient is done in the registration counter (during working hours) or in the emergency department of the hospital (during non peak hours) .The general inpatient case sheet for patients is generated at the time of admission in the respective inpatient admission counters.

All datas pertaining to the patients progress in the hospital and care provided are preserved

in the patients bed head ticket which is supervised by the nursing staff of the concerned

ward where the patient is admitted, all entries made in the Bed Head Ticket is recorded in a chronological manner and authenticated by the designated authority of the particular entry.

3. After getting the orders of discharge of the patients from the treating Consultant, the Nursing Staff, on duty get the discharge summary prepared from the Consultant / Medical officer, the slip is sent to the Billing Department for necessary payment (for patient staying in private ,semi private wards and paying wards) .

4. Necessary payment done at Billing Department and receipt is given to patient relative. Nursing staff discharges the after getting clearance slip from billing department. Patient file is sent to medical record room.

5. In case the patient is transferred or referred to another hospital the medical record contains information regarding reasons for transfer , name of the hospital where the patient is being transferred

☐ DIVISION

MRD has following functional unit :-

1) Receiving area

- Here files are received

2) Quality check

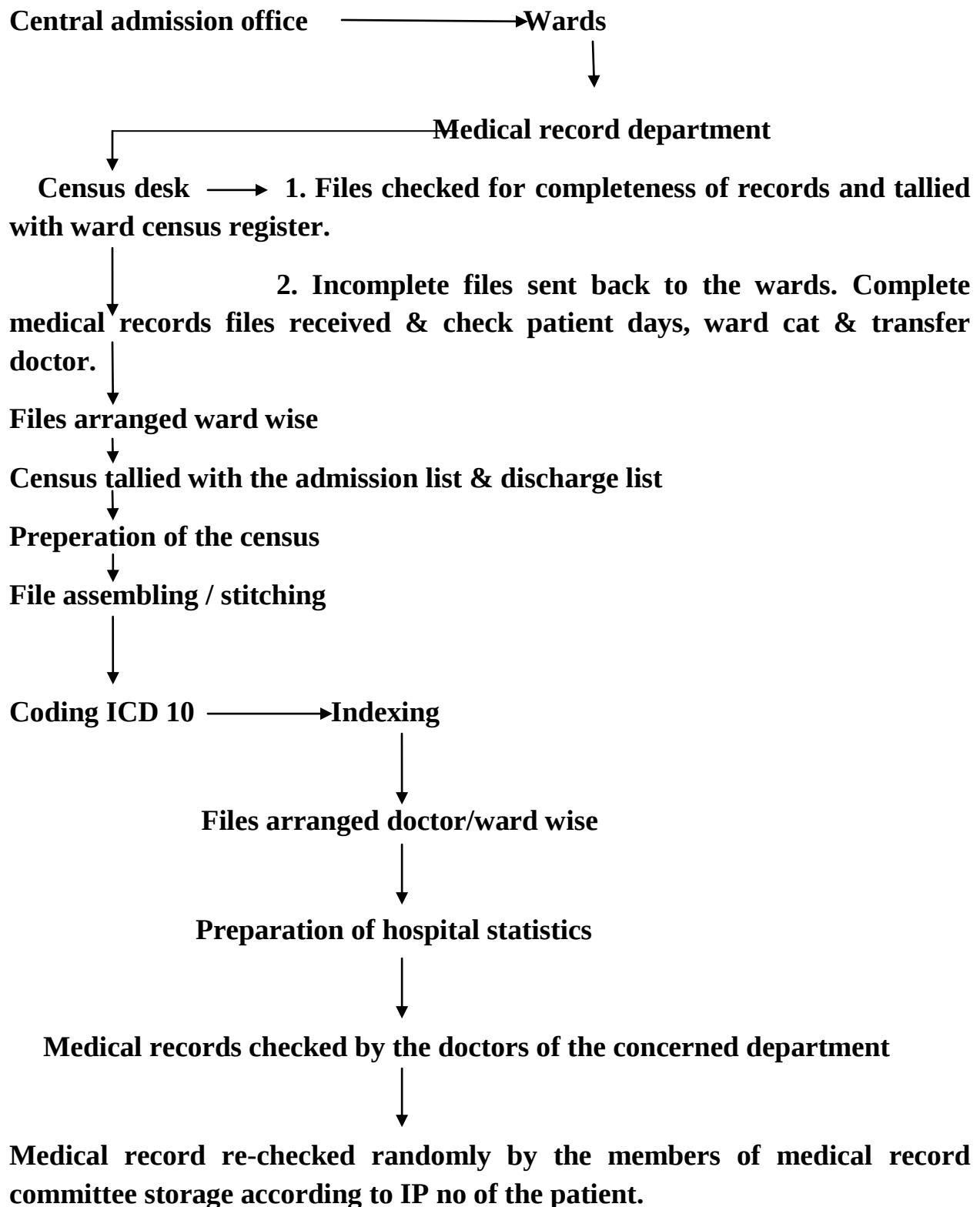
- Here quality of files are checked. If everything is present what is required then files are accepted otherwise the files are sent back to the ward.

