DID WE IMPROVE THE QUALITY OF SURGICAL RECORD KEEPING ACCORDING TO MODIFIED ANKLe STANDARD?

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ABSTRACT

OBJECTIVE: To evaluate the current status and improvement in quality of surgical records in 2014 as compared to previous audit of 2012 at Dow University Hospital (DUH), Karachi, Pakistan.

METHODS: A review of records of all the patients in surgery department of DUH were done according to Modified Adjusted Note Keeping and Legibility (ANKLe) score in first audit. After sharing the results of the first audit and education of the junior doctors, re-audit was done and completed from June 2014 to August 2014. The modified ANKLe score with an overall total-score of 24 consists of the combination of the content (out of 20) and legibility (out of 4). An acceptable score is at least 20 (content score 17/20; legibility score 3/4). Scores were compared to a study conducted previously in 2012.

RESULTS: Records of 290 patients were assessed. Mean scores for total ANKLe score, content and legibility for current study were 19.94±3.36, 16.48±3.12 & 3.56±0.581 respectively whereas 18.4±2.1, 14.4±2.1 & 3.9±0.2 respectively in study conducted in 2012. The benchmark of 80% (20/24 score) for total ANKLe score was achieved in 63.7% compared to 26.1% in 2012. Similarly, standard of ≥17/20 for contents and ≥3/4 for legibility was achieved in 60.34% and 95.5% respectively as compared to 6.8% & 99.1% respectively in 2012.

CONCLUSION: Overall, quality of surgical record keeping in DUH has been improved but still not at ideal status. The ANKLe score can be used in hospitals. By giving education and guidance to junior doctors the quality of medical records can be improved.

KEY WORDS: Medical Records (MeSH); Documentation (MeSH); Clinical Audit (MeSH); Case notes (Non-MeSH); Quality of Health Care (MeSH);

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INTRODUCTION

Clinical health record is an established method of storing the obligatory information, data and other related authorizations to mark essential information. Thoroughly defined and great-quality clinical case notes are very essential for good patient care, making correct diagnosis and planning effective management. A high quality medical record is not only important for daily patient management but it's also very essential for audit of records, doing research and many medico-legal purposes.[1,2] Proper medical record keeping simplifies to transfers patient's information to other health care professionals to certify patient's safety care both now and in the future and decrease medical mistakes.[3-5]

Many hospitals currently are observing their clinical notes by different scoring systems but very little amount of work has been done to educate the junior doctors who are actually in more contact with the patients and who, are mostly write the notes. Usually it is experienced in the initial days of the work by observing other seniors. Nevertheless, these notes are usually copies by others and are not officially educated that how we are supposed to write it so usually bad practices are being transferred.

Dow university Hospital affiliated with Dow International medical college of Dow University of Health Sciences has been keeping the case notes record for last many years. The Hospital has already scored its quality of clinical case notes by different scoring methods including Adjusted Note keeping and Legibility (ANKLe) score,[6] on Royal College guidelines[7] and CRABEL Score (named on its proposed authors: Crawford JR, Beresford TP, Lafferty KL).[8]

In 2012, audit of the case notes was done in the surgery department of Dow University Hospital affiliated with Dow University of Health Sciences which was not meeting the standards of some of the elementary case note guidelines.[9] The mistakes which were frequently observed in the files were shown to the junior doctors and they were educated to improve it. This education helps to improve and maintain the high quality clinical case notes. Recently we have done second audit to complete the audit cycle and to observe any change in practice of doctors because of our intervention of training in terms of record keeping among junior doctors.

The aim of this audit was to evaluate the present status of documentation and to compare it to the previous records according to modified ANKLe score to identify the areas which have been improved or those which need further

TABLE I: MODIFIED ANKLe SCORE (n = 290)

Standard	Mean ± SD of Score 2012	Mean ± SD of Score 2014	Standard Achieved* (% of notes) 2012	Standard Achieved* (% of notes) 2014
Contents	14.4±2.1	16.48±3.12	16 (6.8)	175(60.34)
Legibility	3.9±0.2	3.56±0.58	232 (99.1)	277(95.5)
ANKLe	18.4±2.1	19.94±3.36	61 (26.1)	185(63.7)

* Standard of Content score 17/20; Legibility 3/4; Total ANKLe score 20/24

enhancement for maintaining high quality standards.

METHODS

Medical records of all patients admitted in the department of surgery at Dow University Hospital from June 2014 to August 2014 were assessed according to ANKLe score guidelines.

This scoring system was made in 2008 according to Royal College of Surgeons of England (RCSE) guidelines[6] which consist of a first part of 18 variables for initial clerking, each variable scoring 1 point. One variable was altered from 'doctor bleep' to 'investigation documented' to bring into line with the local structure. Additional two things were included, particularly for the records of surgery department i.e consent and operative notes. To find out the legibility a scoring system (1-4) was also included. The modified ANKLe score with an overall total score of 24 consists of the combination of, the content (out of 20) and legibility (out of 4). An acceptable score is at least 20 (content score 17/20; legibility score 3/4) as in the earlier study. This indicates that the clinical notes are legible and the bulk of the important content is recorded.

