Audit of Operative Notes and Documentation in a Surgical Unit of Tertiary Health Care Centre Karachi

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ABSTRACT

OBJECTIVE: To assess the quality of operative notes compared to the international standard, recognize flaws and missed information.

METHODOLOGY: This retrospective clinical audit was conducted at Surgical Unit III, Dr Ruth Pfau Civil Hospital, Karachi. Eighty-seven consecutive operation notes were audited from July to September 2024. A checklist was utilized to assess 20 different parameters. The parameters were developed following the 2014 guidelines for Good Surgical Practice set forth by the Royal College of Surgeons of England. The inclusion criteria encompassed all General Surgery patients admitted for elective and emergency surgeries with no exclusions based on the type of procedure performed. The frequency of each parameter was determined. Data analysis was performed using SPSS ver. 22.

RESULTS: Key details, including patient identification, date and time of the procedure, surgeon's name, operative procedure title, and overall legibility, were consistently documented across all records. Nature of procedure, antibiotics prophylaxis and deep venous thrombosis (DVT) prophylaxis were not recorded in any of the operative documents.

CONCLUSION: This audit highlights deficiencies in operative note documentation, particularly regarding DVT prophylaxis, antibiotic prophylaxis, and blood loss recording. Adherence to standards recommended by the Royal College of Surgeons of England and use of standardized documentation templates may improve surgical record quality.

KEYWORDS: Clinical audit, Royal College of Surgeons guidelines, Operative notes, Quality improvement, Documentation.

INTRODUCTION

Clinical audit is a structured process designed to improve patient care and outcomes by systematically assessing healthcare practices against established standards. It entails analyzing current procedures, identifying opportunities for enhancement, and implementing evidence-based changes to maintain and elevate the quality of care delivered[1]. Effective clinical documentation improves the optimization of patient care. Medical notes are crucial for effective communication among healthcare providers and play a significant role in keeping patients and their families informed[2].

In 2014, the Royal College of Surgeons of England published the Good Surgical Practice guidelines, which define key principles and best practices for the meticulous and precise documentation of operative records[1].

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This audit aimed to evaluate the quality of operative notes in relation to international standards, identify deficiencies and missing information, and provide recommendations for enhancing the quality of operative notes within the General Surgery department at tertiary care hospitals in Karachi.

METHODOLOGY

This retrospective clinical audit was conducted at the Surgical Department Unit III of Dr. Ruth K. M. Pfau Civil Hospital. Eighty-seven consecutive operation notes were audited from July to September 2024. A structured checklist was utilized to assess 20 parameters, which were derived from the 2014 Good Surgical Practice guidelines established by the Royal College of Surgeons of England[1].

All General Surgery patients requiring surgical procedures in both emergency and elective settings under general or spinal anesthesia were included. No exclusion criteria were applied.

Study protocol:

A single reviewer carefully reviewed all operation notes, collecting feedback on their legibility from both nursing staff and doctors. The data collected was scrutinized and presented in the ward meeting. A session was conducted among residents and consultant surgeons. Present, absent, or not applicable terms were used in proforma. The checklist evaluated key parameters including patient information, procedure date and time, classification of

surgery (elective or emergency), names of the operating surgeon and assistant, anesthetist, description of the surgical procedure performed, type of incision, operative diagnosis and findings, complications or issues encountered, additional procedures undertaken along with the rationale, details regarding tissues excised, modified, or augmented, the closure technique utilized, estimated blood loss, administration of antibiotic prophylaxis (if applicable), implementation of deep vein thrombosis (DVT) prophylaxis (if relevant), detailed post-operative care instructions, along with the inclusion of a signature and ensuring the legibility of the recorded operative notes. Data analysis was performed using SPSS Version 22.

RESULTS

Eighty-seven operative notes were analyzed retrospectively against the Royal College of Surgeons (RCS) guidelines for the operative notes and documentation. Twenty variables were assessed, and it was found that patient's identification, date of procedure, time of procedure, name of surgeon, name of theatre anesthetist, name of operative procedure, and legibility were recorded in 100% (n=87) of operative notes, which makes them the most documented parameters.

Whereas the type of surgery, whether elective/ emergency procedure, antibiotics prophylaxis and DVT prophylaxis were not recorded in any of the operative notes (0% (n=0).

Type of incision and operative diagnosis were recorded in 98.85% (n=86).

Operative diagnosis and details of closure technique were recorded in 96.55% (n=84).