3) Census recording

- Daily census report is made for different wards from 12 midnight for next 24 hours.

4) Record storage area

- After indexing of the disease, stitching is done and is stored in the record storage area.



MIDNIGHT CENSUS :

Ward Census Reports is generated by nursing staff at night duty for every single ward. The reports are submitted individually to the medical record department for further proceedings.

The medical record clerk receives the data and forward to compile the same for preparing the census report.

The census report is submitted to the Medical Superintendent of the hospital on a regular basis by the medical record clerk.

CONFIDENTIALITY AND INTEGRITY OF RECORD:

The hospital knows its responsibility as custodian of medical records and executes the following procedure to maintain its confidentiality, security and integrity :

1. Patient is the owner of his medical record and no content of it would be made available to any third party without written authorization from the patient. The hospital observes the following guideline instruction for the purpose :

Retrieval / Accessibility of Medical Record:

- Maintain records in proper accessibility manner.
- Hand over the records as & when required by Director /Chairman/MS for administrative purposes.
- Physician / Surgeon for follow up purposes by getting permission from MS and get the records.
- Records required for Medico Legal Cases in the Court of Law by the Consultant / M.O.'s.
- For Follow up of In-patients by the Consultants as well as by the Patients.
- As & when they require Discharge Summary, Investigation Reports etc.

- Patients relatives will require a written authorization from the patient for obtaining information from the medical records. However these information should not be given in original , a xerox of the same would be handed over, and signature taken in specific format.
- 2. Incase loss or tampering of patient's medical record data is reported, the medical record clerk would immediately inform the same to the Medical Superintendent who would be responsible for taking appropriate action. He will inform the external agencies as applicable and would hold an internal enquiry for investigating the cause for such event.

He would form an internal committee under the authorities who would hold the enquiry in reality and would submit the report to the Director/Chairman as per the committee's finding for further action.

Incase the internal committee confirms any sort of negligence or discrepancy on part of any hospital employee, MS would inform the same to higher authorities for further action .

- 3. The Medical Record Department is responsible for proper storage, retrieval and maintenance of confidentiality and security of the record. During normal working hours it is the policy of the hospital to have atleast one staff available in the department .

At the end of the day medical record clerk is responsible to lock the department in the presence of a security staff .The key is handed over to the concerned security staff. There after the security department is made responsible for the protection of the medical record room.

Retention Policy :

- i. Policy : The Department is responsible for consolidation of all Forms belonging with patient is sent for storage in a manner with the help of Admission Number, which is assign at the time of Admission. These records are stored in the Medical Record Departments for the following Retention Period as per the Govt. Orders

Normal Record : Five (05) Years.

Medico Legal Record : Till the closure of case

ii.Security :

- a. Access to Medical Records Department is limited to only person authorized department staff.
 - b. Incase any record is issued to any designate individual as per the retrieval policy, the same is recorded in the outgoing patient record entry register for accountability.
 - c. No form of record is issued to any person without proper authorization from the designated authorities.
 - d. During non working hours the security staff is responsible for safety of the department.
- iii. At the end of the designated retention period the medical record clerk will seek written approval from the director for destruction of the medical records who have crossed the retention period.
- Only after obtaining written from the designated hospital authority , the medical records will be destructed by the department staff.

METHODOLOGY

It was a descriptive cross sectional study of one month duration from 1st of april to 31st of april 2016. It was carried out in Sir Gangaram hospital which is a tertiary care hospital situated in delhi, provided with 675 beds and it caters a huge population of delhi and other cities.

After taking informed departmental consent, department proceedings were observed, questions were asked and data was recorded with the help of information provided by registrars/head nurses/head officer of the respective wards/departments. To make classification of the admitted patients into logical and systematic groups, all unit's incharges and registrars were consulted repeatedly. Another source of information used, for classification of diseases was WHO publication ICD-10. During daily visit for purpose of follow up, hospital records were reviewed- age, gender, disease profile, duration of hospital stay were recorded and bed occupancy rate was calculated and average length of stay was computed. The variables of special interest were total beds available, total days of admission, duration of stay, bed turnover rate, discharge and death.

To achieve the assessment's objectives :

- Documented the existing MR practices
- Developed observational criteria and questionnaires to assess the main components of MR department services
- Used both quantitative and qualitative approach to data collection
- Collected data in the study sites
- Presented results
- Provided recommendation on major problems facing MR practices

Criteria used for the assessment tool were selected after a thorough and systematic review of the relevant literature (Ajluni 1993; Green and Bowie 2005; Huffman 1994; Imbierski et al., 1979; Skurka 1994) focusing mainly on MR management, MR development in developing countries, health information management, and accreditation standards and quality control of MR.

A quantitative approach was used while collecting the data. A qualitative approach was used for form content analysis, direct observation by data collectors, and in-depth interviews.

The system used in each hospital for arranging the forms inside the MR folder was considered as the criterion to be checked when assessing the arrangement (order) of MR forms. Arrangement of forms was assessed using a data collection sheet (Form 8 in Annex A).

