Original Research Article

A prospective closed loop audit on the quality of the operative notes in a general surgical unit in a quaternary care centre

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ABSTRACT

Background: Proper documentation of the surgery done in the form of operative notes is a very important aspect of surgical practice. The aim of this clinical audit was to identify the existing standard of the operative notes written in a general surgical unit in a quaternary care hospital; and to compare it with the recommendations given by Royal College of Surgeons, England (in Good Surgical Practice, 2014) and if needed, to improve the standard of practice.
Methods: In the first loop of this prospective audit, 75 consecutive operative notes which were written were compared with the RCS guidelines and the areas which had missing data were identified. These areas were informed to the residents, who are primarily involved in the documentation of the operative notes. The second loop of the audit was conducted after a gap of 4 months involving 75 consecutive operative notes again.
Results: The areas which were initially deficient were better documented when analysed in the second loop.
Conclusions: Documentation of operative notes does not always comply with the set guidelines as highlighted in the first loop of our audit. But by employing a clinical audit it is possible to identify the existing deficiencies and thereby improving the standards of practice. Also, operative note writing should be taught as part of surgical training. Definitions should be clearly provided, and specific guidelines should be established to improve the quality of the operative notes and their use to improve patient safety.

Keywords: Clinical audit, Operative notes documentation, General surgical unit

INTRODUCTION

Medical records are important in a clinical practice for good clinical care and audit of the services provided. Among these, documentation of operative notes is fundamental in a surgical practice. Accurate and detailed documentation of surgical operation notes is significant for post-operative care, research and academic purposes, and medico-legal purposes.[1,2] With the increasing litigations seen in medical practice, accurate documentation is critical for medico-legal clarity.[2,3] For these purposes, various medical councils across the globe have provided many guidelines for a proper documentation for operative notes.[4] The main aim of this clinical audit was to assess the quality of operative notes in a general surgical unit at Rajiv Gandhi Government General Hospital, Chennai, using the Royal College of Surgeons, England (RCSE) guidelines as a standard.

METHODS

A prospective clinical audit on documentation of the quality of the operative notes was done in a general surgical unit in Rajiv Gandhi Government General Hospital, Chennai. The audit was done keeping the guidelines provided by the RCSE (in good surgical

practice) as the standard. The first cycle of the audit was conducted in November 2018 and operative notes of 75 cases were consecutively assessed by the authors using the RCSE good surgical practice guidelines. The variables analysed were:

1) Date and time
2) Elective/emergency procedure
3) Names of the operating surgeon and assistant
4) Name of the theatre anaesthetist
5) Operative procedure carried out
6) Incision
7) Operative diagnosis
8) Operative findings
9) Any problems/complications
10) Any extra procedure performed and the reason why it was performed
11) Details of tissue removed, added or altered
12) Details of closure technique
13) Anticipated blood loss
14) Detailed postoperative care instructions
15) Signature

A checklist was formulated for data collection to ensure that all the components of the data were properly collected. Each component was checked as 'present or not indicated' or 'absent or not indicated' and the analysis at the end of each loop of the audit was presented as a proportion or frequency of the total number of operative notes. Following this, the analysis of the data from the first loop was done and the areas which were deficient were identified. The surgeons in the unit were then made aware about this analysis. They were re-emphasised about the guidelines provided by RCSE and also about the importance of proper documentation of the operative notes. Following this, the second loop of the audit was conducted in April 2019. Again, the operative notes of 75 cases were assessed. A significant improvement in the quality of the operative notes could be appreciated at the end of the second loop.

RESULTS

The analysis at the end of the first loop of the audit showed that among all the documented variables, the blood loss (2.66%) and the reason why any extra was done (if any extra procedure was done) were the least documented. The post-operative instructions were the best documented (100%).

In the second loop of the audit, it was found that excluding blood loss (86.66%), all other components had over 96% of documentation, with many components having 100% in documentation.

In our audit we found that there were extra complications which were encountered in 20 cases in the first loop but only 6 of these were documented (giving 33.33%). Subsequently in the second loop 22 cases had extra complications and 21 of these were documented

(95.45%). Similarly, in the first loop of the audit, it was found that extra procedures were done in 23 cases but only 10 of these were documented (95.45%). In the second loop, extra procedures were done in 24 cases and 23 of these were documented (95.83%).

Table 1: Percentage and number of operative notes with inclusion of specific information.

