IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT

(ISSN 2811-2504 *)

https://ijojournals.com/ Volume 07 || Issue 12 || December, 2024 ||

PERFORMANCE EVALUATION OF MEDICAL RECORDS DEPARTMENT IN A CORPORATE HOSPITAL

Dr.A.Girija[1], Haneen Sadiq Ali[2]

[1]Associate Professor, Apollo Institute of Hospital Administration, Hyderabad, Telangana, India
[2]Management Trainee, AIHA, Hyderabad, Telangana, India

ABSTRACT

The Healthcare Information Management (HIM) Department is crucial in ensuring information accuracy, privacy, and legal compliance in hospitals. Its role is vital for maintaining the integrity of patient data and the quality of healthcare services. A study conducted at corporate hospital in Hyderabad, assessed the performance of the Healthcare Information Management (HIM) Department by reviewing 150 In-Patient medical records. The department demonstrated 100% compliance in risk management, infrastructure, security, and other key areas, though 7 out of 14 measurable standards showed non-compliance. Nurses were identified as the primary source of documentation errors, particularly in the 'Diabetics Booklet'. Despite these issues, the HIM department exhibited a high-performance level, with potential for further improvement through standardization and regular audits.

KEY WORDS: HIM Department, Medical Records, Regulatory compliance, Risk Management, Performance Evaluation.

INTRODUCTION

The Medical Records Department (MRD) is vital in healthcare, ensuring patient records are accurate, complete, and securely stored. It plays a key role in maintaining the quality of patient care and the efficiency of healthcare facilities. Regulations and strict oversight are crucial for keeping medical records reliable and secure. Bodies like NABH and JCI set rules to ensure patient information is handled properly. The Medical Records Department is essential for maintaining accurate, private, and legally compliant records. These records support patient care, legal protection, research, and smooth healthcare operations.

Septi Yhuninda Erika et al. studied the factors that influence the performance of the medical record staff at the Public Health Centers in Jayapura City. They concluded that the most dominant factor affecting the performance of medical record staff at the Public Health Centers in Jayapura City as workload.

Azzolini E et al. assessed the efficacy of internal audit as a tool to improve the quality of medical records in hospital settings. They performed quality assessment by using a 48-items evaluation grid divided into 9 domains: General; Patient Medical History and Physical Examination; Daily Clinical Progress Notes; Daily Nursing Progress Notes; Drug Therapy Chart; Pain Chart; Discharge Summary; Surgery Register; Informed Consent.

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT

(ISSN 2811-2504 *)

Dr.A.Girija[1]

https://ijojournals.com/ *Volume 07 || Issue 12 || December, 2024 ||*

Sima Ajami et al studied the performance improvement indicators of hospital MRD. Sima Ajami & Saeedeh Ketabi studied and evaluated the performance of the Medical Records Departments (MRDs) of the selected hospitals in Isfahan, Iran by using Analytical Hierarchy Process (AHP) which is useful for managers to allocate and prioritize resources.

Shreeranga Bhat et al. have studied how Lean Six Sigma (LSS) methodology was applied to a medical records department (MRD) of a hospital in India to reduce theTurn-Around-Time (TAT) of medical records preparation process and thus to improve productivity and performance of the department.

Sima Ajami et al. conducted a research on performance evaluation of medical records department with a Balanced Scorecard (BSC) approach in a hospital of Isfahan, Iran. Sayed Jalaladdin et al. conducted a descriptive study. Data was gathered via checklist through face-to-face interview. Performance evaluation was achieved in 4 different categories: reception, coding, statistics, and archiving, each with 8-9 indices.

NEED FOR THE STUDY

Medical records are a comprehensive documentation of a patient's medical history and the care they receive. They are crucial for planning and coordinating patient care, recording communication between healthcare providers, and safeguarding the legal interests of both patients and providers. Additionally, these records are valuable for educating medical students and resident physicians, facilitating internal hospital audits and quality assurance, and supporting medical research. Therefore, it is vital for healthcare facilities to maintain an efficient medical records department that ensures high-quality documentation, quickly identifies and corrects errors, and adheres to established policies.

OBJECTIVESOFTHESTUDY

The objectives of this study are as follows:

1. To recognize the role of the Medical Records Department and the patient medical records in risk management.
2. To understand the process flow of the medical records in the department and the Standards Operating Procedures (SOPs) governing this cycle.
3. To evaluate the Medical Records Department on the basis of infrastructure, security, confidentiality, research, education, proper collection, maintenance, storage and retrieval of medical records.
4. To check the compliance percentage of the medical records department with respect to standards set by the national and international regulatory bodies.

RESEARCH METHODOLOGY

SCOPE OF THE STUDY: This study evaluates the performance of Medical Records Department in the study hospital by examining five key areas: infrastructure, security, confidentiality, research

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT
(ISSN 2811-2504 *)
Dr.A.Girija[1]

https://ijojournals.com/ Volume 07 || Issue 12 || December, 2024 ||

and education and the handling of medical records. It uses direct observation and checklists to assess how well the department meets JCI and NABH standards.