The following 10 basic forms were checked for every MR reviewed by the study, to assess the presence of basic and special forms (see Annex A):

- Admission and Discharge Record
- Discharge Summary
- Medical History
- Physical Examination
- Progress Notes (clinical notes)
- Physician's Orders
- Nursing Notes
- Graphic Sheet (i.e., temperature, pulse, pressure)
- Routine Diagnostic Reports (i.e., laboratory, x-ray)
- Consent Form

The admission and discharge record, discharge summary, and physician's orders sheets were reviewed to indicate the special forms to be checked for a MR. For example, the operation report and anesthesia report should have been checked if the patient had a surgical procedure(s); the consultation report should have been checked if the attending physician had requested a consultation for the patient; and the blood transfusion report should have been checked if the patient had a transfusion. In depth review of admission and discharge record, history and physical exam records, discharge summary, and operation report (for surgical cases) was done to evaluate the quality of MRs.

These records and reports were chosen for the following reasons:

- 1) they are considered the backbone of a MR.
- 2) they significantly represent the quality of medical recording.
- 3) there is a remarkable consensus among medical professionals concerning their contents.

SELECTION OF SITES

Medical record department of Sir Gangaram hospital was selected and five categories of hospital were selected for the estimation of hospital statistics.

DATA SOURCES

Data were obtained from the following sources:

- Review of the available written documents related to the topics assessed.
- Medical records, log books, ward census report, hospital census report, and daily admissions and discharges list
- Direct observations
- Structured interview with the head of the MR department

Admission and Discharge Record Checklist

An Admission and Discharge Record criteria checklist was used to assess the presence of the following criteria in each of the admission and discharge records, namely:

- Patient identification and administrative data: name; hospital number; sex; age; marital status; occupation; health insurance; address; ward and room; attending physician; date of admission; and date of discharge
- Medical data: provisional diagnosis, final diagnosis, operations (surgical cases), and code number
- Signature of physician
- Legibility of recording

Medical History and Physical Examination Checklist

Content of the medical history and physical examination was reviewed using the medical history and physical examination checklist. The presence of the following criteria was checked:

- Medical history: chief complaint; present illness; past history; family and social
- Physical examination: pulse, temperature, blood pressure, heart, chest; local exam, and
- provisional diagnosis
- Signature of physician
- Date
- Legibility

Discharge Summary Checklist

The content of discharge summary forms was reviewed using the discharge summary checklist. The presence of the following criteria was checked:

- Patient number
- Provisional diagnosis
- Final diagnosis
- Significant findings (i.e., history, physical exam, investigations)
- Course in hospital (i.e., treatment, complications, progress)
- Procedures performed (i.e., surgical procedures)
- Condition of patient on discharge
- Specific instructions to patient (i.e., diet, medications, follow up)
- Signature of physician
- Date
- Legibility

Operation Report Checklist

The content of operation report forms was reviewed using the operation report checklist:

- Patient number

- Name of procedure
- Date of surgery
- Time of operation
- Preoperative diagnosis
- Postoperative diagnosis
- Findings
- Used technique and procedures
- Names of surgeons
- Surgeon signature
- Date
- Legibility

Legal Aspects of MR Assessment Checklist

Using a special criteria checklist, the following documentation principles, which have direct legal implications, was to be checked for every form included in the MR:

- All pages contain patient's name and number
- Patient's name and number are consistent on all forms
- Presence of consent forms
- All documents are original
- No erasures (words or lines that have been erased)
- No obliterations (i.e., spots of ink, spots of blood, ugly marks, etc.)
- No entries in pencil
- No recording on non-designated forms (i.e., blank sheets of paper)
- No recording on inappropriate forms (i.e., recording discharge summary on operation report form)
- No empty forms
- No loose forms

Coding and Indexing of Diseases and Operations Sheet

A coding and indexing of diseases and operations sheet was used to assess the following:

- Presence of diseases/ operations codes
- Indexing of entered codes
- Proper filing of diseases/operations index cards (if manual)
- Completeness of the disease/operation index card, in terms of hospital number, age and Sex of patient, days of stay, and attending physician.

Master Patient Index Assessment Sheet

A master patient index assessment sheet was used to assess:

- Presence of patient index card
- Filing of index card (if manual)
- Completeness of card information, regarding patient's name, hospital number, sex, age, address, attending physician, date of admission and discharge
- Accuracy of recording by comparing card data with data recorded in the medical record.

Daily Discharge Analysis Assessment Sheet

Each record was checked against the discharge analysis logbook to assess:

- Degree of analysis (i.e., being analyzed or not)
- Identification of analyzed record under the designated clinical specialty (i.e., medicine, surgery pediatrics, obstetrics and gynecology)
- Result (discharge or death)
- Patient's days

Ward and Daily Hospital Census Report Assessment Sheet

Figures of the daily admissions, discharges, and deaths reported in the above statistics for the

preceding four days were tabulated by hospital wards. The following hospital indicators were reviewed for accuracy:

- Bed occupancy rate
- Average length of stay
- Bed turnover rate
- Death rate

Questionnaire for Head of MR Department

The medical record officer of MR department was asked pre-structured questions to collect information and data on the MRO's perceptions of hospital administration and other hospital departments, namely:

- How frequently does the hospital administration recognize the importance of the MR department, enforces department rules, and provides it with adequate staff, equipment, supplies, and space?
- How frequently does the department deal with problems with medical staff, nursing staff, outpatient department, patient accounts, and supply department

FINDINGS

STRUCTURE OF MR DEPARTMENT

Physical structure

It was found that the MR department was appropriately located to allow users accessibility and was quite impressive.