Data was analyzed by SPSS version 17 (SPSS Inc., Chicago, IL) for descriptive statistics. The results were compared with previous results assessed in 2012.[9]

RESULTS

Records of 290 patients were assessed. Mean scores for total ANKLe score, content and legibility were 19.94±3.36, 16.48±3.12 & 3.56±0.581 respectively. The benchmark of 80% (20/24 score) for total ANKLe score was achieved in 63.7%. Similarly, standard of >17/20 for contents and >3/4 for legibility was achieved in 60.34% and 95.5% respectively (Table I).

Only one variable was found to be 100% documented which was patient name as compared to previous 2012 in which 100% record was documented in two variables, patient's name and consultant on call. Whereas the minimal documented variable was social history which is 8 (2.8%) currently and 2 (0.2%) in previous data while some variables like, time when patient seen was 8 (3.4%) in 2012 which showed improvement and its 221(76.2%) now, referral source was 14 (5.9%) and its 177 (61.03%) now, and investigation were documented 20 (8.5%) in 2012 and its improved to be 82 (28.3%) now.

Shown in Table II that out of total set of 236 notes, 218 (92.4%) notes achieved a score of 4 in 2012 while it has been increased in 2014 to 277/290 (95.5%), indicating that quality of handwriting has been improved.

DISCUSSION

Our study showed a drastic improvement in the contents and total ANKLe score by achieving standard in 60.34% and 63.7% respectively which was 6.8% and 26.1% in 2012. It also maintained the beauty of legibility to 95.5% in comparison to 99.1% in 2012. These results are in comparison to other studies result like a study done in 2008 in ENT ward which achieved 75% of standards in legibility, 66% in content and 68% in overall ANKLe score.[6]

"Audit is the process of reviewing the delivery of care to identify deficiencies so that they may be remedied".[10] So the purpose of doing an audit in any hospital has been achieved to a good extent in Dow University Hospital because most of the area which were deficient two years back it improved after 2 years like percentage documentation of referral source, date of birth or hospital number, consultant on call, time seen examination plan of care has been increased shown in Table II. In fact, overall ANKLe score including the main contents as well as legibility has been increased and the main reason of this achievement is the briefing provided to them by faculty members and the hard work of the junior doctors. We said in our previous study that with simple awareness of doctors and highlighting their significance all this essential information can be easily improved.[7]

The limitation of the study was that the minimum documented part in study is again social history (2.8%) and the reason of this repetition was again the same that there wasn't any area of social history in the provided printed proforma in hospital file and this means that a good quality proforma is very necessary.[11]

Record keeping is done in different ways since the beginning of current medicine. The responsibility of improvement of medical records is on the shoulders of every health professional. Actual benefits can be provided to the patients by improving patient outcomes and doctors' performance by organizing and making the record more legible. At this instant the main effort is to improve it into electronic records.[12,13] It is observed that by educating the junior doctors can make the implementation of any printed proforma in hospitals. The doctors must be properly guided and after the initial appointment and the register should be well maintained and monitored.[14,15] We admit that bringing any improvement into medical exercise needs institutional amendment along with changing the way of doctor's practice.

TABLE II: CONTENTS DOCUMENTATION IN SURGICAL CASE NOTES (n = 290)

Variables			No. (%) of Documentation 2012	No. (%) of Documentation 2014
Generic content	Name		236 (100)	290(100)
	Date of birth or hospital number		181 (76.7)	270(93.1)
	Consultant on call		236 (100)	280(96.6)
	Referral source		14 (5.9)	177(61.0)
	Date seen		233 (98.7)	287(99)
	Time seen		8 (3.4)	221(76.2)
	Presenting complaint		213 (90.3)	271(93.4)
	History of presenting complaint		206 (87.3)	247(85.2)
	Past medical history		204 (86.4)	262(90.3)
	Drug and allergy history		200 (84.7)	259(89.31)
	Family history		202 (85.6)	253(87.24)
	Social history		2 (0.8)	8(2.8)
	Examination		191 (80.9	236(81.38)
	Working diagnosis		226 (95.8)	274(94.5)
	Plan of care		120 (50.8)	279(96.2)
	Investigations		20 (8.5)	82(28.3)
	Doctor name		228 (96.6)	285(98.3)
	Doctor signature		225 (95.3)	275(94.8)
Surgery specific content	Informed consent form		223 (94.5)	283(97.6)
	Operative Notes form		218 (92.4)	282(97.2)
	Quality of handwriting Score			
Legibility scoring system	Largely illegible	1	1 (0.4)	0(0)
	Legible with difficulty	2	1 (0.4)	13(4.5)
	Legible	3	16 (6.8)	102(35.2)
	Legible and neat	4	218 (92.4)	175(60.3)

CONCLUSION

Overall, quality of surgical record keeping in DUH has been improved but still not ideal.

The ANKLe score for the assessment of the content as well as legibility of clinical records is one of the good scoring systems. The ANKLe score can be used in hospitals and by giving education and guidance to junior doctors the quality of medical records can be improved.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

FJ: Concept & study design, acquisition of data, drafting the manuscript, final approval of the version to be published

NB & AK: Acquisition, analysis & interpretation of data, drafting the manuscript, final approval of the version to be published

MJ: Drafting the manuscript, final approval of the version to be published

FAM: Critical review, final approval of the version to be published

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CONFLICT OF INTEREST

Authors declared no conflict of interest

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