Others included details of tissue removed 91.95% (n=80), name of assistant 82.75% (n=72), signature 71.26% (n=62), Complications encountered and anticipated blood loss 31.03% (n=27), extra procedure performed with reasons 18.39% (n=16). **(Table I)**

Table I: The frequency of documentation for the parameters outlined in the guidelines issued by the Royal College of Surgeons

Parameter assessed	Frequency of documentation(n)
Elective/ emergency procedure	0 % (0)
Patient's identification	100 % (87)
Date of procedure	100 % (87)
Time of procedure	100 % (87)
Name of surgeon	100 % (87)
Name of assistant	82.75 % (72)
Name of theatre anesthetist	100 % (87)
Name of operative procedure	100 % (87)
Operative diagnosis	96.55 % (84)
Type of Incision	98.85 % (86)
Operative findings	98.85 % (86)
Complications encountered	31.03 %(27)
Extra procedure performed with reasons	18.39 % (16)
Details of tissue removed, added or altered	91.95 %(80)
Details of the closure technique	96.55 % (84)
Anticipated blood loss	31.03 % (27)
Antibiotics prophylaxis	0 % (0)
DVT prophylaxis	0% (0)
Signature	71.26 % (62)
Legibility	100 % (87)

DVT: Deep vein thrombosis

DISCUSSION

Accurate patient documentation is essential in the medical profession, particularly in cases related to malpractice. Operative notes are essential medico-legal and clinical records that support continuity of patient care[1].

An audit was done in Bangalore, India, on 75 surgical notes. All RCS parameters were assessed. The name of the surgeon, the diagnosis of the patient and the procedure were recorded in all surgical notes (100%). DVT prophylaxis was recorded in (22%) elective and (13%) in emergency surgery notes[3]. Our study revealed that patient identification and the names of the surgeon and assistant were present in 100% of notes, whereas DVT prophylaxis was 0%. Atif QAA 2020[4] conducted an audit at the Pakistan Institute of Medical Sciences (PIMS), Pakistan. Sixty operative notes were evaluated instead of RCS parameters. Only the surgeon's name was recorded in (100%) of operative notes. The elective and emergency procedure type was recorded in 3.3%. Our study similarly reveals that elective and emergency procedures were not recorded in any of the operative notes (n = 0%), and the names of the surgeon and assistant were recorded as 100%. To assess the quality of operative notes, Javid M 20205 organized a closed-loop audit at a quaternary care centre in Chennai, India. The analysis of blood loss documentation in the first cycle was 2.66% in 75 operative notes. The second loop shows that blood loss was recorded in 86.66% of notes, whereas in our study, blood loss was recorded as 31.03%.

A retrospective review in the United Kingdom reviewed fifty general surgery operative notes. The name of the theatre assistant was recorded in (58%) of operative notes in the first half of the audit. The second half reported the name of the theatre assistant in 98% of operative notes. [6] Whereas in our study, the name of the theatre anesthetist was 100%.

Several studies were done to improve documentation of operative notes. RCS guidelines were used in the theatre as a memory chart by Chinedu MO 2024[7], in Nigeria. Memory charts showed no statistical

significance in the improvement of operative notes.
Hence, strategies like re-audit, templates and electronic media help to improve the quality of operative notes. In a study of 125 operative notes in Pakistan[8], the documentation rate after re-audit increased from 37% to 83%.
Improving the quality and standards of operative notes plays a crucial role in elevating the overall standards of patient care. Operative notes serve as detailed records of surgical procedures, documenting essential information about the intervention, techniques used, complications encountered, and decisions made during surgery[9].
By prioritizing the standards of operative notes, healthcare providers uphold the integrity and effectiveness of surgical care while fostering patient safety and trust in medical services. [10]
This study had several limitations. First, it was a single -center audit with a relatively small sample size. Second, the retrospective design relied solely on available documentation and may not reflect actual intraoperative practices. Third, only one audit cycle was performed, and a re-audit following implementation of corrective measures is required to complete the audit cycle.

CONCLUSION

This audit highlights deficiencies in operative note documentation, particularly regarding DVT prophylaxis, antibiotic prophylaxis, and blood loss recording. Adherence to standards recommended by the Royal College of Surgeons of England and use of standardized documentation templates may improve surgical record quality.

Ethical permission: As this study was a clinical audit using anonymized operative records and involved no direct patient interaction, formal ethical approval was waived according to institutional policy.

Conflict of Interest: The author states no conflict of interest.

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Data Sharing Statement: The corresponding author can provide the data proving the findings of this study on request. Privacy or ethical restrictions bound us from sharing the data publicly.

AUTHOR CONTRIBUTION

Taj A: Conception & design, data collection, analysis and interpretation of results, manuscript drafting & revising, final approval, agreement to be accountable.
Hunain: Data collection, manuscript drafting & revising, final approval, agreement to be accountable.
Rajput A: Conception & design, manuscript drafting & revising, final approval,
agreement to be responsible.
Akram Q: Data collection, manuscript drafting & revising, final approval, agreement to be accountable.
Jaleel F: Manuscript drafting & revising, final approval, agreement to be accountable.

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