Also the space allocated to the MR department was adequate.

Equipments

Well equipped (PC's, printers, photo copying machine, office furnitures etc.)

Personnel

Staff members in MR department were sufficient to perform smooth functioning of the department.

Management: Organizational Structure, Policies, Administration

Department had organizational charts and written policies and procedures manuals and job descriptions.

Medical Records Content and Documentation

The contents of the records were arranged and they were complete. The basic and special forms were available.

Coding, Indexing, and Discharge Analysis

They have been using the ICD- 10 for coding and classification of diseases and operations.

Support of Hospital Administration to the MR Department and Its Relationships with Other Hospital Departments

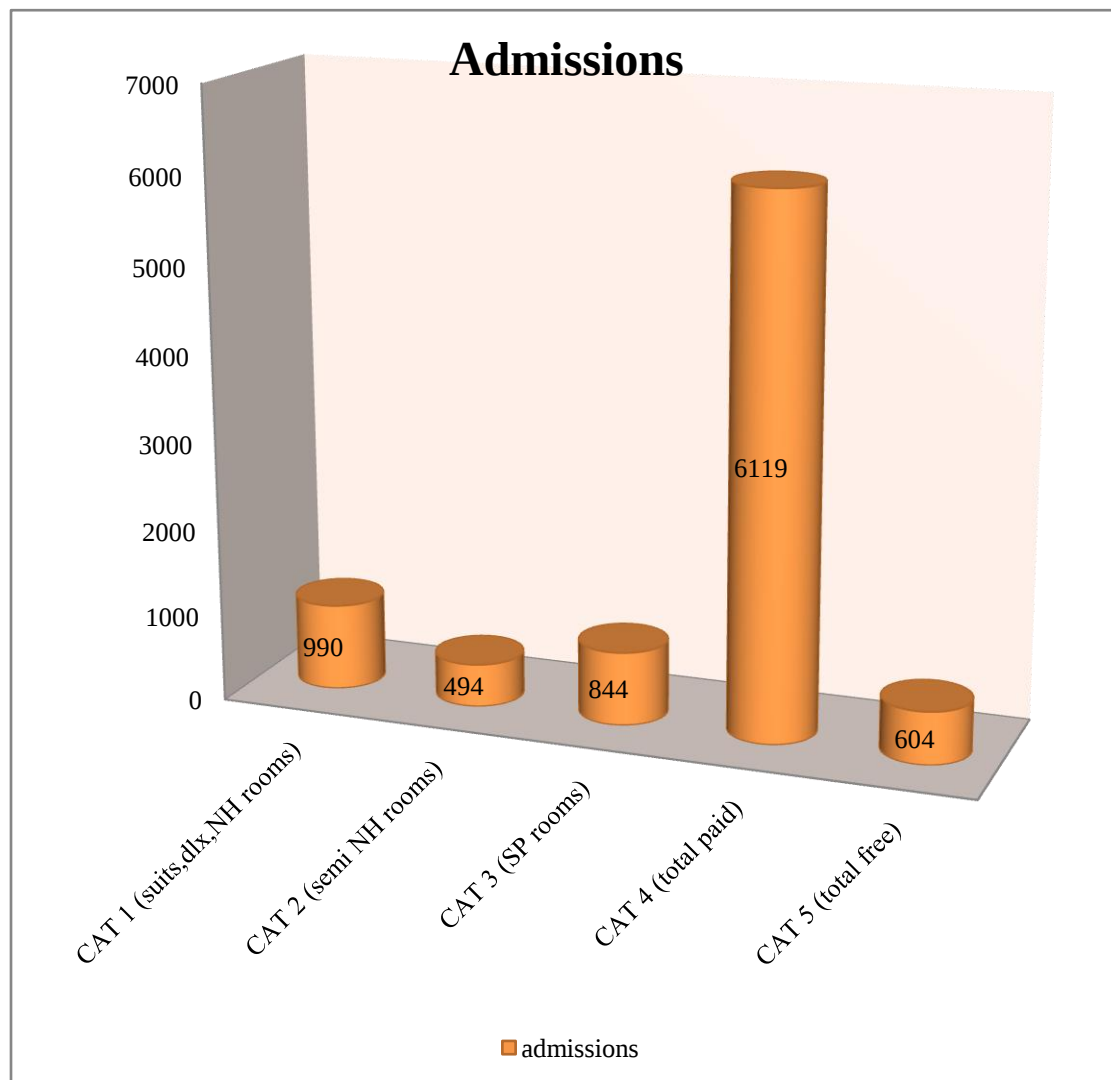
MRO reported that the hospital administration frequently appreciate the importance of the MR department, enforce department rules, or provide the department with adequate personnel and supplies. Rarely they have experienced problems with medical staff, head nurses, patient accounts, and outpatient clinics.