SAMPLE DESIGN: This research is a mix of compliance/non-compliance and qualitative study, where data is collected through simple random sampling technique.

SAMPLE SIZE: The sample size of the study is 150 medical records collected for a period of 3 months.

SOURCES OFDATA: The data is collected by both primary and secondary sources. The primary source of data is through the use of four checklists created to meet the requirements of objectives of the study and these checklists were filled through direct observation. Secondary data was collected from the Medical Records Department standard operating procedure (SOPs) manual.

ANALYTICAL TOOLS & TECHNIQUES USED: The data entry and analysis was done with the help of MS EXCEL 2010. The analytical tools used include frequencies, descriptive analysis, graphical and tabulation tools.

RESULTS AND DISCUSSION

1. Role of Healthcare Information Management (HIM) department & medical records in risk management in a hospital setting: HIM Department and patient medical records play a pivotal role in risk management in a hospital setting. They help healthcare facilities in effective management, risk mitigation and reduce liability. Ten parameters are being assessed to understand the role of HIM department and medical records in risk management with the use of a checklist.

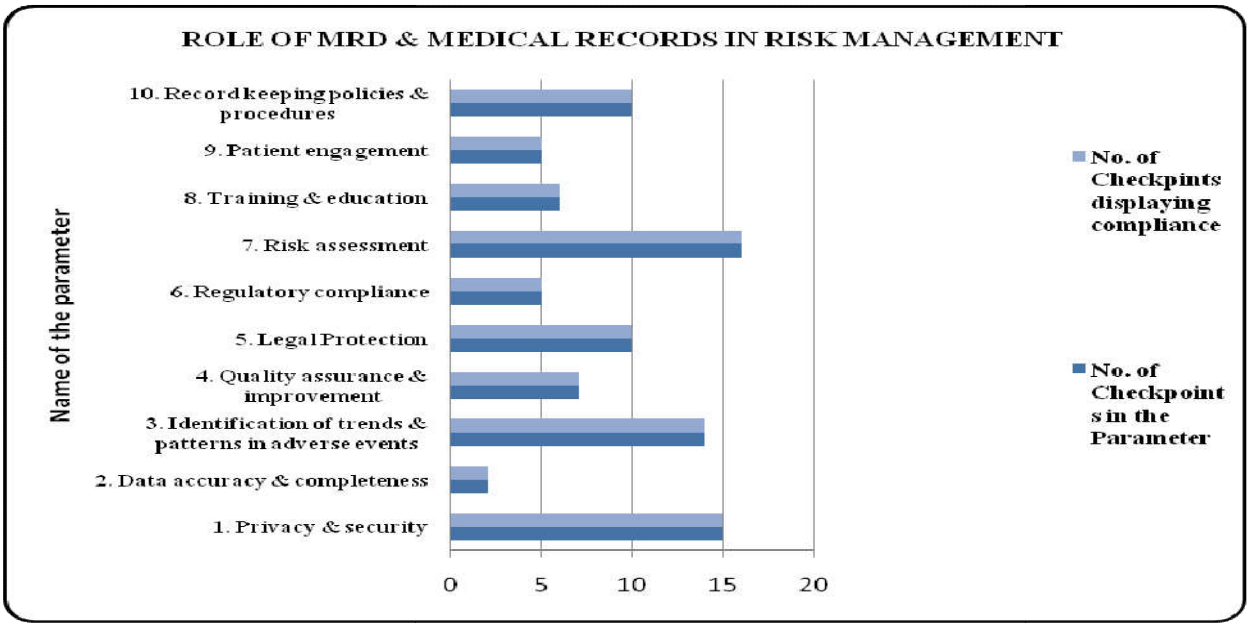


Fig 1: No. of elements in the checklist & No. of compliant elements

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT
(ISSN 2811-2504 *)
Dr.A.Girija[1]

https://ijojournals.com/ *Volume 07 || Issue 12 || December, 2024 ||*

Interpretation: Fig 1 shows 10 parameters of the checklist that were created to check and understand the role of HIM department and medical records in risk management. All the elements across the 10 parameters showcased 100% compliance.

2. The process flow of medical records to and fro into the healthcare information management department and the Standard Operating Procedures (SOP's) governing this flow: Flow charts for the flow of medical records into HIM department were shown for new patients (Fig 2), In-patients (Fig 3) & re-visit patients (Fig 4).

