MEDICAL RECORD DEPARTMENT: AN ANALYTICAL STUDY

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ABSTRACT

BACKGROUND: Over the years Medical Records Department has arisen as a vital part of any health care organization or a hospital. The dictum is “People forget, but Records remember”. Medical Records has become a specialty in its own right, and the Medical Record Officers and Medical Record Technicians have earned the right to be considered as specialist in their own field. This is so because patient care requires a chronological record of patient care and treatment, and this enables the clinical team, as well as the hospital administrator, to evaluate the quality of medical care, and the effectiveness of the hospital services. This study is based on some objectives, to evaluate the existing medical record keeping system and evaluate the effectiveness of the current medical record system.

METHODS: The population of the study includes all the medical record staffs of medical record department. The data were collected by direct interaction with personnel of the medical record department in B.P.S. Medical College & Hospitals of the Sonepat district, Haryana. Additional information was gathered by observation.

RESULTS: This study was aimed to analyze the existing working procedure of Medical Record department to find out the areas that could be further improved. It was observed that the personnel in the Medical Record Department were sincere and conscious and the department was computerized, ICD coding system is implemented though there is scope for implementation of Electronic Health Record.

CONCLUSIONS: The problems faced by Medical Record Department are the scarcity of staff and space for storage & working is insufficient which should be increased.

KEY WORDS: ICD, MRD, MRO.
INTRODUCTION

Medical records is the systematic documentation of the patient’s personal and social data, history of his or her ailment, clinical findings, investigations, diagnosis, treatment given, account of following up and outcome.

Medical records through which hospital statistics are generated serve as a eyes and ears to the hospital administrator. Medical records are of importance to the hospital for the evaluation of its services for better patient care. They also serve as a resource for education and training of physicians and others, also being a basis for clinical research. Research to be effective requires scientifically recorded observations as reflected in the medical record. And, the importance of medical records for legal purpose is well established.

REVIEW OF LITERATURE

(2013)[1] Isfahani SS, Bahrami S, Torki S, in a research paper “Job characteristic perception and intrinsic motivation in medical record department staff.” determined the relationship between job characteristics and intrinsic motivation in medical record staff in hospitals. This study also described that human resources are key factors in service organizations like hospitals. Therefore, motivating human resources to achieve the objectives of an organization is important.

(2013) [2] Al-Jafar E. in the study titled “Exploring patient satisfaction before and after electronic health record (EHR) implementation: the Kuwait experience.” investigated patient satisfaction with the quality of services provided before and after the implementation of electronic health records (EHRs) at Primary Health Care Centers (PHCCs) in Kuwait. In this study it was find out that Before EHR implementation, respondents' disagreement regarding the doctor's carefulness in conducting the examination, uses of medical terminology, explanations for medication given, and time given for a patient was more than 30 percent. Disagreement regarding the rest of the questions related to the patient/physician relationship after EHR implementation was also higher (25 percent to 39 percent).

(2012) [3] Nahid Tavakoli, Sakineh Saghaiannejad, Mohammad Reza Habibi “ A comparative study of laws and procedures pertaining to the medical records retention in selected countries” concluded that the lack of a complete, transparent and update medical record retention schedule in Iran, lead to confusion for hospitals.

(2011) [4] Bali Amit, Bali Deepika, Iyer Nageshwar and Iyer Meenakshi in the study titled “Management of Medical Records: Facts and Figures for Surgeons” explained the various aspect of record maintenance. Medical records are the one of the most important aspect on which practically almost every medico-legal battle is won or lost. If written correctly, notes will support the doctor about the correctness of treatment. In spite of knowing the importance of proper record keeping in India, it is still in the initial stages

(2009) [5] Thomas Joseph in his research publication on “Medical records and issues in negligence stated about various methods” stated various methods of record keeping. The traditional method of keeping records that is followed in most of the hospitals across India is the manual method involving papers and books. There are serious limitations of manual record keeping including the need for large storage areas and difficulties in the retrieval of records. However, it is legally more acceptable as documentary evidence as it is difficult to tamper with the records without detection.

(2009) [6] Gurudatta. S. Pawar, Jayashree .G. Pawar in a research paper “Facts of Medical Record Keeping - The Integral Part of Medical and Medico Legal Practice.” stated that Medical records are the integral part of medical practice/ medical profession. In the present days of consumer awareness and litigation suites, they help the treating physician to prove that he /she has used proper
care and skill while treating the patient. Maintaining and preserving them in a proper and methodical way is the responsibility of the concerned doctor.