HOSPITAL STATISTICS

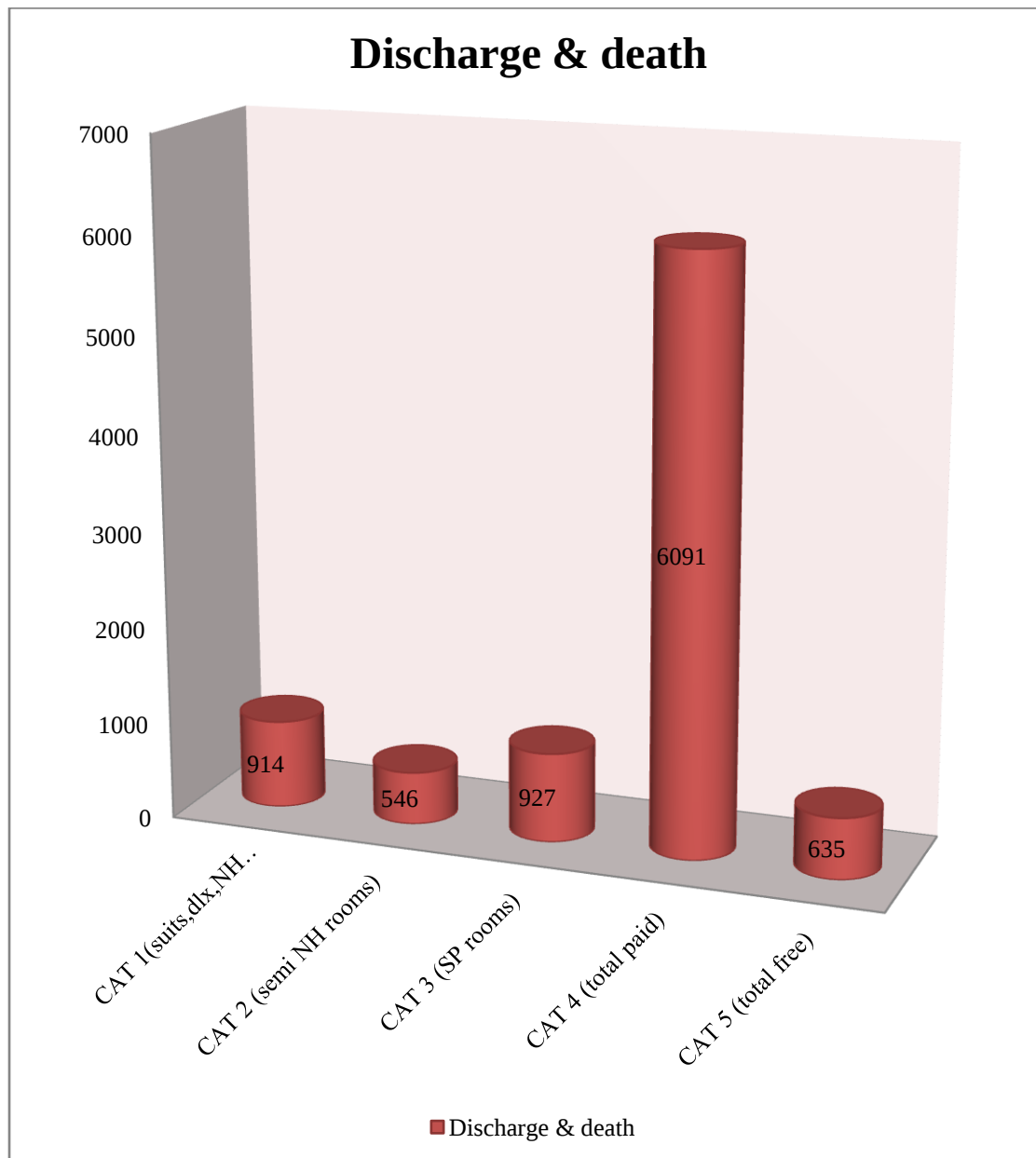
Hospital statistics were observed and carried out on a daily basis and the daily data was compiled together to obtain the monthly hospital statistics of Sir Ganga Ram Hospital for the month of april 2016.

