

# Surgical Operative Notes Compliance with the Standard Guidelines of the Royal College of Surgeons: A Retrospective Clinical Audit at a Tertiary Hospital in Bangalore, India

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## ABSTRACT

**Introduction:** Operative notes are essential documents that record the operative findings and procedures performed during surgeries. Therefore, it is crucial to document them with clarity and objectivity. They serve various purposes, including auditing, teaching, research, and providing valuable information in medicolegal cases.

**Aim:** To assess the accuracy of operative note-keeping in accordance with the guidelines set by the Royal College of Surgeons (RCS) of England.

**Materials and Methods:** A retrospective clinical audit was conducted to evaluate the quality of operative notes in the Department of General Surgery at St. John's Medical College and Hospital in Bengaluru, Karnataka, India, from June 2022 to October 2022. A total of 75 surgical notes were analysed, including cases of both elective and emergency surgeries. The audit assessed all 19 parameters mentioned by the RCS. A master sheet was created to record the analysed variables,

and each variable was categorised as present, absent, or not applicable. Statistical analysis was performed using the Statistical Package for Social Sciences (SPSS), version 21.0, and the results were expressed as percentages.

**Results:** The documentation of the surgeon's name, diagnosis, intraoperative findings, and procedure performed was accurate in both groups, comprising 45 (100%) cases of elective surgeries and 30 (100%) cases of emergency surgeries. However, there was a lower compliance with Deep Venous Thrombosis (DVT) prophylaxis in both groups, with 10 (22%) cases in elective surgeries and 4 (13%) cases in emergency surgeries.

**Conclusion:** Based on the findings of the present study, it is recommended to adhere more strictly to the guidelines provided by the RCS of England, particularly in emergency cases. Regular audits should be conducted to ensure quality management, enhance surgical training, and address medicolegal implications effectively.

**Keywords:** General surgery, Operation notes, Quality improvement research

## INTRODUCTION

In all surgical specialties, the integrity, clarity, and diagrammatic representation of the operative notes are crucial. They convey information about the operative findings and procedures performed that would be impossible to understand otherwise. It is an essential and important document for the department's success in research, audit, teaching, medicolegal significance, and general performance [1]. Every surgeon has a professional obligation to keep a complete and accurate record of their surgical notes [1]. Unfortunately, these notes are often neglected on multiple fronts. