Assessing the Quality of Operation Notes in a Teaching Hospital

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Abstract

Operation notes are very essential written clinical document in the surgical journey of the patient. In spite of being essential, it is left to be written by surgical residents. The Royal College of Surgeons guidance, Good Clinical Practice, with its most recent version in 2014, dictates that surgeons must ensure that all medical records are accurate, comprehensive, legible and contemporaneous.

Aim: This study was aimed to compare the quality of operation notes in the Department of General Surgery against the set standards of The Royal College of Surgeons and also to identify the possible shortcomings with a view to suggest practice improving solutions.

Materials and Methods: This is a retrospective study done in the Department of General Surgery at All India Institute of Medical Sciences, Rishikesh between 1st May 2017 to 31st August 2017. Inclusion criteria were all the patients who had undergone major surgery between the study period and whose operation notes was available in the record.

Results: Total of 173 operation notes meet the inclusion criteria and were included in the study which were compared with 27 core variables of operation notes as per The Royal College of Surgeons standards. None of the operation notes analyzed in this study completed all the 27 standard variables.

Conclusion: Improving the quality of operation notes automatically improves the communication among healthcare workers and helps to prevent errors. We recommend a formal training in writing operation notes to medical graduates and residents to improve the quality of operation notes.

Keywords: Operation Records; Quality of Operation Records

Introduction

Operation notes are an essential aspect of written communication in the surgical journey of a patient. Apart from being a very important clinical document, it is vital in the immediate care and safety of the patient. It also helps to audit patient care and is imperative in legal matters [1].

With the growing need to ensure accurate record keeping, improve the research output and the ever increasing medical litigations, it is necessary to accurately document the operation notes. The Royal College of Surgeons guidance, Good Clinical Practice, with its most recent version in 2014, dictates that surgeons must ensure all medical records are legible, complete and contemporaneous [2]. The aim of this study was to compare the quality of operation notes in the Department of General Surgery against the set standards of The Royal College of Surgeons and also to identify the possible shortcomings with a view to suggest practice improving solutions.

Methods

This is a retrospective study done in the Department of General Surgery at All India Institute of Medical Sciences, Rishikesh between 1st May 2017 to 31st August 2017.

Inclusion Criteria

Medical records of all patients who underwent major surgery between 1st May to 31st August 2017

Exclusion Criteria

Illegible or Missing Medical records of patients who underwent major surgery during the study period.

All patients who underwent major surgery between 1st May 2017 to 31st August 2017 were included in the study. The operation records of all these patients were studied and compared against the standard set by The Royal College of Surgeons, Good Clinical Practice version 2014 (Table1).

	Item
1	Date
2	Time
3	Legible/Illegible
4	Patient identifiers
5	Consultant Incharge
6	Name of operating Surgeon
7	Name of operating Assistant
8	Name of Anaesthetist
9	Name of Scrub nurse
10	Type of Anaesthesia
11	Pre op Diagnosis
12	Post op diagnosis
13	Name of Operation done
14	Patient position
15	Incision/Approach
16	Per op Findings described
17	Any problems/complications
18	Additional procedures performed and why
19	Details of Tissue removed/added/altered
20	Any Prosthesis used
21	Serial no of prostheses
22	Serial no of prostheses recorded elsewhere
23	Details of closure technique
24	Postop instructions
25	Antibiotics
26	VTE prophylaxis
27	Signature with name and designation

Table 1: Checklist of variables according to RCS Eng.

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Legibility was evaluated by two different evaluators and was considered legible if the complete operation notes were readable by both evaluators. Data was analyzed as simple percentages.

Results

The total number of surgeries done in the department of General Surgery in the study period was 195. Out of these 161(82.5%) were elective and 34(17.4%) were emergency surgeries. The operation notes were recorded in 173(88.7%) and were absent in 22(11.3%) surgeries, which will be excluded in further tabulation of results. The type of surgery, whether elective or emergency, were recorded in all the operation notes analyzed. All the operation notes were hand written as our institute at present has no provision of computerized operation notes. Table 2 shows the number and percentage of the presence and absence of the 27 core variables required in operation notes as per The Royal College of Surgeons standards.

