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EVALUATING THE QUALITY AND COMPLETENESS OF INPATIENT MEDICAL RECORD DOCUMENTATION: A CLINICAL AUDIT

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ABSTRACT

Background: High-quality documentation of medical records is necessary to carry out smooth communication between healthcare providers, to provide efficacious patient care, and for legal reasons. However, incomplete or poor documentation is a frequent issue that can affect the safety and care of patients (1).

Objective: To evaluate and improve the quality as well as the completeness of inpatient medical record documentation using the Plan-Do-Study-Act (PDSA) cycle in Al Nafees Medical College And Hospital, Islamabad.

Journal of Medical & Health Sciences Review
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Methodology: A clinical audit was carried out using the PDSA quality improvement methodology. The standardized history form used by Al Nafees Medical College And Hospital was compared with the standards of the Royal College of Physicians, United Kingdom to evaluate the quality. Following quality evaluation, the completeness of the form was also compared using a standardized checklist following GMC and Royal College of Physicians guidelines. Interventions such as educational sessions, distribution of standardized history templates, and workshops were carried out to improve the documentation practices of junior doctors. A re-audit was conducted post-interventions to measure the changes.

Results: The audit revealed that none of the inpatient records were according to the established standards, with common deficiencies in the history section, additional history section, and discharge section. Post-interventions, compliance led to significant improvement in quality and completeness.

Conclusion: The PDSA cycle constructively identified and conveyed key issues in inpatient medical record documentation. Interventions led to significant improvements, explaining the importance of continuous improvement in clinical setups.

Keywords: Clinical audit, Plan-Do-Study-Act (PDSA) cycle, Quality improvement patient records, Healthcare communication, Patient Safety, Documentation completeness

Introduction

Clinical audit is a part of clinical governance in healthcare settings which involves identifying deficiencies in clinical setup, comparing it with standards, knowing the amount of deviation from the standards, and then applying changes to bring improvement (2). The importance of clinical audit lies in its capacity to promote quality improvement, making it a foundation of effective clinical governance. Clinical audit is very important in the domain of improving medical documentation.

Fruitful clinical documentation is essential in maintaining high standards of patient care. The General Medical Council in the United Kingdom highlights " Good Medical Practice" which states that doctors are required to maintain clear and accurate medical records (3). Incomplete documentation can lead to miscommunication between healthcare providers, lead to medical

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errors, and cause legal mishaps. Therefore, good-quality documentation is not only necessary for clinical matters but also for legal issues (4).

In addition to clinical aspects medical records also serve as valuable sources for research and audits. Regular audits of medical records are important for monitoring the performance of hospitals so that patient care is according to standards (5). Despite significant advancements in medical fields, many healthcare settings have low-quality documentation practices due to inadequate training, lack of standardized templates, and reluctance to change (6).

This clinical audit was conducted at Al Nafees Medical College And Hospital, Islamabad, where a significant gap in the evaluation and improvement of inpatient medical record documentation was observed. The audit, the first of its kind in the hospital, follows the guidelines set by the Royal College of Physicians and the Royal College of Surgeons of England. We utilized the Plan-Do-Study-Act cycle to recognize deficiencies in documentation, implement interventions, and measure the effects of these interventions.

Aims

The main aim of this clinical audit was to improve the quality and completeness of inpatient medical records in Al Nafees Medical College And Hospital of Islamabad, ensuring that at least 90% of records meet established standards within 2 months.

Objectives

- To assess the quality of inpatient medical records.
- To identify deficiencies in documentation practices.
- To implement targeted interventions.
- To evaluate the impact of these interventions through a re-audit.

The Standards

The standards consisted of nine parameters, as given in Figures 1-4, and an overall grade was given to each parameter as such: excellent (80%-100%), good (60%-79%), poor (40%-59%), satisfactory (20%-39%), and unsatisfactory (less than 20%) depending on how they were completed. After each parameter was given a grade an overall grade for the whole file was given to assess the quality of documentation.

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Assessment Parameters consisted of the following: personal data, history section, additional history section, examination section, investigations section, treatment section, admission section, diagnosis section, and discharge section.