(2009) [7] Mestri Shashidhar C in his study “Legal and ethical aspects of medical records – An Indian Perspective” stated that Medical records are an index of a Health Institution and Medical Records department is the back bone of Health information system. Medical records speak volumes on and about, inception and progress of Hospital, retrospective and prospective statistical analysis, trends of cases admitted to the hospital etc. Medical Records act as growing data base of medical and scientific knowledge; and help the Government while planning and allocation of budget for health care system of the country. The need of hour is uniformity in storing Medical Records by various Acts.

(2006) [8] Praveen Kumar A, Gomes L.A. in their study “a study of the hospital information system (his) in the medical records department of a tertiary teaching hospital” stated that the present scenario in India is that most of the Medical Records Department is partially computerized. The survey conducted in the hospital reveals the importance of information networking between the departments. Computerization of the medical records and documentation has resulted in efficient data management and information dissemination for the users. In the study it was also concluded that possibility of a modern and computerized information system is not too far.

(2005) [9] Chattoraj, S. Satpathy, R.K. Sarma in the study titled as “Standardizing Medical Records Forms: A Study at a Tertiary Super Specialty Hospital” stated that Patient care includes a chronological record of care and treatment, namely medical records. Printed performs developed by hospitals are widely used to achieve regularity and uniformity in the recording and presentation of information. A smooth and uninterrupted supply of well-designed forms is a must for efficient medical record keeping. This study revealed that forms are not standardized with regard to number, color, content and size. Only the core forms bear numbers. Too many sizes are in use. Use of too many forms of the same color may defeat the very purpose for introducing color code, that of easy identification.

(2005) [10] According to Delhi Health Government Medical record is a systematic documentation of a patient personal and social data, history of his or her ailments, clinical findings, investigation, diagnosis and treatment given and an account of follow up and final outcome. Medical record is also a clinical, scientific administration and legal document relating to patient care in which sufficient data is recorded, medical record compares history data physical examination, diagnoses data acquired through diagnostic test, consultation, treatment including medication, therapeutic data, administrative data, medical surgical procedures and end result. Medical Record Department is playing a key role in conducting monthly meetings and providing important hospital statistical data.

(2005) [11] Dr Singh Sanju, Dr Sinha Usha in the study “Preservation of medical records - An essential part of health care delivery” concluded that the medical record is the property of the hospital. There is a need to legalize the importance of maintaining and scientific preservation of patient records in all the healthcare facilities including private practitioner clinics, nursing homes, PHCs and small and big hospitals.

(2004-05) [12] Dr. Kumar Ashok in a Case Study submitted to Central Bureau of Health Intelligence (CBHI) titled “Improving and strengthening the use of ICD 10 and Medical Record System in India” recommended that

1. All Government and Private health and medical institutions in the country should essentially use ICD 10 in their records and reports and the same should be ensured by all concerned authorities through well designed guidelines, directives and continued monitoring.

2. All medical and health institutions, including hospitals of any size, in the country should equip themselves with WHO publication on ICD 10 (3 volumes) as a reference and ICD 10 codes relevant to each medical specialty be prominently made available in concerned wards in the hospitals. No medical record should remain without ICD 10 code for the diagnosed disease.
In his study “A Study of the Storage Problems of Medical Records in Tertiary Hospital” stated that The maintenance of the Medical Record is an essential task, advantageous to both the hospital and the patient. However the duration of preservation of records has long been a controversial issue. In this study it was concluded that although technology is advancing at a breath-taking pace it is wise to adopt only those systems which are truly beneficial to improving the efficiency and resource maximization of the organization. They also suggested measures that there are several high-tech solutions are available for storage of medical records but it is our contention that the easiest and most low-cost solution (for hospitals in India) would be a combination of filtering the active files and microfilming the older In-Patient files.

METHODS

Research design & Setting
The present research study is descriptive in nature & based in the Medical Record Department of B.P.S. Medical College & Hospital Khanpur Kalan, Sonipat Haryana. 34 samples of respondents have been taken which include 4 Medical Record Officer/Medical Record Technicians & 30 Patients.

Data Collection
For present study, primary data are collected by personal interviews, observation and 2 set of questionnaires, one to be filled up by Medical Record Department Professionals & second to be filled by Patients/Users of Medical Record Department. A number of questions pertaining to the working procedure of Medical Record Department are framed and these questions are in proper sequence. Most of the questions are of multiple choices and close ended type and filled by using survey method.

