Did we improve the quality of surgical record keeping? A complete audit at Dow University Hospital according to ANKLe standard

by Nighat Bukhtiyar

FILE	17406-67521-1-RV.DOCX (46.56K)		
TIME SUBMITTED	06-FEB-2017 04:40PM	WORD COUNT	1970
SUBMISSION ID	767140778	CHARACTER COUNT	12024

Original Article

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Original article
Word count: 1813

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Abstract

Objective: To find out the improvement in quality of medical records in the department of surgery at Dow University Hospital, a tertiary care teaching hospital.

Methods: Medical records of all the patients in Dow University Hospital surgery department were reviewed according to modified ANKLe score in first audit which was done from February to April 2012. After sharing the results of the first audit and education the junior doctors re audit was done. The second audit cycle was completed from June 2014 to August 2014 and scored. The modified ANKLe score (total 24) is formed by the combination of, the content (out of 20) and legibility (out of 4) making overall score out of 24. A score of at least 20 (content score 17/20; legibility score 3/4) is considered as acceptable.

Results: Records of 290 patients were evaluated. Overall mean ± standard deviation (SD) of ANKLe score was 19.94 ± 3.36 out of 24, total content 16.48 ± *3.12* out of 20 while legibility was found to be 3.56 ±*0.581* out of 4. This when compared with the results of 2012 audit in which Overall ANKLe score was 18.4± 2.1 and Content and legibility has overall mean scores of 14.4 and 3.9 respectively. The benchmark of 80% is achieved in 63.7 compared to 26.1% in 2012 for total ANKLe score, 60.34 achieved score of ≥17 out of 20 for contents compared to 6.8% in 2012 while legibility has been decreased to 95.5 which was 99.1% in 2012.

Conclusion: Overall, quality of records has been improved. However, legibility score was decreased with time. Efforts should be required to address this important issue as well.

KEY WORDS: Case notes, Quality, ANKLe score, Audit

Word count:273

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 gradually important for daily patient management but it's also very essential for research, audit and medico-legal purposes.[1,2] Proper medical record keeping simplifies to transfers patient's information to other health care professionals to certify patients safety care both now and in the future and decrease medical mistakes.[3,4,5]

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 contact more with the patients and who, are mostly writing 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 International Medical College Hospital affiliated with 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 ANKLe score (Adjusted Note keeping and Legibility)[6], on Royal College guidelines[7] and CRABEL Score (named on its proposed authors: Crawford JR, Beresford TP, Lafferty KL).[8]

In 2012 a case note audit was done in the surgery department of Dow University Hospital affiliated with Dow University of Health Sciences which indicated that some of the elementary case note standards of the guidelines were not being met. The mistakes which were frequently

observed in the files were shown to the junior doctors and they were educated to improve it. This education help 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.

METHODOLOGY

Medical records of all patients admitted in surgery department of surgery at Dow University Hospital from June 2014 to August 2014 were assessed by AK and NB by ANKLE score.

This scoring system was made in 2008 with RCSE guidelines consisting of an initial 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 framework. Additional two points were included, specifically for the surgery department records. To determine the legibility a scoring system (1-4) was also included. The ANKLe score (total 24) is formed by the combination of, the content (out of 20) and legibility (out of 4) to give an overall score out of 24. A score of at least 20 (content score 17/20; legibility score 3/4) is considered as acceptable 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 with the help of SPSS version 17 (SPSS Inc., Chicago, IL) for descriptive statistics. The results were compared with previous results assessed in 2012.

RESULTS

Files of 290 patients were evaluated. Generally mean ± standard deviation (SD) of ANKLe score was 19.94 ± 3.365 owing to maximum score of 24.Mean overall score of total content 16.48 ± *3.12* out of 20 while legibility was found to be 3.56 ±*0.581*. (Table-I).

Only one variable was found to be 100 documented which was patient name as compared to previous 2012 in which two variables, patient's name and consultant on call were documented in 100% of records. 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(61.0) now, and investigation were documented 20 (8.5%) in 2012 and its improved to be 82 (28.3) now.

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

The benchmark of 80% was achieved in 26.1% for total ANKLe score in 2012 and it has been increased to 63.7 , 6.8% of contents achieved score of 17 or more than 17 out of 20 and while legibility has been decresed to 95.5 which was 99.1% in 2012. (Table-I)

Discussion

Genise Patterson said "There is no such thing as perfect or complete …only continuous improvement". So as Dow university Hospital did, it 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 are 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.[9]

"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 all these important information can be easily improved with simple awareness of doctors and highlighting their importance.[7]

The minimum documented part in this 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. Making the record in organized form can give actual benefits to patients by improving patient outcomes and doctors' performance. At this instant the main effort is to improve it into electronic records.[12]. It is observed that by educating the junior doctors can make the implementation of any printed proforma in hospitals. But this should be done while any doctor is appointed at the beginning level by giving him guidance and support and which is then maintained and monitored.[13] We admit that bringing any improvement into medical Exercise needs institutional amendment along with changing the way of doctor's practice.

Conclusion

The ANKLe score for the assessment of the content as well as legibility clinical records is one of the good scoring systems. Overall, quality of records has been improved. 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.

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 *±0.581*	232 (99.1)	277(95.5)
ANKLe	14.4 ± 2.1	19.94 ± 3.365	61 (26.1)	185(63.7)

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

Table-II: Contents documentation in surgical case notes (n = 290).

Generic content	No. (%) of Documentation 2012	No. (%) of Documentation 2014
• 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)
Legibility scoring system			
Quality of handwriting Score			
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)

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