		CAT 1	CAT 2	CAT 3	CAT 4	CAT 5	OVERALL
S.NO	PARTICULARS						
1	ADMISSION	990	494	844	6119	604	6723
2	ADMISSION PER DAY	33	16.47	28.13	203.97	20.13	224.10
3	DISCHARGE	898	535	897	6034	615	6649
4	DISCHARGE PER DAY	30	17.83	29.90	201.13	20.50	221.63
5	DEATH	16	11	30	57	20	77
6	DEATH PER DAY	0.53	0.37	1.00	1.90	0.67	2.57
7	PATIENT DAYS	5349	2981	5346	18058	6511	21569
8	BED DAYS	6120	3540	5160	16830	3540	20370
9	BED OCCUPANCY	87.40	84.21	103.60	107.30	99.18	105.89
10	PATIENT DAYS/DAY	178.29	99.37	178.20	601.93	117.03	718.97
11	BED DAYS/DAY	204	118	172	561	118	679
12	ALOS	4.83	5.46	5.77	2.96	5.53	3.21
13	DISCHARGE & DEATH	914	546	927	6091	635	6726

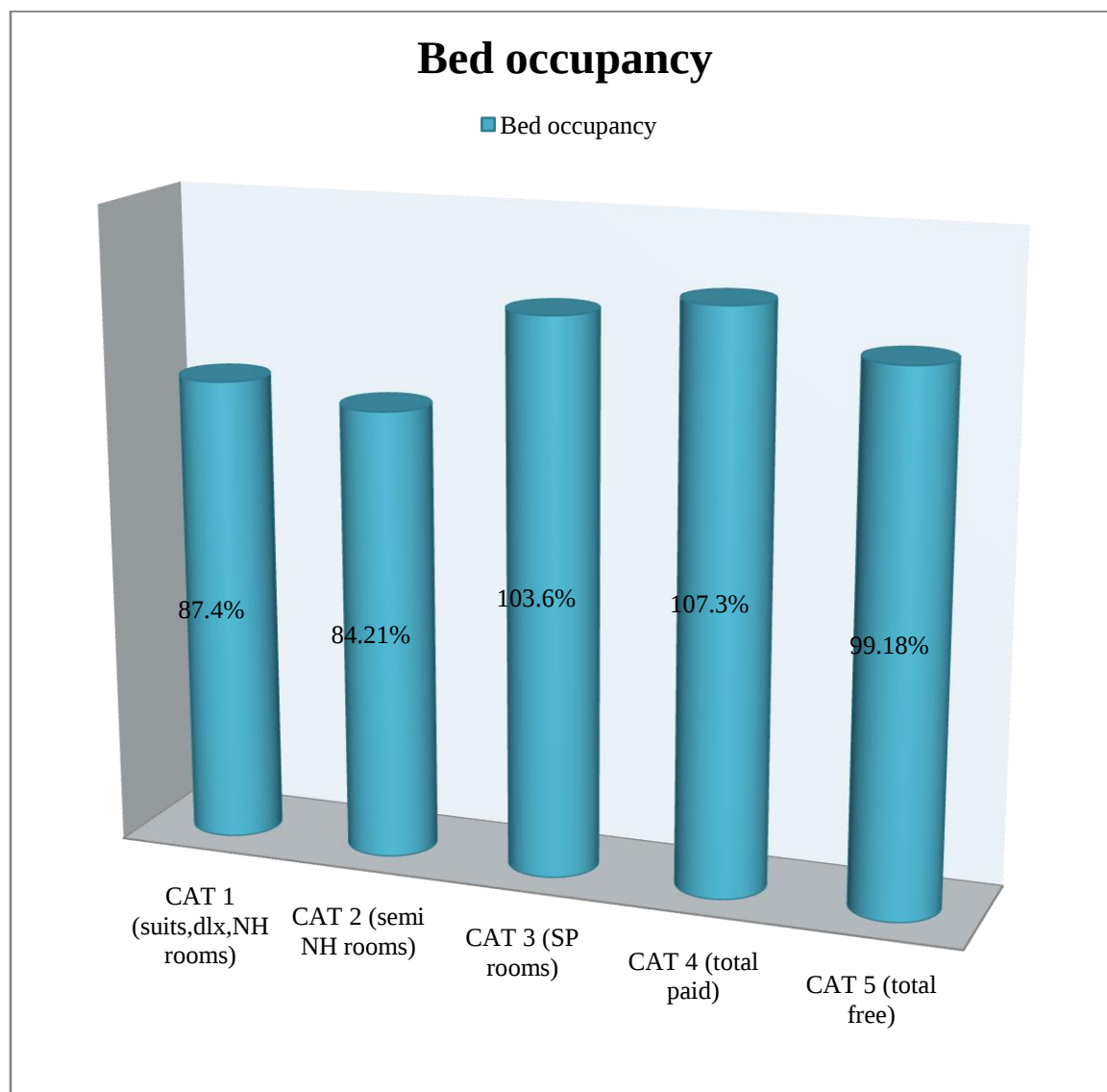
Admissions (April 2016) (in no.)



