AUDIT ARTICLE

An audit of operative notes in general surgery at Pakistan Institute of Medical Sciences (P.I.M.S.), Pakistan. Do we follow the Royal College of Surgeons (England) guidelines?

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Abstract

Objectives: To evaluate operative notes in the light of a standard guideline, and to establish a new more precise proforma for future documentation.

Method: The retrospective study was conducted at the Pakistan Institute of Medical Sciences, Islamabad, Pakistan, and comprised audit of consecutive General Surgery elective operation theatre notes from October 2015 to November 2015 according to Royal College of Surgeons (England) guidelines 2014. After the audit, all the doctors were educated about the completion of operation notes and an experimental operation notes template was designed and implemented. Re-audit was done.

Results: A total of 60 operation notes were audited, and of the 20 parameters in the checklist, only 2(10%) were filled up at all times; surgeon's name and procedure. In the remaining 18(90%) parameters, the value ranged from 0% to 98.3%. Re-audit showed 100% note-taking across all the 20 parameters.

Conclusion: The new proforma for operative notes allowed no room for error or missed entries.

Keywords: Operative notes, Audit, RCS guidelines. (JPMA 70: 491; 2020).

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Introduction

The Royal College of Surgeons (England) emphasises that surgeons "must ensure that accurate, comprehensive, legible and contemporaneous records are maintained of all their interactions with patients".[1] Operative notes are an account of details of events occurring from patient's entry into the operating theatre (OT) to their exit after surgery.[2] These serve as a reference tool for future references whenever healthcare professionals confront patients with surgical history. Apart from being a record of history, these notes might need to be reviewed in case of litigation issues.[2,3] Moreover, OT notes are an important part of medical records that prove to be a valuable tool for researchers.

Many a study has been conducted all around the world regarding accuracy, completeness, validity, legibility, reliability and correctness of medical/OT notes. Results showed poor quality of medical record-keeping.[2,4] The Royal College of Surgeons (England) established guidelines regarding documentation of operative notes in 2008.[1]

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The current study was planned to determine whether the guidelines were being followed at our institution, and what could be done to improve the quality of note-keeping.

Materials and Methods

The retrospective study was conducted at the Pakistan Institute of Medical Sciences (PIMS), Islamabad, Pakistan, and comprised audit of consecutive General Surgery elective OT notes from October 2015 to November 2015 according to the Royal College of Surgeons (England) guidelines 2014. Data included surgeries for upper gastrointestinal tract (GIT), colorectal, breast and endocrine, vascular and hernia. The specific criteria on which the notes were judged was based on the Good Surgical Practice guidelines 2014.[1] Data was collected on a generated checklist (Appendix-A).

The results were presented in a departmental meeting in the General Surgery ward. Doctors were educated about the guidelines1 and the details to be included in the operative notes. A new detailed OT notes proforma, including 20 important categories (Appendix-B) was established based on the guidelines[1] and implemented

Appendix-A: Operative Notes Checklist

Sr. No.: _____ Date: _____ PCN: _____

Date and time	
Elective/emergency procedure	
Names of the operating surgeon and assistant	
Name of the theatre anaesthetist	
Operative procedure carried out	
Incision	
Operative diagnosis	
Operative findings	
Any problems/complications	
Any extra procedure performed and the reason why it was performed	
Details of tissue removed, added or altered	
Identification of any prosthesis used, including the serial numbers of prostheses and other implanted materials	
Details of closure technique	
Anticipated blood loss	
Antibiotic prophylaxis (where applicable)	
DVT prophylaxis (where applicable)	
Detailed postoperative care instructions	
Signature	

Appendix-B: Operation Notes.

Date of surgery		Name	
Age	Sex	PCN	
Bed #	Ward		
Date of admission		Department	Consultant

Pre-Operative Diagnosis:		Surgeon:			
Per-Operative Diagnosis:		Assistant:			
Procedure:		Anaesthetist:	Scrub Nurse:		
Blood Loss:		Anaesthesia:	GA	SA	LA
Start Time:	Finish Time:	Elective/Emergency Procedure:			
Antibiotic Prophylaxis:		DVT Prophylaxis:			

Position:		
Incision:		
Findings:		
Steps:		
Complications:		
Details of Extra Procedure Performed:		
Sample/Tissue Removed:		
Mesh/Graft/Prosthesis/Staples Used:		
Closure Technique:		
Post-Operative Orders:	**Vital Monitoring**	**NPO Duration**
Antibiotic 1.	2.	3.
Analgesia 1.	2.	3.
Fluids 1.	2.	3

Table: Percentage of data entry in operative notes comparing audit and re-audit.