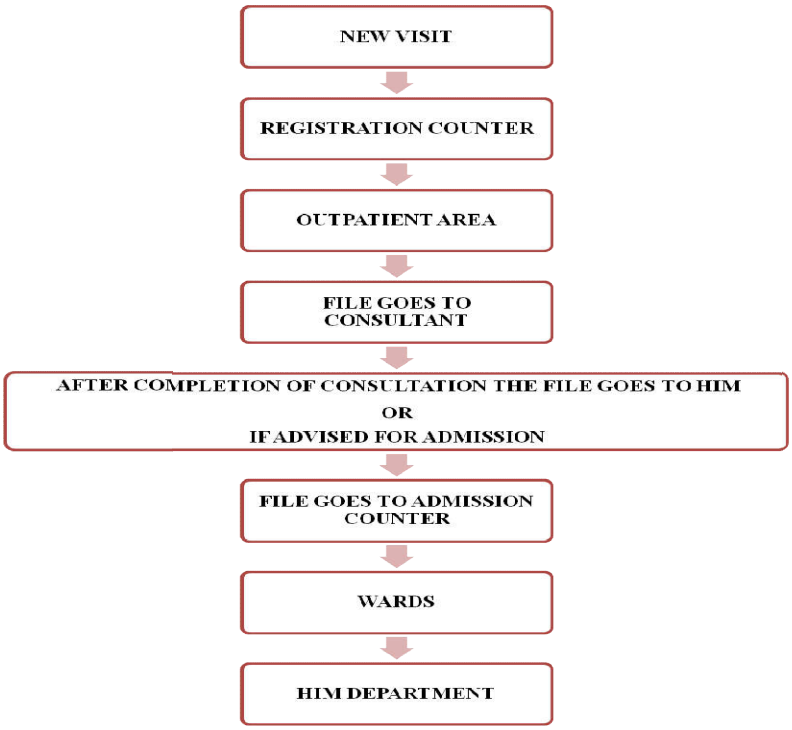


Fig 2: Flow chart for the flow of medical records into HIM department for new patients

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT
(ISSN 2811-2504 *)
Dr.A.Girija[1]

https://ijojournals.com/ Volume 07 || Issue 12 || December, 2024 ||

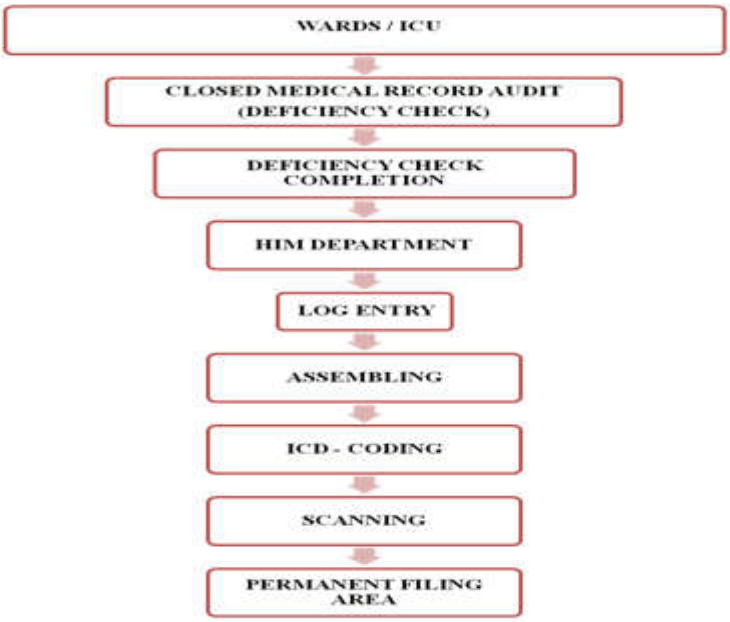


Fig 3: Flow chart for the flow of medical records into the HIM department for In- patients

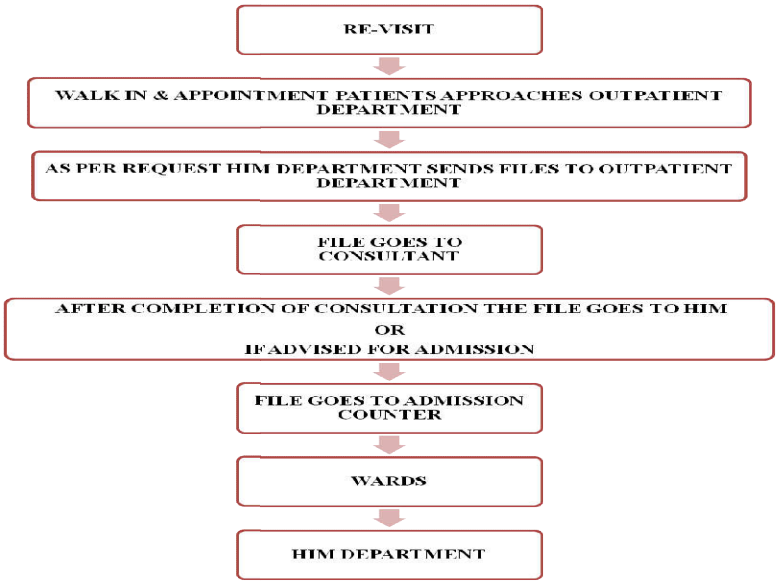


Fig 4: Flow chart for the flow of medical records into the HIM department for Re-visit patients

3. Evaluating the medical records department on the basis of five different parameters: The Medical records department of the hospital is evaluated with the help of a checklist divided into 5 components, each of which combined have 28 checkpoints. Infrastructure, Security and

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT

(ISSN 2811-2504 *)

Dr.A.Girija[1]

https://ijojournals.com/ *Volume 07 || Issue 12 || December, 2024 ||*

Confidentiality, Accessibility section of the checklist consists of 6 checkpoints as shown in Fig 5, all of which have showcased 100% compliance respectively. Research and Education section of the checklist consists of 2 checkpoints as shown in Fig 5, and have showcased 100% compliance. Medical Records- collection, storage, maintenance, retrieval section of the checklist consists of 8 checkpoints as shown in Fig 5, and have shown 100% compliance.