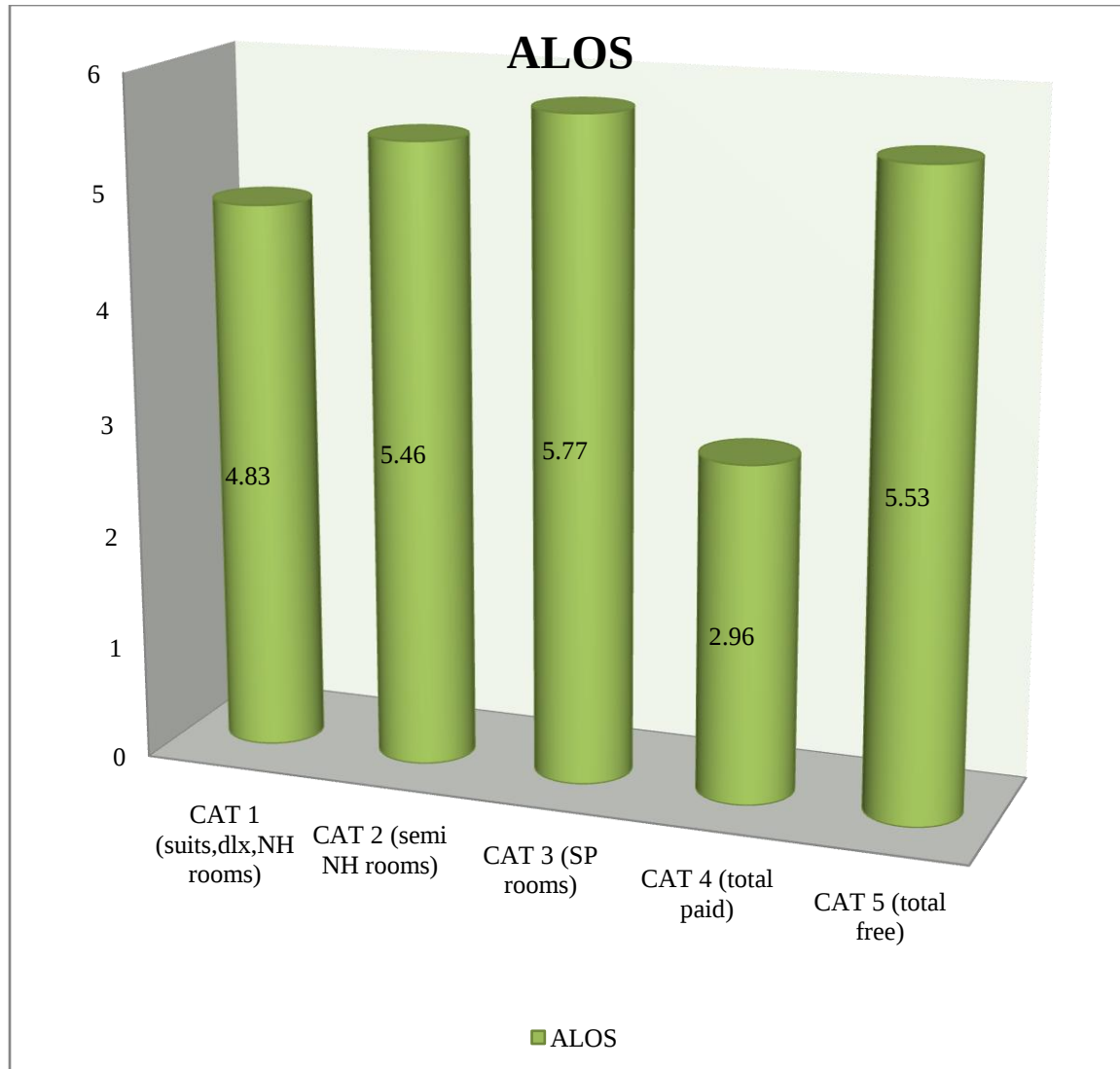
Discharge and death (April 2016) (in no.)