Methodology

Design

A retrospective and prospective observational study was carried out. About 60 files of patients admitted in medical ward numbers 6 and 7 were audited against established standards. Only files of patients admitted in the last 2 months before IRBC approval were evaluated. After their evaluation, changes were implemented through presentations, group sessions, workshops, and the provision of a newly developed standardized history form. Followed by interventions a re-audit was carried out to assess the changes.

Sample Size

The sample size was 60 files of patients which were taken from Al Nafees Medical College And Hospital, Islamabad. The audit included only the medicine department of the hospital. The exclusion criteria were all files of other departments along with files before 7th August 2024 and beyond 16th October 2024. The inclusion criteria were Patients admitted to both male and female wards between the given above dates.

Sampling Technique

A systematic simple random sampling technique was used to involve files of patients who were admitted to the medicine department. The first cycle was conducted from 7th August 2024 and 12th September 2024 while 2nd cycle was conducted from 20th September and 24th October 2024.

Data Collection Technique And Analysis

Files of patients available in the record room of the hospital were accessed for data collection. The techniques involved were surveying and observation. A checklist was developed using the standards of the Royal College of Physicians then each parameter of the file was compared and marked as completed or not completed on the checklist. In the first cycle, 30 files were compared followed by a series of presentations, group discussions, and workshops then a re-audit of 30 files in the 2nd cycle. A new structure of the files was proposed as given in the above figures. Multiple components were added to the file such as weight, date of birth, vaccination history, blood

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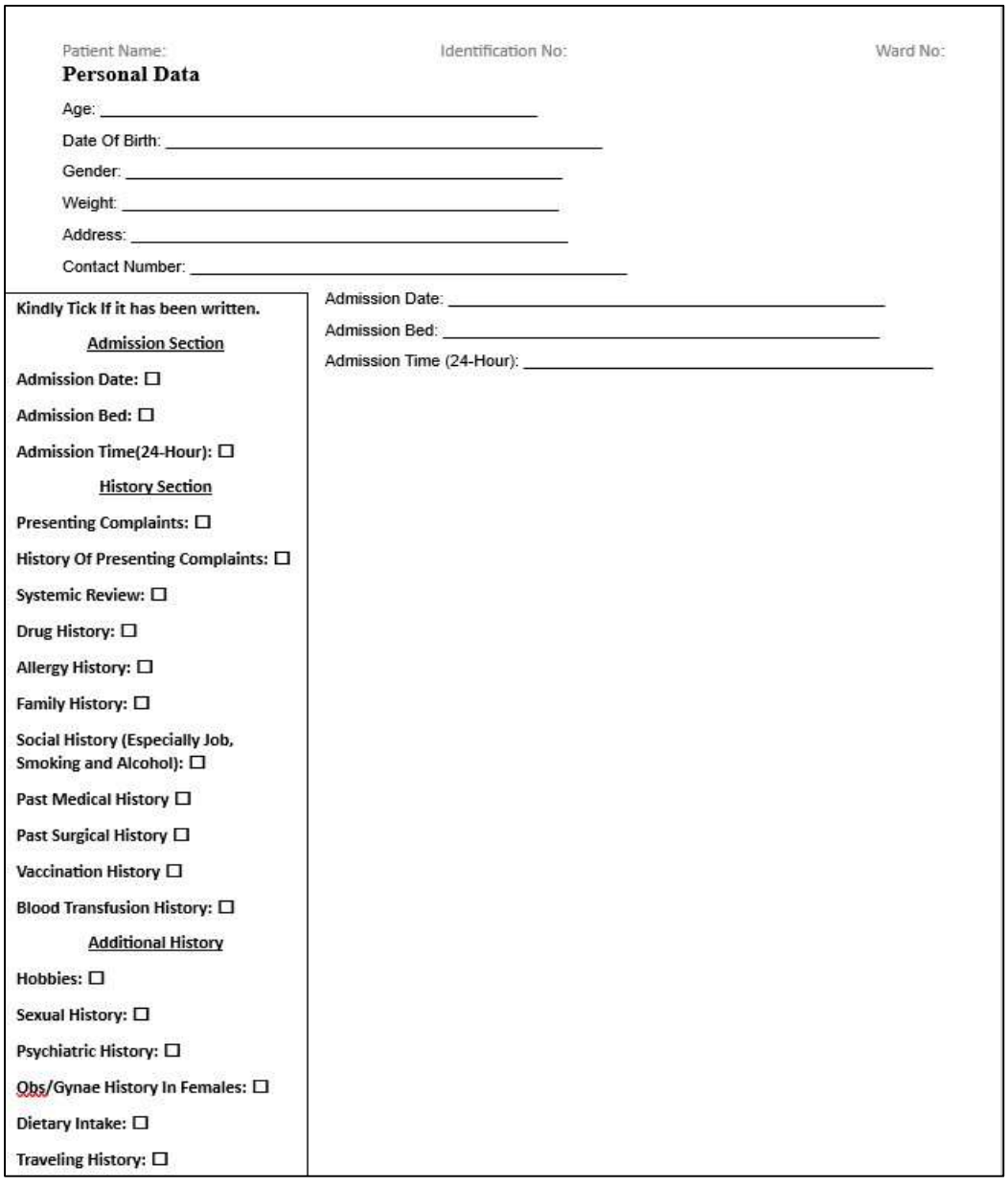
https://jmhsr.com/index.php/jmhsr

