An analysis of operative notes in major surgeries at a teaching hospital

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Abstract
Introduction

Operative (OP) note is an important document, which should be recorded immediately after surgery. It should be accurate and in detail, for management of the patient and for legal purposes. In our contest, it's written by surgical trainees and supervised by senior surgeons, which is an important part of surgical training.

Materials and methods
We have analysed 215 major surgical OP notes including elective and emergency surgeries in general surgical units, Teaching Hospital Jaffna, from 1st of July 2016 to 31st of December 2016.

Results
All surgeries were performed under general anaesthesia and 83.3 % (n=179) performed by consultants. 90% of OP notes didn't contain time of the surgery, but date of the surgery was mentioned in 82.1% (n=195). Details of surgical team were mentioned in 98.2%, but details of anaesthetic team mentioned in 8.3 %(n=18). Operative diagnosis was missed in 48.8% (n=110) of OP notes. Details of closure technique was not mentioned in 15.5% and none of the notes contained detail of blood loss. Monitoring vital parameters, fluid management and pain management were mentioned 78%, 50%, and 89.9% respectively. Only 6.5% of OP notes were signed by the person who has written.
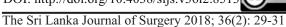
Conclusion and recommendation
Operative notes were incomplete in most cases. Several areas were identified for further improvement. Pre-designed surgery specific post-operative forms can be used in operating theatres to improve documentation of op notes.

Introduction

Operative (OP) note is an important document, which should be recorded immediately after surgery. Accurate and detailed operative notes are important in all surgical specialities, not only for patient's safety but also to provide information for research, audit, and medico legal purposes (1).

Traditionally, operative notes have been written by one of the junior members of the scrubbed team, often supervised by a senior surgeon, which considered as an essential part of surgical training. The consultant must make sure that trainees are capable of writing good and acceptable operation notes.

De Zoysa, SK De Silva et al conducted a survey in National hospital Colombo and concluded that considerable bed head tickets (BHT) were lacking adequate descriptions of components such as intraoperative findings, tissue added or removed and closure (2). These inadequacies have been noted in other regions of the world as well (3) and leads to poor post-operative patient management. Studies have shown considerable improvement in the quality of operation notes after the introduction of aide memoires, preformats and electronic templates (4).

There were no published local or national studies available to assess the documentation of surgical operative notes and to compare with the standards set by the Royal College of Surgeons (5). The aim of this retrospective study was to review operative notes in general surgical units in Teaching hospital Jaffna to determine completeness.

Materials and methods

This study was a hospital based retrospective study, conducted in all general surgical units in Teaching hospital Jaffna. The Data were obtained from BHTs for a 6 month period (1st of July 2016 to 30th of December 2016). Ethical clearance was obtained from Ethical review committee, Faculty of Medicine, University of Jaffna. All elective and emergency major surgeries according to BUPA criteria were included in this study. We have used systematic sampling method with sampling interval of one.

Two hundred and fifteen operative notes were compared with the standards published by Royal College of surgeons in Good

surgical practice 2014 (Figure 1).

Our data extraction sheet contained two parts, which were details of surgery and documentation. These data were analysed by SPSS version 21.

Essential elements to be included in the operative notes issued by Royal College of Surgeons – Good surgical practise 2014

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. Identification of any prosthesis used, including the serial numbers of prostheses
13. and other implanted materials
14. Details of closure technique
15. Anticipated blood loss
16. Detailed postoperative care instructions
17. Signature

Figure 1. Essential elements of Operative records

Results

All surgeries were done under general anaesthesia.The number of surgeries performed by each category were documented as follows: Consultant 179 (83.3%), senior registrar 8 (3.5%) and registrar 28 (13.1%). But the person documenting these operative details were not identified in these operative notes.

Date of the surgery was mentioned in 82 %(n=138) of operative notes but only 9% (n=15) documented the time. Whether the operation was elective or emergency was mentioned in 5.3% (n=12). Name of the surgeon and assistant were noted in majority of the operative notes, but the name of the anaesthetist was mentioned in 8.3 % (n=18). Operative procedures and post-operative instructions were mentioned as shown in Figure 2 and 3 respectively.

Estimated blood loss was mentioned only in 2 operative notes out of 215. Only 7.1 %(n=15) were signed by the operating surgeon or assistant. .