Scope of the Study
The scope of the present research will endeavor to help academicians, government, hospital administration department and researcher on one hand, patients on the other hand. The present study identify the problems and satisfaction level of various users who visit the Medical Record Department to get information then some suggestion about improvement in efficiency and effectiveness of Medical Record Department of B.P.S. Medical College & Hospital Khanpur Kalan, Sonipat Haryana.

Objective of the study
This study is based on some objectives, which are as under:

1. To evaluate the existing medical record keeping system.
2. To asses and evaluate the effectiveness of the current medical record system.
3. To assess the logical and legal aspects of the current medical record keeping system.
4. To identify the shortcomings if any & provide suitable recommendation to improve the existing Medical Recording system.
DATA ANALYSIS & INTERPRETATION

Opinion of Staff working in MRD about the existing Medical Record Keeping System

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Time taken in retrieving a file reflects the efficiency of Medical Record Department. The personnel working in the Medical Record Department answered that files in the Medical Record Department are easily accessible. Time was assessed for retrieving a particular file on request according to Out-Patient & In-Patient records. The personnel working in the Medical Record Department answered that time taken for retrieval of outpatient records is 3 minutes and for inpatient records is 5 minutes.

Decentralization of Medical Records leads to confusion. Centralization of filing system leads to proper arrangement of Medical Records and ease in retrieval of files on request. The personnel working in the Medical Record Department answered that filing system should be centralized.

Storing files for years necessitate a lot of space and if the space is not adequate then there will be complexity in storing files. Moreover there should be adequate working space for professionals working in Medical Record Department. The personnel working in the Medical Record Department responded that working space is inadequate.

There should be adequacy of infrastructure & facilities in Medical Record Department for effective work flow. Infrastructure & facilities in Medical Record Department include ample number of rooms, file storing racks; computers & scanners. The personnel working in the Medical Record Department answered that files in the Medical Record Department are easily accessible.
Department responded that infrastructure and facilities in medical record department are adequate. Extent of workload on staff working in working in Medical Record Department affects the efficiency. Excessive workload decreases efficiency of staff working in Medical Record Department. The personnel working in the Medical Record Department responded that working load is affecting them to great extent.

IPD and medico legal files have to be kept for years. There should be no difficulty in storing files. Filing system should be in a proper way. The personnel working in the Medical Record Department answered there is no problem in storing of files & In-Patient case files are stored for 5 years and Medico Legal case files are stored for 10 years.

ICD 10 is the coding system used now in most of the medical record department. It provides uniformity while comparing data. The personnel working in the Medical Record Department answered that In-Patient cases are classified according to ICD10 Coding System & they are filing Medical records in the numerical manner.

Scanning of files is helpful as it eliminates paper based files which require more space and are more prone to wear and tear. The personnel working in the Medical Record Department answered that the scanning & elimination of paper based file system is advantageous, feasible & it will improve accessibility to old medical records.

As Medical Record Department is the most suitable department for computerization. Most of developed countries have adopted Health Record. The personnel working in the Medical Record Department answered that the computerization of essential and useful in Medical Record department & preparation of daily statistics with the help of computers decreases workload.

As computerization is becoming an essential component of health information system. It is easy to retrieve the information if there is computerization. The personnel working in the Medical Record Department answered that the computerization of medical records reduced their workload.

A lot of Hospitals are going to implement E-health record documentation. But it is important to evaluate the existing system for feasibility in Establishment of Electronic health record documentation. E-health record will improve patient care and save time as it will be easy to get information about past disease and it will improve access to patient history. The personnel working in the Medical Record Department answered that establishment of Electronic health record documentation will improve patient care and save time. Moreover Electronic health record documentation will provide immediate information during an emergency.

### TABLE NO. 2: Response of patients towards time taken in getting the information

<table>
<thead>
<tr>
<th>TIME TAKEN TO GET INFORMATION</th>
<th>NO. OF RESPONDANTS</th>
<th>% OF TOTAL NUMBER OF RESPONDANTS</th>
</tr>
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<tr>
<td>&lt;5 MINUTES</td>
<td>9</td>
<td>30%</td>
</tr>
<tr>
<td>5-10 MINUTES</td>
<td>16</td>
<td>53.3%</td>
</tr>
<tr>
<td>10-30 MINUTES</td>
<td>5</td>
<td>16.7%</td>
</tr>
<tr>
<td>&gt;30 MINUTES</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30</td>
<td>100%</td>
</tr>
</tbody>
</table>
Majority of respondents (83.3%) got their requested information within 10 minutes

One of the main objectives of the Medical Record Department is to provide the information required by patients/attendants on time. Hence a M.R.D. must avoid delay in providing information to the patients. Many studies have indicated that there is significant correlation between patient satisfaction and the waiting time factor. The present study reveals that 93.3% of the respondents were satisfied with time taken in providing information.