transfusion history, hobbies, sexual history, psychiatric history, obs/gynae history in females, dietary intake, traveling history, prognosis, discharge type, and flow chart of lab results. The data analysis was done using Statistical Package for Social Sciences version 20 and Microsoft Excel 2019.

Newly Developed Questionnaire



Patient Name: Identification No: Ward No:

Personal Data

Age: _____

Date Of Birth: _____

Gender: _____

Weight: _____

Address: _____

Contact Number: _____

Kindly Tick If it has been written.

Admission Section

Admission Date: ☐

Admission Bed: ☐

Admission Time(24-Hour): ☐

History Section

Presenting Complaints: ☐

History Of Presenting Complaints: ☐

Systemic Review: ☐

Drug History: ☐

Allergy History: ☐

Family History: ☐

Social History (Especially Job, Smoking and Alcohol): ☐

Past Medical History ☐

Past Surgical History ☐

Vaccination History ☐

Blood Transfusion History: ☐

Additional History

Hobbies: ☐

Sexual History: ☐

Psychiatric History: ☐

Obs/Gynae History In Females: ☐

Dietary Intake: ☐

Traveling History: ☐

Admission Date: _____

Admission Bed: _____

Admission Time (24-Hour): _____

Figure 1: First Portion of Newly Developed File And Questionnaire

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Kindly Tick If it has been written.

Examination Section

Vitals: ☐

Focused Examination: ☐

Other Examination: ☐

Figure 2: Second Portion

Kindly Tick If it has been written.

Investigation Section

Required Tests: ☐

Documentation Of Results: ☐

Flow Chart Of Results: ☐

Figure 3: Third Portion

Kindly Tick If it has been written.

Treatment Section

Medication Prescription: ☐

Procedure: ☐

Follow Up: ☐

Patient's Instructions: ☐

Figure 4: Fourth Portion

Kindly Tick If it has been written.

Diagnosis Section

Provisional Diagnosis: ☐

Final Diagnosis: ☐

Prognosis: ☐

Nursing Notes: ☐

Figure 5: Fifth Portion

Kindly Tick If it has been written.

Discharge Section

Admission Summary: ☐

Discharge Type: ☐

Discharge Notes And Date: ☐

Nursing Notes: ☐

Attending Doctors Details: ☐

Figure 6: Sixth Portion

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Ethical Approval

The clinical audit was approved by the Institutional Review Board Committee of Al Nafees Medical College And Hospital, Islamabad.