Variable	Percentage of Data Entry	
	Audit	Re-Audit
Date	96.7	100
Time	3.3	100
Elective/ER procedure	3.3	100
Surgeon's Name	100	100
Anaesthetist's Name	88.3	100
Procedure	100	100
Incision	93.3	100
Operative Diagnosis	98.3	100
Operative findings	83.3	100
Complications	5.0	100
Extra Procedure	0	100
Tissue removed, added or altered	1.7	100
Prosthesis	3.3	100
Patient Control Number (PCN)	30	100
Closure Details	13.3	100
Anticipated Blood Loss	3.3	100
Antibiotic Prophylaxis	0	100
DVT Prophylaxis	0	100
Post-operative Instructions	98.3	100
Signature	93.3	100

DVT: Deep vein thrombosis

for documentation.

Re-audit was done in December 2015, whereby operative notes of 60 consecutive patients were examined. A similar data collection checklist was used. Statistical analysis, including paired t-test, was performed.

Results

A total of 60 operation notes were audited, and of the 20 parameters in the checklist, only 2(10%) were filled up at all times; surgeon's name and procedure. In the remaining 18(90%) parameters, the value ranged from 3.3% to 98.3% (Table). The difference between audit and reaudit was statistically significant ($p<0.001$) (Figure).

Discussion

OT notes are an important part of clinical course, and good-quality, accurate, precise and well-structured notes may prove helpful in several situations, for example, future reference by a physician,[2] medico-legal[2,3] or research purposes. The Royal College of Surgeons (England) established guidelines for a complete OT notes proforma in the Good Surgical Practice guidelines 2014.[1] Strict adherence to a standard set of guidelines improves medical record-keeping and reduces chances of error.

Literature lists a number of studies from General Surgery as well as sub-specialties, showing poor quality of

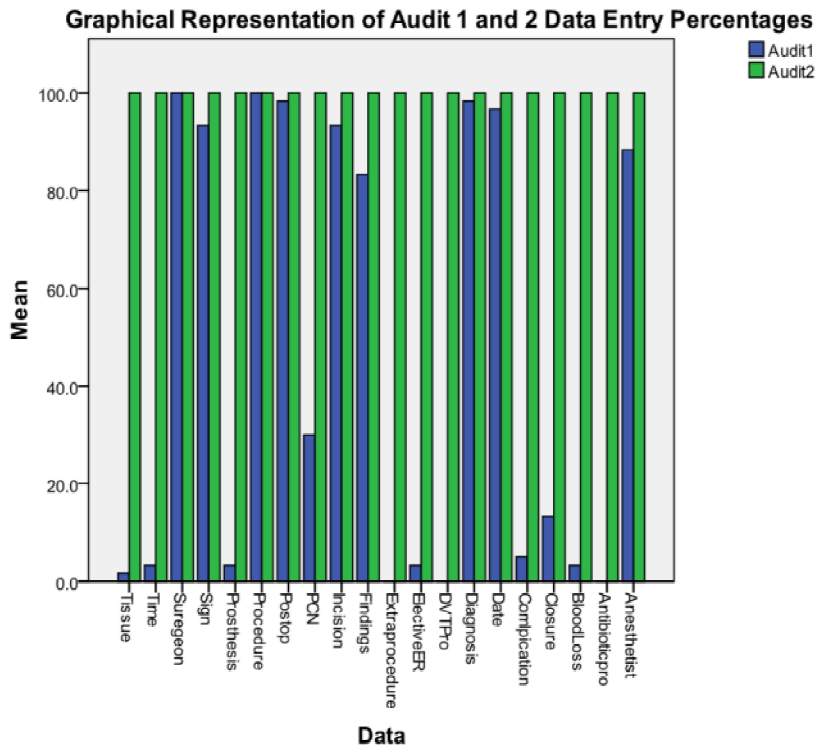

Figure: Entry percentages during Audit and Re-audit.

medical record-keeping including OT notes.[2,5,6] The reasons for the substandard notes could be lack of time, workload or simple negligence. To overcome all these problems, a template for OT note documentation should be normal practice. As concluded previously, an electronic operative note whether printed or recorded to a database, is the gold standard for operative note-keeping.[3,7-10] A template would remind the record-keeper to enter all the important data in the notes as prompted.

A computer-based electronic medical record-keeping is costly, time-consuming and requires more staff as well as appropriate training.[2,11] While paper-based documentation can easily be applied to any institution without the need for major monetary investment or computer-based training.

At PIMS, such a template was widely being used by all surgical departments, including sub-specialties, for operative notes. However, the proforma lacked in a few areas which were pointed out after this audit and a new, precise proforma was established including all main points of data-collection based on the 2014 guidelines[1] and it was found to be 100% effective after the re-audit. The proforma has been submitted to the hospital's review board for further suggestions/approval for hospital-wide application.

The only limitation of the proforma was the space available for complete documentation of longer procedures, complications or special post-operative instructions. This could easily be overcome by using an additional proforma for further documentation.

Conclusion

Accuracy and legibility of operative notes are key aspects of patients' medical record-keeping which provides valuable information for all future references. Operative notes at the study site were not in accordance with relevant guidelines , and the new proforma was found to be just about perfect, with no room for error or missed entries.

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