

MEDICAL RECORD DOCUMENTATION OF PATIENTS ADMITTED TO A MEDICAL UNIT IN A TEACHING HOSPITAL

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ABSTRACT

Objective: To compare the standards of documentation with audit study 2005 and to determine that changes have been implemented.

Methodology: This descriptive audit study was conducted in the medical C unit of Lady Reading Hospital, Peshawar - Pakistan from 1st January 2010 to 31st December 2010. Out of 3684 patients admitted during the year 2010, 200 case notes were randomly selected and subjected to re-audit. The clinical notes were broadly analysed for documentation of six parameters. Each parameter's documentation was to be graded as very good, good, average, poor or not documented.

Results: Personal bio-data was documented average in 195 (97.5%) cases; History and examination were average in 98 (49%) cases and good in 85 (42.5%) cases; Investigations were documented good in 140 (70%) and average in 13 (6.5%) cases. Progress notes were good in 130 (65%) cases and treatment was documented good in 194 (97%) cases. In 105 (52.5%) charts, one or more of the six selected items were not documented at all. Progress notes were not written in 48 (24%), investigations in 35 (17.5%), diagnosis in 16 (8%), history and examination in 4 (2%), bio-data in 2 (1%) and treatment in 1 (0.5%) of the case notes. For comparison between audit 2005 and present audit 2010, the P value was 0.05.

Conclusion: No change was made in the previous five years and no steps of improvement have been implemented.

Key Words: Case notes, Patient information, Documentation, Change.

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INTRODUCTION

One of the first ever clinical audits was undertaken by Florence Nightingale during the Crimean War of 1853-1855. Florence was appalled by the unsanitary conditions and high mortality rates among injured or ill soldiers. She applied strict sanitary routines and standards of hygiene to the hospital and equipment, and kept meticulous records of the mortality rates among the hospital patients. Following this change the mortality rates fell from 40% to 2%¹. Another famous figure who

advocated clinical audit on monitoring surgical outcomes was Ernest Codman (1869-1940). Codman's idea "was to follow every patient's case history after surgery to identify individual surgeon's errors on specific patients"^{2,3}. The term audit is usually associated with accounting in order to prevent fraud.⁴ Clinical audit is a process that has been defined as a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change⁵. Aspects of the structure, processes, and outcomes of care are selected and systematically evaluated against explicit criteria. Where indicated, changes are implemented at an individual, team, or service level and further monitoring is used to confirm improvement in healthcare delivery⁶.

The key component of clinical audit is that performance is reviewed to ensure that what should be done is *being* done, and if not it provides a framework to enable improvements to be made. It had been formally incorporated in the health care systems of a number of countries⁶. Clinical audit is an essential and integral part of

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clinical governance⁷.

The clinical audit process seeks to identify areas for service improvement, develop & carry out action plans to rectify or improve service provision and then to audit to ensure that these changes have an effect⁸. First audit of medical records was carried out at Lady Reading Hospital Peshawar in 2005⁹. After a period of five years re-audits was done. The aim of this study is to compare the standard of documentation in two periods and to determine that the changes have been implemented and that improvements have been made.

METHODOLOGY

This audit was conducted in Medical C unit of Lady Reading Hospital, Peshawar - Pakistan from January 2010 to December 2010. Medical C unit deals emergencies and routine elective admissions via outpatient department. Lady Reading Hospital is a tertiary care hospital draining whole Khyber PakhtoonKhwa province and various regions of Afghanistan. The same strategies for identifying the sample, methods and data analysis were used to ensure comparability with the original audit. Patients whose notes were missing were not included in the study. (n= 20).

All the case notes of medical C unit for the year 2010 were collected from record room of Lady Reading Hospital Peshawar. Total number of patients admitted in the year 2010 was 3684. The sample frame for the study was 3664 as 20 charts were missing. Two hundred case notes were selected in simple randomised manner as study sample. The patient's information was entered in to a pre-designed audit Performa having all the relevant details. Six parameters were assessed in the contents of medical notes, as in parent audit. These included documentation of bio-data of the patient, history and physical examination, diagnosis, Investigation recorded, daily progress notes and treatment.

The bio-data included the personal details of the patient. The history and examination was analysed and assessed as per standard. The diagnosis included Primary and secondary diagnosis. Investigations including documentation of any other diagnostic intervention were recorded in chronological order in a pre-designed flow sheet. Daily progress notes were classified accordingly as to whether the notes are comprehensive or not and whether these are written daily. Treatment included medications and any therapeutic intervention. Medications were assessed regarding trade and generic names of a drug, dose and frequency of administration and date of starting and stopping. Each parameter was

then graded as very good, good, average, poor or not documented.

RESULTS

Total number of admissions in Medical "C" lady Reading Hospital in the years of 2010 was 3684. Out of total patients 1831(49.70%) were males and 1853(50.30%) were females with a ratio of 0.9:1. Twenty cases were missing leaving only 3664 for the audit. Out of these, 200 case notes were scrutinized. For comparison between audit 2005 and audit 2010, chi square test was applied on the data and P value=0.05 which is showing that there is significant difference between audit 2005 and parent audit 2010.

In 97.5%(n=195) of our patients, Personal data was recorded in an average way. In 02 charts (1%) bio-data was recorded in good manner and poor in 0.5% (n=1) charts. In only 2 patients of 200 (1%) bio-data was not taken at all.