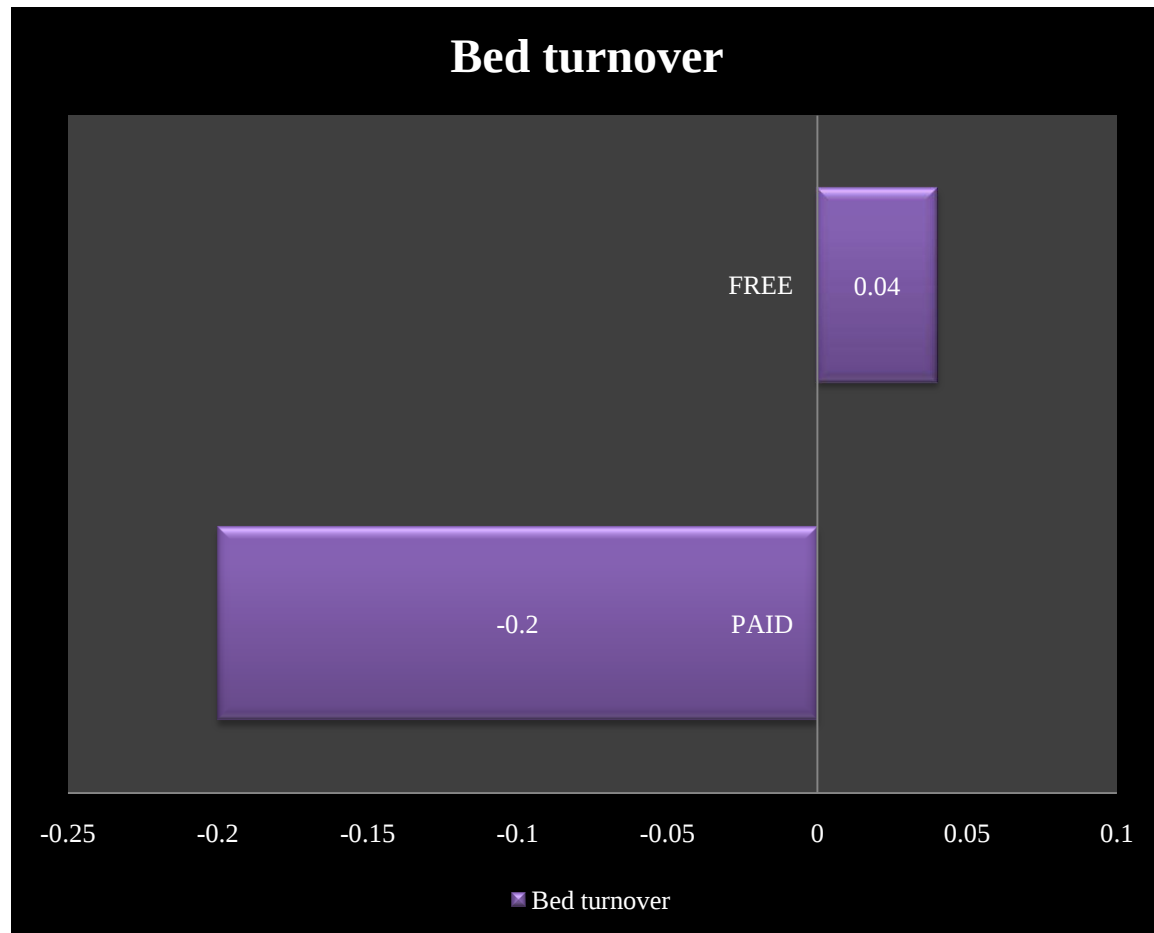
Bed occupancy (April 2016) (in %)



Average length of stay (April 2016) (in days)



Bed turnover (April 2016)



INTERPRETATION

- From the data collected for the month of april 2016 it was found that maximum admissions in Sir Gangaram Hospital occurred in category-1 which includes premium suits, suits, deluxe rooms & nursing home rooms i.e 990 and total paid admissions were 6119.
- Discharge and death was maximum in category-3 i.e 927, which is semi private rooms and for paid patients it was 6091.
- Bed occupancy was maximum in category-3 i.e 103.60%, which is semi private rooms and for total paid patients it was 107.30%.
- Average length of stay was maximum for category-3 i.e 5.77, which is semi private rooms and for total paid patients it 5.53.
- The present data suggested that in terms of bed occupancy rate & average length of stay, the medical and allied wards were found to run in optimal capacity
- Bed turnover rate for paid patients was found to be -0.20 & it was 0.04 for free patients. Overall total bed turnover rate was -0.17.

RECOMMENDATIONS

- Complete electronic medical record system is recommended.
 - EMR's are a digital version of the paper charts in the clinicians office. An EMR contains the medical and treatment history of the patient in one practice.
- An EMR is more beneficial than paper records because it allows providers to :-
 - Track data over time.
 - Identify patients who are due for preventive visits and screening.
 - Monitor how patients measure up to certain parameters , such as vaccinations and blood pressure readings.

- Improve overall quality of care in a practice.
- With regards to the coding and indexing of diseases and operations, the application of computerized system for admissions, patient index and disease index, and hospital statistics should be promoted.
- Hospital administration should enforce MR regulations and provide the MR department with adequate, space, staff, and equipment.

CONCLUSION

- Medical record department is an integral part of a hospital and plays a very important role in maintaining the function of a tertiary care hospital.
- Without MRD it is impossible to carry out accurate hospital statistics
- Hospital statistics is very important for any hospital as it represents the vital statistics of the hospital which in turn represents the growth or recession of the hospital.
- Hospital-based rates are used for a variety of purposes. First, they describe the general characteristics of the patients treated at the facility. Hospital administrators use the data to monitor the volume of patients treated monthly, weekly, or within some other specified time frame. The statistics give health care decision makers the information they need to plan facilities and to monitor inpatient and outpatient revenue streams. With the knowledge of how clinical data are collected and analyzed, the HIM professional can become an invaluable member of the health care team.

REFERENCES

Ajluni, Musa, 1993. Evaluating Medical Record Departments in Some Hospitals in Jordan, Ph.D. Dissertation. Egypt: Alexandria University.

Huffman, E. 1994. Health Information Management. Illinois: Physician's Record Company.

World Health Organization. 2002. MR Manual. Geneva.

Wheeler, E.Todd. 1994. Hospital Design and Function. New York: McGraw-Hill Book Company.

Ankara, 1989 Hacettepe university institute of social sciences.

Jones and Horton, Loretta A. (2004) *Calculating and Reporting Healthcare Statistics*. Chicago: American Health Information Management Association and Bartlett Publishers.

Sonu Goel, Anil Kumar Gupta, Amarjeet Singh, Elsevier.

D.C Joshi, Mamta Joshi, Jaypee