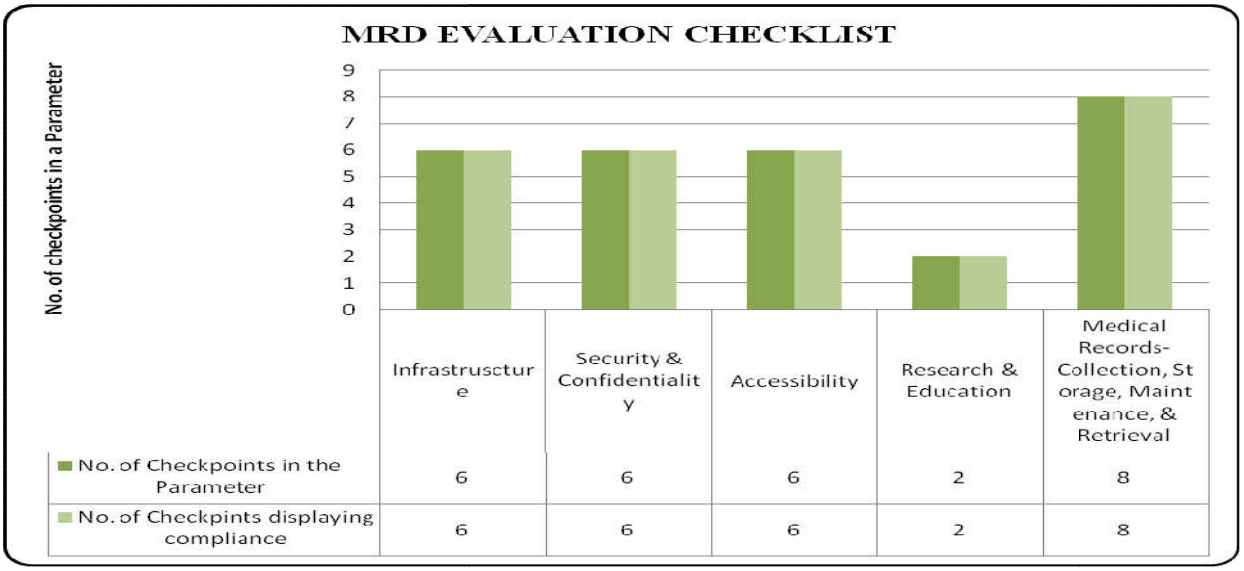


Fig 5 – MRD Evaluation checklist

4. Compliance percentage of healthcare information management department to standards set by Joint Commission International (JCI) & National Accreditation Board for Hospitals and Healthcare Professionals (NABH):

MEASURABLE STANDARDS CHECKLIST:-

Section 1- To evaluate and analyze the medical records on the basis of - completeness & accurateness of medical records:- The standards set by JCI 7th edition (section III - Management of Information, standards MOI 1 to MOI 13) and NABH 5th edition (chapter 10 - Information Management System, standards IMS 1 to IMS 10) were used to create checklists to analyze the compliance of the HIM department when handling the management and the patient records.

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT
(ISSN 2811-2504 *)
Dr.A.Girija[1]

https://ijojournals.com/ Volume 07 || Issue 12 || December, 2024 ||

Table 1- Completeness and accurateness of medical records

CHECKPOINT	No. of N/A	No. of YES	%	No.of NO	%
1. Unique Identifier is assigned (UHID, IP NO, AGE, NAME, SEX, ETC)	0	149	99.33	1	0.66
2. contents of MR are identified & documented	0	150	100	0	0
3. MR is complete, up to date, & in chronological account of patient care	0	111	74	39	26
4. Authorized staff make entry in MR	0	150	100	0	0
5. Entry in MR is signed, dated & timed	0	72	48	78	52
6. Author of entry can be identified	0	145	96.66	5	3.33
7. MR have only authorized abbreviations	0	139	92.66	11	7.33
8. Abbreviations are not used on informed consent, discharge summary & other material given to patient	0	10	6.66	140	93.33
9. Discharge summary is signed by consultant	0	150	100	0	0
10. Documentation errors are corrected as per policy	57	63	67.74	30	32.25
11. No unauthorized forms found in patient's Medical records	0	150	100	0	0
12. MR contains info to identify patient, support diagnosis, justify treatment, document course, results	0	150	100	0	0
13. MR have codification as per ICD	150	0	0	0	0
14. MR have complete and/or proper consent	0	145	96.66	5	3.33

Interpretation: Table -1 presents a dataset of a checklist that was created to verify the completeness and accuracy of the medical records. It consists of 14 standard checkpoints, out of which, 7 items display 100% compliance, 3 items display minute deviation from the standards and 4 items display major non-compliance trends throughout the sample size. The following is in depth interpretation of the non-compliance patterns:

- **Item 6**. Author of the entry can be identified- The name and signature of the medical professional was missing in diabetic booklet.
- **Item 7.** MR have only authorized abbreviations - the hospital has a list of certain abbreviations that are not to be used in the MR and are mentioned at the bottom of the forms. 11 files out of 150 contained some of these abbreviations.
- **Item 14.** MR have complete and proper consent- In 5 out of 150 files, the consent was found to

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT
(ISSN 2811-2504 *)
Dr.A.Girija[1]

https://ijojournals.com/ Volume 07 || Issue 12 || December, 2024 ||

be mostly improper as compared to incomplete. In 2 cases, the name of the patient was missingin the surgical consent. In 1, the name of the Doctor was missing, in another there was use of abbreviations when mentioning the name of the procedure in the consent. In one case, there was no time and date in the region when consent was signed by both the doctor and patient.

- **Item 3.** MR is complete, up to date & in chronological account of patient care- out of 150 files 39 showed non-compliance, mostly the reason was the documentation in the forms was incomplete and in some cases the file was not arranged in chronological account of patient care. **Item 5.** Entry in MR is signed, dated and timed- the non-compliance here was 78 out of 150files. The forms where this error was made was diabetes booklet, nursing hand off communication, plan of care.
- **Item 8.** Abbreviations are not used on informed consent, discharge summary & other material given to the patient- the non-compliance here was 99.33%, 140 out 150 samples had errors. In just one case it was seen in consent form and rest were seen in the discharge summary.
- **Item 10.** Documentation errors corrected as per policy- out of 150 files, in 30 files errors in documentation were not corrected as per the policy.

Section 2- To evaluate and analyze the medical records on the basis of -continuity of care in the medical records:-

Continuity of Care checklist is designed to verify the continuity of care in the medical records. It consists of 9 items, out of which all the items portrayed 100% compliance.

NON-MEASURABLE STANDARDS CHECKLIST:

The non-measurable regulatory standards checklist was created to analyze whether all the non-measurable standards of the JCI and NABH with respect to the Medical Records Department are being adhered to in the HIM department of the hospital. The checklist consists of 32 items, all of which showed 100% compliance.

***5.* Accuracy and completeness of medical records on the basis of the entries done by the various stakeholders responsible of handling them:**

The patient medical records are filled by various healthcare providers who are considered as the stakeholders responsible for handling them. This checklist named “Patient Medical Records Review Form” was created to check the accuracy and completeness of the medical records basedon the entries made by the healthcare providers. It consists of 100 checkpoints in total. The checklist is divided into 2 sections, mainly to take into consideration surgical and non-surgical cases. The section one consists of the following stakeholders- secretary, doctor, nurse, dietician, physiotherapist, and medical social worker. The second section (for surgical/procedures cases) consists of the following stakeholders- nurse, anesthesiologist, and surgeon.

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT
(ISSN 2811-2504 *)
Dr.A.Girija[1]

https://ijojournals.com/ Volume 07 || Issue 12 || December, 2024 ||

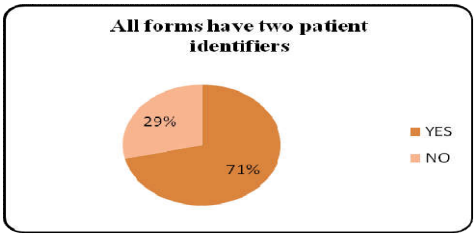


Fig 6 - Compliance/non-compliance rateof checkpoint- All forms have two identifiers

Interpretation: FIG 6 showcases a pie chart reflecting the compliance -71% and non-compliance 29% rate of the respective checkpoint.

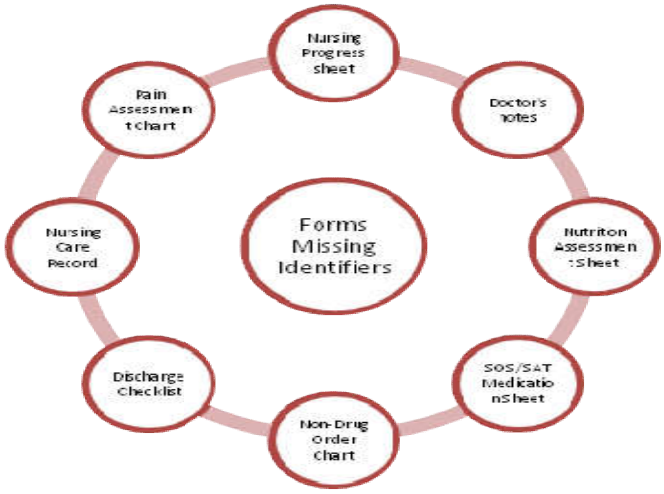


Fig 7 - Forms in MRs that were missing stickerswith the patient identifiers

Interpretation: FIG 7 is a diagram displaying the names of the forms in the Medical Records that had the patient identifier sticker missing. It was observed that the form showcasing the most number of deficiencies is 'nursing progress sheet' with stickers missing in form 7 files, whereas, the form with least frequency of deficiency in the mentioned forms is a tie between- SOS/SAT medication chart (4) and Non-drug order chart (4).