Discussion

Operative notes are very important document after surgery and it should be written in detail for post-operative management purposes as well as legal purposes. Inadequacy has been noted in many centres including developed countries (1,3,6) which leads to poor post-operative patient
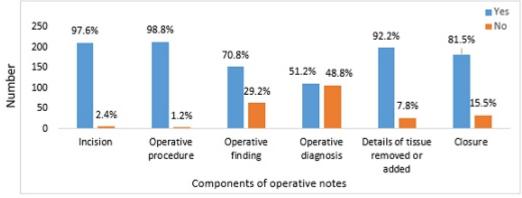

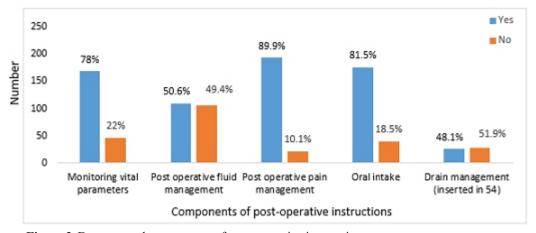**Figure 2.** Documented components of operative procedure

Figure 3. Documented components of post-operative instructions

management and follow up. Many centres have implemented different methods to overcome this issue (4,7).

In Sri Lanka most of the operative notes are hand written, which are shown to be deficient in some components and can lead to misinterpretations by other health care personal (8). Except for mentioning emergency or elective nature, name of the anesthetist , blood loss and signature of the note writer, other components were present in more than 50% of the operative notes.Mentioning emergency or elective is irrelevant in most of the major surgeries except exploratory laparotomies. Name of the anaesthetist is usually documented in anaesthetic notes. Blood loss is an important component which needs to be mentioned in OP notes for post-operative management plans. Signature by the consultant at the bottom of op note will make sure the proper information regarding surgery and post-operative management is conveyed to the BHT, which was missing in most. Our study is comparable to findings of other studies done in Asian and Europe countries, though there were some components missing.

There were some limitations in our study. We were unable to assess the quality of the details documented in each component, which needs more defined systems. Some European countries have implemented electronic format for documenting operative notes which reduced variability between different operation reports for the same procedure and increase their content in line with Royal College of surgeons of England recommend-ations. Most hospitals in the current local setting do not have computerised patient database systems making it difficult to implement electronic based operative note systems..

Conclusions and recommendation

Documenting operative notes need to improve further in some aspects. We can implement surgery specific pre-designed post-operative forms to be filled after the operations, which could be attached to the BHTs. There are some drawbacks such as, these pre- designed forms are surgery specific but not patient specific and also these can be lost easily from BHTs. After the implementation of such formats this study need to be re-audited to see improvement and sustainability.

References

1. A K Ghosh, An audit of orthopedic operation notes: what are we missing? Clinical Audit 2010:2 37–40. doi.org/10.2147/CA.S9665

2. De Zoysa M.I.M, De zilva S.K.L.A, An audit on operative note writing, Annual Research Symposium Sept 2012, University of Colombo, Sri Lanka.

3. Hira Ali, Zubia Masood, Bushra Shirazi, Assessing the Quality of Operative Notes, Pak J Med Dent 2015; 4(1):54-59

4. Andrew W Barritt,Laura clark, Adam MM Cohen, Improving the quality of procedure-specific operation reports in orthopaedic surgery, Ann R Coll Surg Engl 2010; 92: 159–162. doi:10.1308/003588410X12518836439245

5. The Royal College of Surgeons of England. Good Surgical Practice. London, UK: RCSENG – Professional Standards and Regulation; 2014

6. Aamir A Hamza, Hulla M Abdalrahim, Saadeldin A Idris, Osama M Ahmed. Evaluating the Operative Notes of Patients Undergoing Surgery at Omdurman Teaching Hospital, Sudan. Sch. J. App. Med. Sci., 2013; 1(6):668-672

7. Kanthan Theivendran, Sami Hassan, David I Clark, Improving the quality of operative notes by implementing a new electronic template for upper limb surgery at the Royal Derby Hospital, BMJ Quality Improvement Reports 2016. doi:10.1136/bmjquality.u208727.w3498

8. Lefter LP, Walker SR, Dewhurst F, Turner RWL. An audit of operative notes: facts and ways to improve. ANZ J Surg 2008; 78: 800-802. doi: 10.1111/j.1445-2197.2008.04654.x.