Results

A total of 60 files were included in the study, 30 in the 1st cycle and 30 in the 2nd cycle. In these cycles, files were retrieved from only the medicine department. In the 1st cycle, none of the files contained the date of birth and weight of the patient. Regarding the address only 77% of files contained it, 40% of files had drug history written in it, 37% of files contained allergy history, and 53% had family history in it. 60 % of files had social history, 0% of files had blood transfusion history, 90% had past surgical history written, and 13% had vaccination history. None of the files contained hobbies, sexual history, psychiatric history, traveling history, and a flow chart. In the 2nd cycle, 50% of files had a date of birth and 90% weighed the patient. All files contained the addresses of the patients, 70% contained drug history, 80% of files had allergy history, and 83% had family history. 77% of files had social history, 93% had blood transfusion history, 93% had surgical history, and 30% had vaccination history. 50% of files had hobbies written in them, 67% had sexual history, 60% had psychiatric history, 40% had traveling history, and 27% contained flow charts of results. Results are explained in the tables.

Table 1

Parameter	1st Cycle (Completed)	2nd Cycle (Completed)
Patient ID	100%	100%
Patient Name	100%	100%
Age	100%	100%
Date of Birth	0%	50%
Gender	100%	100%
Weight	0%	90%
Address	77%	100%
Contact Number	100%	100%

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Table 2

Presenting Complaints	100%	100%
History of Presenting Complaints	100%	100%
Systemic Review	97%	100%
Drug History	40%	70%
Allergy History	37%	80%
Family History	53%	83%
Social History	60%	77%
Blood Transfusion History	0%	93%
Past Medical History	100%	100%
Past Surgical History	90%	93%
Vaccination History	13%	30%

Table 3

Hobbies	0%	50%
Sexual History	0%	40%
Psychiatric History	0%	60%
Obs/gynae History in Females	57%	70%
Dietary Intake	3%	87%
Traveling History	0%	40%

Table 4

Vitals	100%	100%
Focused Examination	100%	100%
Other Examination	77%	80%
Required Tests	100%	100%
Documentation Of Results	100%	100%
Flow Chart of Results	0%	27%

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Table 5

Medication Prescription	100%	100%
Procedures	63%	77%
Follow Up	70%	80%
Patient Instructions	90%	97%

Table 6

Admission Date And Bed	97%	100%
Admission Time (24-Hour Time)	30%	57%

Table 7

Provisional Diagnosis	100%	100%
Final Diagnosis	100%	100%
Prognosis	30%	53%
Nursing Notes	100%	100%

Table 8

Admission Summary	80%	87%
Discharge Type	20%	83%
Discharge Notes And Date	93%	93%
Attending Doctor Details	97%	98%

Discussion

This audit was done to find out the current practice of documenting patient medical records in the medicine department of Al Nafees Medical College And Hospital, Islamabad, and then involved improving deficiencies according to the standards of the Royal College of Physicians.

The patient records did not include weight, date of birth, vaccination history, blood transfusion history, hobbies, sexual history, psychiatric history, obstetrics/gynecology history in females, dietary intake, traveling history, prognosis, discharge type, and flow chart of lab results which were later included in the new questionnaire.

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Documentation of date of birth was done in no files however, post-sessions and presentations about 50% of files had it. The history portion was considered the most important aspect because it was the key to the diagnosis. The drug history was included in only 40% of files in 1st cycle and improved to 70% in 2nd cycle. The sexual history and psychiatric history in the files of 1st cycle constitute 0% because of social stigma and hesitancy by junior doctors to ask. After motivating junior doctors, it respectively rose to 40% and 60% in the 2nd cycle.

The discharge criterion written in the 1st cycle was 20% and rose to 83% in the 2nd cycle and it will improve after the introduction of the newly developed history questionnaire. The flow chart of results was not included in a single file in the 1st cycle but improved to 27% in 2nd cycle.

Limitation

The audit did not involve other departments and the sample size was relatively small.

Recommendations

- To explain the importance of standardized documentation to junior doctors.
- Shifting pre-existing data to standardized history sheets.
- To carry out monthly sessions for training junior doctors.
- To regularly evaluate and implement changes carried out.
- To support the implemented changes.
- To ask senior faculty to assess these changes.
- To involve other departments.

Conclusion

The documentation that was carried out in our hospital was very poor and unsatisfactory but after a series of presentations and group sessions, a consequential improvement was seen. Documentation of records is necessary for research, legal issues, and patient care. The significance of documentation should be explained to students with undergraduate degrees in addition to junior doctors and postgraduate residents.

Conflict of Interest

There was no conflict of interest from the authors.

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Ethical approval letter

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