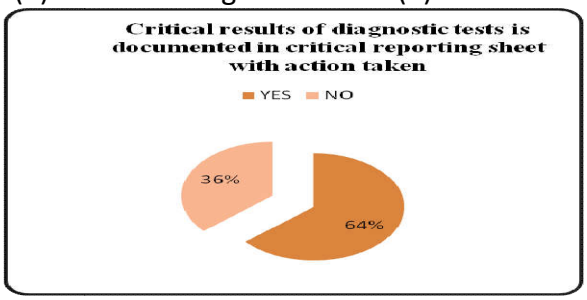


Fig 8 - Rate of compliance/non-compliance in documentation ofcritical test results

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT
(ISSN 2811-2504 *)
https://ijojournals.com/ Volume 07 || Issue 12 || December, 2024 ||

Dr.A.Girija[1]

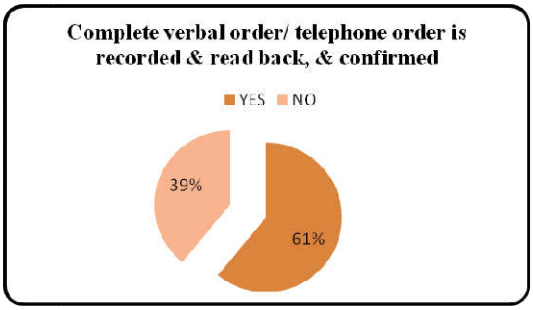


Fig 9 - The rate of compliance/non-compliance in receiving & recording of verbal/telephone orders

Interpretation: Fig 8 displays a pie chart of the checkpoint 'critical results of diagnostic tests is documented in the critical reporting sheet', here the number of medical records with non-compliance is 24 out of 147 records and percent is 36% non-compliance. Fig 9 displays a pie chart of the checkpoint indicating standard receiving and recording of verbal/telephone orders, here the number of medical records with non-compliance is 25 out of 64 records and percent is 39% non-compliance.

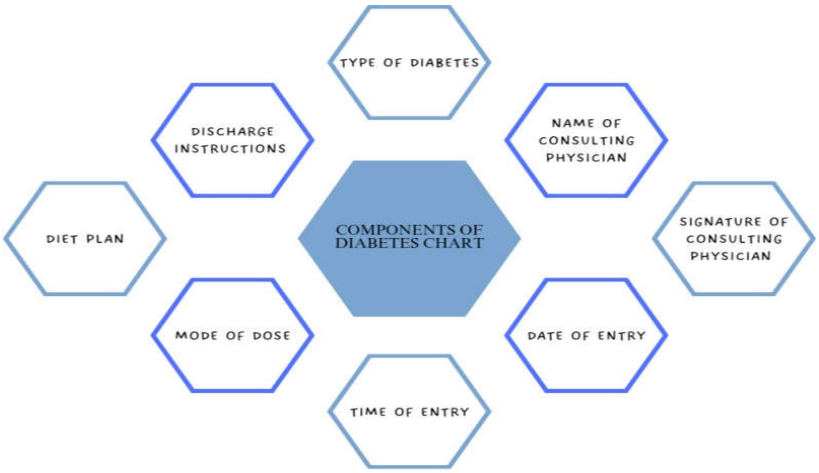
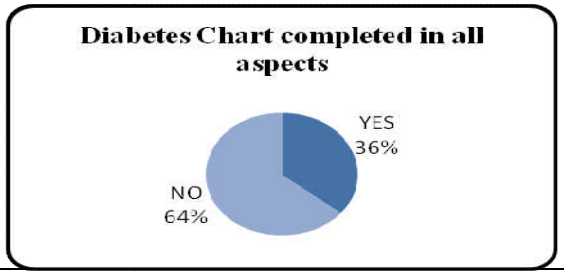