S.no	Variable	Recorded N (%)	Not recorded N (%)
1	Date	44 (25.4%)	
2	Time	18 (10.4%)	155 (89.5%)
3	Legible	151 (87.2%)	22 (12.7%)
4	Patient identifiers	158 (91.3%)	15 (8.6%)
5	Consultant Incharge	164 (94.7%)	09 (5.2%)
6	Name of operating Surgeon	164 (94.7%)	09 (5.2%)
7	Name of operating Assistant	149 (86.1%)	24 (13.8%)
8	Name of Anaesthetist	151 (87.2%)	22 (12.7%)
9	Name of Scrub nurse	67 (38.7%)	106 (61.2%)
10	Type of Anaesthesia	128 (73.9%)	55 (31.7%)
11	Pre op Diagnosis	157 (90.7%)	16 (10.1%)
12	Post op diagnosis	157 (90.7%)	16 (10.1%)
13	Name of Operation done	167 (96.5%)	06 (3.4%)
14	Patient position	87 (50.2%)	86 (49.7%)
15	Incision/Approach	138 (79.7%)	35 (20.2%)
16	Per op Findings described	126 (72.8%)	47 (27.1%)
17	Any problems/complications	19 (mentioned in all cases where problems ocuured)	------------
18	Additional procedures performed and why	16 (mentioned in all where additional procedures done)	--------------
19	Details of Tissue removed/added/altered	117 (67.6%)	56 (32.3%)
20	Any Prosthesis used	72 (mentioned in all cases where used)	-----------------
21	Serial no of prostheses	72 (mentioned in all cases where used)	-----------------
22	Serial no of prostheses recorded elsewhere	72 (mentioned in all cases where used)	-----------------
23	Details of closure technique	110 (63.5%)	63 (36.4%)
24	Postop instructions	173 (100%)	
25	Antibiotics	145 (83.8%)	28 (16.1%)
26	VTE prophylaxis	0	173 (100%)
27	Signature with name and designation	0	173 (100%)

Table 2: Details of the 27 variables in operation notes.

None of the operation notes analyzed in this study completed all the 27 standard variables. In 74.5% of operation notes the date and in 89.5% the time of surgery was missing. Scrub nurse has a pivotal role in any surgical procedure. The name of the scrub nurse was missing in 61.2% of the records. As all the notes were handwritten, legibility was a major variable affecting the quality of operation notes, 12.7% of the operation notes were illegible. In 50% of records the position of the patient was not mentioned. Describing the per operative findings is an imperative part of any operation note, it was missing in

27% of the records evaluated. Type of anesthesia was also missing in 31.7%.

Some of the variables showed a noteworthy completion (>90%) like patient identifiers (91.3%), name of consultant In charge (94.7%), name of operating surgeon (94.7%), name of the operation done (96.5%).

Out of the 173 operation notes analyzed, 19 patients had a complication during surgery and in 16 patients an additional procedure had to be done, all these were clearly mentioned in the operation notes. As the surgeons do not have a habit of recording negative factors like "no additional procedures or no complications during surgery", omissions occurred in recording these variables. 72 out of 173 surgeries had the use of a prosthesis, the details of which were mentioned in the operation record. None of the operation notes mentioned the details of thromboprophylaxis. Signature with name and designation, which could identify the signatory, was not present in any of the operation notes studied.

Discussion

An operation note is pertinent to establish a continuity of care between the operating team and other healthcare workers. In the present time of rising standards of patient care and increasing litigation against doctors, the importance of appropriately written operation notes cannot be over emphasized. The appalling quality of operation notes in our study is in contrast to similar studies done in the developed world [2,3]. A study conducted by Hamza A, et al. [4] revealed that the date and time of surgery were noted in 98% and 81% respectively. However, in or study, the date and time were documented in just 25.4% and 10.4% of the operation notes respectively. Their study also showed that patient identifiers were noted in 28-33% of notes, however we found 92% documentation of patient identifiers in our study. Mentioning patient identifiers in the operation notes is important for patient safety.

In another study done by Baigrie RJ, et al. [5] it was found that post op instructions were absent in approximately 75% of operation notes and the details of prostheses was rarely mentioned. The same study also revealed that 70% of their operation notes were illegible. Post-operative instructions were mentioned in all the operation notes we analyzed in our study. Also the details of prostheses were recorded in all the surgeries where they were used. Despite the fact that all the operation notes in our study were hand written, 87.2% of them

were legible. Illegible operation notes are difficult to understand by other healthcare workers and can compromise the safety of the patient. Our study revealed that thromboprophylaxis was not recorded in any of the operation notes. If thromboprophylaxis is not recorded in an operation note, any delay in its treatment may contribute to the development of thrombosis and possible embolism. In a study done by Blackburn and Seven Audit and Research Collaborative in Orthopedics (SARCO), thromboprophylaxis was recorded in 50.6% of operation notes studied [6]. In our study none of the operation notes had a signature which could identify the signatory. In the study done by SARCO, it was present in 81.9% 0f operation notes analyzed [6]. Several factors might explain the substandard quality of operation notes in our study. Lack of formal training on proper operation notes writing to medical graduates and residents. Also in a low resource setting like ours documentation of operation notes is a secondary consideration. There are many studies that have found operation notes to be of substandard quality [7-12]. But the same studies have also found that creating awareness about the low quality of operation notes along with the provision of prompts and proformas, improve the quality of operation note writing. Studies have also found that typed or computerized operation notes are better than hand written notes [13-15].

Conclusions

Improving the quality of operation notes automatically improves the communication among healthcare workers and helps to prevent errors. We recommend use of template based operation notes which are typed rather than hand written. Also formal training in writing operation notes to medical graduates and residents will play a very important role in improving the quality of such an important medical document.

Declarations

- Funding: Nil
- Conflict of interest: None declared
- Ethical approval: Yes

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