Another objective of the Medical Record Department is to provide the precise information. The present study reveals that all of the respondents (100%) were satisfied with preciseness of information.

### TABLE 3

<table>
<thead>
<tr>
<th>Q.NO.</th>
<th>QUESTION</th>
<th>RESPONSE</th>
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<tbody>
<tr>
<td>2</td>
<td>Do you get the needed information in time?</td>
<td>28 (93.3%)</td>
</tr>
<tr>
<td>3</td>
<td>Does the M.R.D. provide the precise information?</td>
<td>30 (100%)</td>
</tr>
<tr>
<td>4</td>
<td>Does the information content meet your needs?</td>
<td>30 (100%)</td>
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<td>5</td>
<td>Do you think that you got the clear information?</td>
<td>30 (100%)</td>
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<tr>
<td>6</td>
<td>Do you think the output information you needed is presented in a useful format?</td>
<td>30 (100%)</td>
</tr>
<tr>
<td>7</td>
<td>Is the staff working in Medical Record Department courteous?</td>
<td>28 (93.3%)</td>
</tr>
<tr>
<td>8</td>
<td>Does the staff in Medical Record Department listen to your request at tentatively?</td>
<td>28 (93.3%)</td>
</tr>
<tr>
<td>9</td>
<td>Do the Medical Record Department Officials provide sufficient information?</td>
<td>30 (100%)</td>
</tr>
<tr>
<td>10</td>
<td>Are you satisfied with the working of medical record department?</td>
<td>28 (93.3%)</td>
</tr>
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</table>

**OVERALL RESPONSE**

<table>
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<tr>
<th></th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td></td>
<td>262</td>
<td>8</td>
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</table>

(97% | (3%)

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FIG 1

Majority of respondents (83.3%) got their requested information within 10 minutes
Information content should meet needs of patients and users of M.R.D. From data analysis it was found that all of the respondents (100%) agreed that information content met their need. In the same way all of the respondents (100%) got the clear information.

From data analysis it is evident that all of the respondents (100%) strongly agree that output information needed is presented in a useful format.

There is a direct correlation between behavior of Medical Record Department officials and patient satisfaction. In this study, 93.33% of the respondents strongly opined that Medical Record Department Officials are well behaved and showed courtesy towards.

This study also showed that 93.33% of the respondents were happy and strongly agrees that the staff working in Medical Record Department listen to request at tentatively and 6.67% of respondents differ in opinion.

While all of the respondents (100%) strongly agreed that the staff working in Medical Record Department provides sufficient information.

Satisfaction simply cannot be measured. The main role of Medical Record Department is to provide the accurate information required on appropriate time to patients and users of the information. However, 93.33% of respondents were satisfied with overall working of Medical Record Department.

CONCLUSION

The system was analyzed by observing working procedure, maintenance of records and registers in the department and personnel interview of Medical Record Department staffs through pre-tested standardized questionnaires.

From the response obtained through the questionnaires, it was observed that the personnel in the Medical Record Department were sincere and conscious and the department was computerized, ICD coding system is implemented though scanning of records can be done which will be helpful.

Analysis of result also showed that though the department is functioning reasonably well, there were areas which could be considerably improved. It was felt that the number of personnel working in Medical Record Department could be increased.

The result of the present study also indicates that the present system of the Medical Records is useful, accessible and affordable.

RECOMMENDATION

On the basis of result and analysis of the study, it is recommended that some changes be considered in order to improve the quality of service rendered by Medical Record Department.

- The success of a good Medical Record depends upon the trained and adequate number of staff posted in Medical Record Department. In its absence it is not possible to develop a good medical record of medico legal importance, patient care and reliable health information (data) which is a key tool for planning. Hence the hospital must have trained and adequate number of staff in the Medical Record Department as the the number of staff working in Medical Record Department is inadequate.
- There is possibility for implementation of Electronic Health Record Documentation.
- Forms in the case sheets should be in A4 size which will be more feasible to scan.
- Working space and space for storage is insufficient which should be increased.
- To impart the entire setting of hospital with a culture of learning and practicing.
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