Fig 10 - Components of diabetes chart that weren't complete

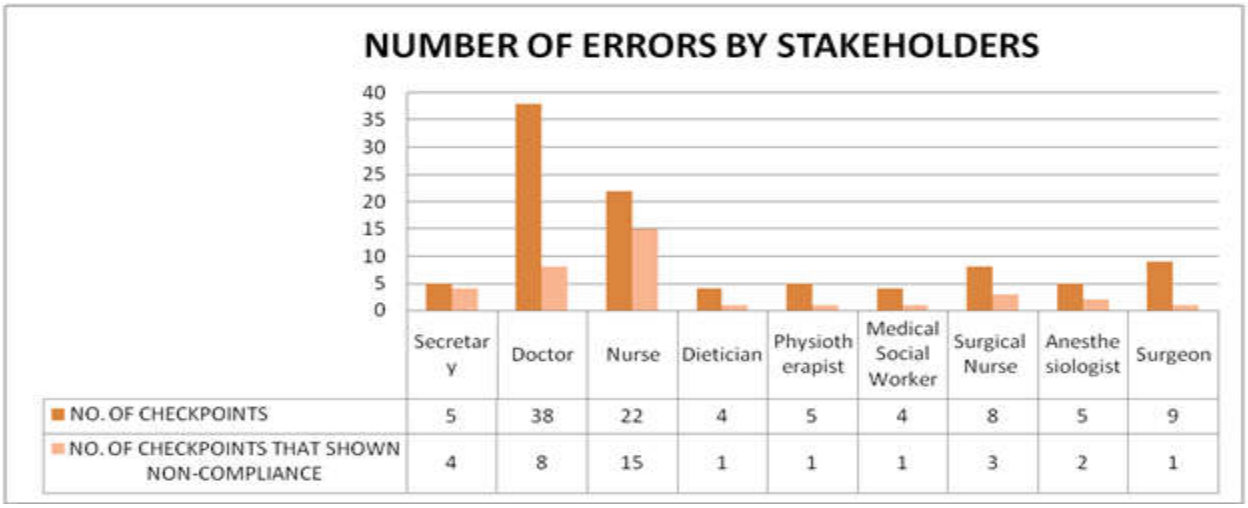


IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT
(ISSN 2811-2504 *)
https://ijojournals.com/ Volume 07 || Issue 12 || December, 2024 ||

Dr.A.Girija[1]

Fig 11 - Diabetescharts completed in all aspects

Interpretation: Fig 11 showcases a pie chart of the percentage of compliance/non-compliance in diabetes booklet in the medical records containing them. The sample size was 64 medical records and out of these 41 showed non-compliance, rounding up to 64%; whereas only 23 displayed compliance, rounding off to 36%. Fig 10 shows occurrence of errors in documentation based on components of diabetes booklet. It is to be noted that one medical record didn't display error in just one component but multiple components were found to be incomplete. The component with the most deficiency was 'Time of entry' at 57 incomplete entries from 64 files, followed by 'Date of entry' at 49 error (here, in some cases the designated area was either incomplete or the documentation was improper as the date was written at the top of the chart instead of the designated area). 'Name of consulting physician' and 'Sign of consulting physician' are the next components with the most errors at 45 and 42 incomplete documentations respectively. The component with the least errors is 'Type of Diabetes' at 5 incomplete documentations out 64 files.



	Secretary	Doctor	Nurse	Dietician	Physiotherapist	Medical Social Worker	Surgical Nurse	Anesthesiologist	Surgeon
NO. OF CHECKPOINTS	5	38	22	4	5	4	8	5	9
NO. OF CHECKPOINTS THAT SHOWN NON-COMPLIANCE	4	8	15	1	1	1	3	2	1

Fig 12 – Number of errors by stakeholders

Interpretation: FIG 12 illustrates the number of checkpoints that are to be maintained by each stakeholder and the number of non-compliances they showcased. The stakeholder with the most non-compliance is the 'nurse', with 15 (68%) non-compliances out of 22 checkpoints.

INFERENCES

- The 10 parameters, namely - Privacy & Security, Documentation of Care, Legal Protection, Identification of Trends & Patterns in Adverse Events, Quality Assurance & Improvement, Regulatory Compliance, Risk Assessment, Training & Education, Patient Engagement, and Record Keeping Policies & Procedures, used to showcase the role of HIM Department in risk

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT
(ISSN 2811-2504 *)
Dr.A.Girija[1]

https://ijojournals.com/ *Volume 07 || Issue 12 || December, 2024 ||*

management, with the use of 90 items checklist displayed 100% compliance in all the parameters.

The 5 parameters, namely - Infrastructure, Security & Confidentiality, Accessibility,Research & education, and Collection, Maintenance, Storage & Retrieval of Medical Records, are used to evaluate the management of the HIM Department. Infrastructure, Security and Confidentiality, Accessibility section of the checklist consists of 6 checkpoints as shown in Fig 5, all of which have showcased 100% compliance respectively. Research and Education section of the checklist consists of 2 checkpoints as shown in Fig 5, and have showcased 100% compliance. . Medical Records- collection, storage, maintenance, retrieval section of the checklist consists of 8 checkpoints as shown in Fig 5, and have shown 100% compliance.

- Compliance of HIM Department to the standards set by JCI and NABH: Measurable standards checklist:-

- 39 out of 150 records were not complete, up-to-date and in chronological account of patient care, displaying 26% non-compliance.
- 78 out of 150 records had entries that were not signed, dated/timed, displaying 52% non-compliance.
- 140 out of 150 records had abbreviations in the discharge summary, displaying 93.33% non-compliance.
- 30 out of 93 records had documentation errors and they were not corrected as per institution policy (policy- all errors/deficiencies are to be corrected within 7 days of records sent to HIM after patient discharge). Displayed 32.25% non-compliance.
- The checklist created to assess the continuity of care in the medical records displayed 100% compliance across all its 9 checkpoints.

The non-measurable regulatory standards checklist, with its 32 items displayed 100% compliance across all the items.