S. no.	Parameter	Operative notes with information inclusion	
		First loop N (%)	**Second loop** N (%)
1	Date	72 (96)	75 (100)
	Time	50 (66.66)	72 (96)
2	Elective or emergency	15 (20)	72 (96)
3	Surgeon	72 (96)	75 (100)
	Assistants	72 (96)	75 (100)
4	Anaesthetist	60 (80)	72 (96)
5	Procedure done	72 (96)	75 (100)
6	Incision	64 (85.33)	75 (100)
7	Operative diagnosis	68 (90.66)	75 (100)
8	Operative findings	59 (78.66)	72 (96)
9	Extra complications	6 out of 20 (30)	21 out of 22 (95.45)
10	Extra procedure done	10 of 23 (43.47)	23 of 24 (95.83)
	Why done	0	24 (100)
11	Details of tissue removed or altered	47 (62.66)	72 (96)
12	Closure details	74 (98.66)	75 (100)
13	Blood loss	2 (2.66)	65 (86.66)
14	Post op instructions	75 (100)	75 (100)
15	Signature	63 (84)	75 (100)

DISCUSSION

The quality of operative notes is of paramount importance to understand what has happened inside the operation theatre. They form an important part of patients case notes and hence the must be complete and legible.[5] Several previous studies have assessed the quality of operative notes, and all these studies, in their initial assessment have found that neither RCSE guidelines nor the respective sub-speciality association guidelines were fully followed properly.[5-7] This is similar to what we found after our initial audit and served as the reason for implementing a change in our practice.

There is enough evidence to say that electronic documentation of operative notes (either printed and

placed in the patients' case notes, and/or stored in an operative note database) can be considered as gold standard and that, it is better than handwritten notes.[5] However, for many hospitals, electronic documentation of operative notes and the option of a computer based operative notes system is still unfeasible. Various factors like cost, staff training, on-going maintenance can limit the usage of electronic documentation to only certain hospitals.

Although there is no standard method which can help in producing a flawless documentation, several previous analyses have described methods aimed at improving the quality of paper based operative notes. They include an aide-memoire sheet placed on the operation sheet, a poster in theatre, surgeon education and an operative checklist, or an operative note pro forma sheet; all have been shown to be effective.[5-8]

In our surgical unit after the first loop of the audit, the surgeons were made aware of the existing standards of practice and the deficiencies found in the collected data. They were educated about the standard RCSE guidelines and the areas which could be improved were also made apparent to them. This led to an increase in the standard of the documentation of operative notes, as observed in the second loop of the audit. The main reason why many components were not documented initially was the lack of awareness about the various components which have to be documented in the operative notes. When this lacuna was addressed, we could observe a good improvement in the quality of documentations. Many components improved to a 100% in the re-audit indicating that the awareness created by clinical audits can make a marked improvement in the surgical practice.

CONCLUSION

An awareness and improvement in the knowledge about the key areas in documentation of the operative notes could be seen by the end of this clinical audit.

Regular closed-loop audits should be performed to further improve the standard and to ensure the maintenance of the existing standard of the operative notes.

Teaching sessions must be conducted on how to write standard operative records and this must be included in the curriculum of the training programs.

REFERENCES

1. Nyamulani N, Mulwafu W. The quality of handwritten operative notes in a surgical unit at Queen Elizabeth Central Hospital (QECH), Malawi: A prospective completed audit loop study. Malawi Medical J. 2018;30(2):86.
2. Rogers A, Bunting M, Atherstone A. The quality of operative notes at a general surgery unit. S Afr J 2008;98:726-8.
3. Hamza AA, Abdalrahim HM, Idris SA, Ahmed OM. Evaluating the operative notes of patients undergoing surgery at Omdurman teaching hospital, Sudan. Sch J App Med Sci. 2013;1(6):668-72.
4. Good Surgical Practice 2014. Royal College of Surgeons (England) Available at: http://www. rcseng.ac.uk/publications/docs/good-surgical-practice. Accessed on 3 November 2019.
5. Payne K, Jones K, Dickenson A. Improving the Standard of Operative Notes within an Oral and Maxillofacial Surgery Department, using an Operative Note Proforma. J Maxillofacial Oral Surg. 2011;10(3):203-8.
6. Bateman ND, Carney AS, Gibbin KP. An audit of the quality of notes in an otolaryngology unit. J Roy Coll Surg Edin. 1999;44:94-5.
7. Din R, Jenna D, Muddu BN. The use of an aide-memoire to improve the quality of operation notes in an orthopedic unit. Ann R Coll Surg Eng. 2001;83:319-20.
8. Hussainy HA, Ali F, Jones S, Mcgregor-Riley J, Sukumar S. Improving the standard of operation notes in orthopaedic and trauma surgery: the value of a proforma. Injury. 2004;35(11):1102-6.