History and examination were recorded in good manner in 42.5%(n=85) cases, while in 49% (n=98) average history was taken. History was written in poor manner in 13 patients (6.5%) and in 04 cases (2%) it was not written at all. Diagnosis was placed in good category in 71%(n=142) cases and average in 20% (n=40) cases. In 16 charts (8%) no diagnosis was written at all.

Complete investigations were recorded on flow sheet in 5%(n=10) of the charts (very good). In 70%(n=140) of case notes investigations were documented in good manner and average in 6.5% (n=13) of cases. In 35 charts (17.5%) no investigations were recorded in flow sheets.

Progress notes were written in good way in 130 (65%) patients while in 48 (24%) patients no progress notes were recorded in case notes. The treatment sheet was filled in good manner in 194 (97%) patients daily (Table 1).

In this study deficiencies were exposed in documentation of all the selected parameters. In 53% of the charts one or more of the six selected items were not mentioned at all. Progress notes were not written in 24%, investigations in 17.5%, diagnosis in 8%, history and examination in 2%, personal data in 1% and treatment in 0.5% of cases.

DISCUSSION

Medicine has built on a large history of innovation from the stethoscope and simple radiographs to magnetic resonance imaging¹⁰. Documentation and record keeping is a fundamental part of clinical practice. Medical record documentation is basis for communication between physician and patients¹¹. Reporting is one

Table 1 : Documentation of the Parameters : A Comparison with Audit in 2005

Parameter	V. Good		P value 0.05	Good		P value 0.05	Average		P value 0.05	Poor		P value 0.05	Not Written		P value 0.05
	n(%) Audit 2005	n(%) Audit 2010		n(%) Audit 2005	n(%) Audit 2010		n(%) Audit 2005	n(%) Audit 2010		n(%) Audit 2005	n(%) Audit 2010		n(%) Audit 2005	n(%) Audit 2010	
Bio-data	-(-)	-(-)	-	194 (97%)	2 (1%)	S	4 (2%)	195 (97.5%)	S	-(-)	1 (0.5%)	S	2 (1%)	2 (1%)	N.S.
History & Examination	-(-)	-(-)	-	22 (11%)	85 (42.5%)	S	98 (49%)	98 (49%)	N.S.	62 (31%)	13 (6.5%)	S	18 (9%)	4 (2%)	N.S.
Diagnosis	48 (24%)	-(-)	S	128 (64%)	142 (71%)	N.S.	10 (5%)	40 (20%)	S	2 (1%)	2 (1%)	N.S.	12 (6%)	16 (8%)	N.S.
Investigation	18 (9%)	5 (2.5%)	S	134 (67%)	140 (70%)	N.S.	6 (3%)	13 (6.5%)	S	2 (1%)	2 (1%)	N.S.	40 (20%)	35 (17.5%)	N.S.
Progress Notes	2(%)	-(-)	S	156 (78%)	130 (65%)	S	18 (9%)	19 (9.5%)	N.S.	-(-)	3 (1.5%)	S	24 (12%)	48 (24%)	S
Treatment	-(-)	-(-)	-	186 (93%)	194 (97%)	N.S.	8 (4%)	3 (1.5%)	S	-(-)	2 (1%)	S	6 (3%)	1 (0.5%)	S

of the most important part of any documentation system¹². In time completion of patient case notes is a critical practice nowadays, in delivery of health care services. It is necessary to have accurate and up-date clinical information for the patient care¹³. Electronic system is more efficient compared to paper system for documentation of case notes¹⁴.

In our tertiary care hospital, electronic clinical documentation was introduced in 2005. Still it is in infancy and most of the units are maintaining hand written medical charts. Our main area of deficiency in this audit process was in the domain of bio-data. In 97.5% of cases it was recorded in an average manner and in 2% cases no bio-data was taken. Comparing to original audit in 2005 bio-data was properly documented in 97% of the cases. Bio-data is the basic personal information which includes name, age, sex, completed postal address and contact telephone number of the patient. Apart from nursing staff, house physicians and trainee medical offices are primarily responsible for recording and maintaining this vital information. Our audit has disclosed lack of interest on part of young doctors in taking patient's personal details.

In none of the case notes complete diagnosis was written as compared to the results in 2005 audit (24%). In 71% of cases diagnosis was graded as good, average in 20%, and in 8% of cases no record of diagnosis is available. Investigations were well documented in only 5% of the charts (very good). In 17.5 % investigations

were not recorded at all and in 7.5% cases either poorly are incompletely (average) recorded. In majority of charts (97%) treatment was writing in good manner and in only one chart (0.5%) it was not mentioned. Daily progress notes were documented in good manner in 65% of the files and in 24% no notes were recorded in progress sheet.

Documentation of history and examination has improved (42.5% in good manner) as compared to the year 2005, while only 11% of cases were taken as good. Physicians are largely defined by their medical skills. Importance of good history and physical examination was highly emphasised in the past period in our Postgraduate Medical institute. That's why we found better result in this domain as compared to other parameters.

CONCLUSION

It is the era of 21st century. Audit can assist and ensure high standards of professional care, monitor trainees of post graduates and evaluate overall performance. Documentation of medical record is still is very poor in our hospital .No change was made in the past five years and no steps of improvement have been implemented. We suggest that Postgraduate medical Institute should play a key role in this regard. It should formally introduce clinical audit in all departments and train clinicians to conduct audit as routine exercise. This will create dedication and sense of responsibility amongst the senior and junior doctors.

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CONTRIBUTORS

Z collected and provided the data and analyzed the results, reviewed the literature and wrote the article, MR and KM helped data analysis while the study concept was developed and supervised by IS. All the authors contributed significantly to the research that resulted in the submitted manuscript.