- Accuracy and completeness of medical records based on entries made by different healthcare professionals:

- 43 out of 150 records had patient identifiers stickers missing, displaying non-compliance of 28.66%.
- The nursing progress sheet was the form that had the most missing stickers displaying 0.046 relative frequency.
- Out of 66 applicable cases the documentation of critical diagnostic tests was missing/ incomplete in 24 records, displaying 36.36% non-compliance.
- Out of 64 applicable cases the documentation of complete verbal order/ telephone order being recorded, read back & confirmed was missing/incomplete in 25 records, displaying 39.06% non-compliance.
- Out of 97 applicable cases the investigation chart was not completed in 49 records, displaying non-compliance of 50.51%.
- Out of 64 applicable cases the diabetes chart was incomplete in 41 records, displaying 64.06%

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT
(ISSN 2811-2504 *)
https://ijojournals.com/ Volume 07 || Issue 12 || December, 2024 ||

Dr.A.Girija[1]

non-compliance.

- The diabetes chart components that were missing in most of the records are name of consulting physician, sign of consulting physician and date of entry with the relative frequency of occurrence at 0.70%, 0.65% and 0.76% respectively.
- The stakeholder with the most missing entries in the IDTR assessment form is the nurse professional with 19 missing signatures out of 137 applicable cases.

OBSERVATIONS

- Medical coding based on International Classification of Diseases (ICD-11) is not done in the physical patient medical records but instead done so in the Electronic Medical Records.
- The medical records are checked for deficiencies at two different locations - the wards/ICUs and in the HIM Department to make sure the records are properly documented.
- Only In-patient medical records include the deficiency checklist and go through deficiency check in the wards/ICUs.
- The ICD coding of medical records is usually pending of multiple patient records due to shortage in number of employees.
- The protocols are strictly followed in the department when it comes to retrieval of medical records for healthcare professionals, patients, research, etc.
- The form in the medical records with the most number of documentation errors is Diabetes booklet and the main factor contributing to the errors is the format/design of the booklet.
- Most of the patient medical records are not arranged as per the chronological order of patient care as stated by the hospital SOPs.

SUGGESTIONS

- A correction log can be created to maintain a record of all the case files that have been submitted to the HIM department with deficiencies and this log should be available to all the clinical department with reminders, so that the corrections can be made within the 7 days the patient records are withheld in the HIM for corrections as per the institution policy.
- The discharge summary pattern can be standardized so as to reduce the number of abbreviations used.
- Artificial Intelligence (AI) can be used to standardize the abbreviations used in the discharge summary in the Electronic Health Records (EHRs) to reduce the errors.
- There should be a regular audit done of the diabetes booklet as it is the top form in case files with most number of deficiencies.

LIMITATIONS

The limitations of the study include:

IJO -INTERNATIONAL JOURNAL OF BUSINESS MANAGEMENT

(ISSN 2811-2504 *)

Dr.A.Girija[1]

https://ijojournals.com/ *Volume 07 || Issue 12 || December, 2024 ||*

- Time constraints when it comes to data collection
- Availability of data constraints
- Chances of personal bias as most of the data collection was done through direct observation.

CONCLUSION

In conclusion, this study provided valuable insights on performance evaluation of medical records based on regulatory standards set by NABH and JCI. It underscored the pivotal role played by the HIM Department in risk management within the healthcare facility. The study also showcased how maintaining proper medical records is indispensable for a hospital due to several different reasons, including patient safety, legal compliance, continuity of care, quality improvement, billing and reimbursement, research and education, etc. In light of these factors, maintaining a well functioning Healthcare Information Management Department is not only a regulatory necessity but also a cornerstone of effective healthcare delivery and risk management within a hospital setting.

REFERENCES

- Septi Yhuninda Erika, Semuel Piter Irab, Yacob Ruru et.al., "Factors affecting the performance of medical records officials at public health centers in Jayapura City", International Journal of Research and Review. 10(7): 323-334,2023.
- Azzolini E, G Furia, A Cambieri, W Ricciardi, M Volpe, "A Poscia Quality improvement of medical records through internal auditing: a comparative analysisa"Journal of preventive medicine and hygiene 60 (3), E250, 2019.
- Shreeranga Bhat, EV Gijo, NA Jnanesh, "Productivity & Performance improvement in the medical records department of a hospital:an application of Lean Six Sigma" International Journal of Productivity and performance management 65 (1), 98-125, 2016
- Sima Ajami, Saedeh Ketabi, Fatemeh Torabiyah, "Performance improvement indicators of the medical records department & IT in hospitals", Pakistan Journal of medical sciences 31 (3), 717, 2015.
- Sima Ajami, Saeedeh Ketabi, "Performance evaluation of medical records departments by analytical hierarchy process (AHP) approach in the selected hospitals in Isfahan", Journal of medical systems 36, 1165-1171, 2012.
- Sima Ajami, Shahram Tofighi, Nahid Tavakoli, Afsaneh Ebadsichani, " Performance evaluation of medical records department with balanced scorecard approach in Fatemeh Zahra Hospital of Najafabad, Iran", Health Information Management 7 (1), 2010.
- Sayed Jalaladdin, Reza Rabiee, Farahnaz Sadooghi, " Performance evaluation of medical record department of specialized-teaching hospitals of Iran Medical Science University", KAUMS Journal (FEYZ) 8 (1), 57-65, 2004.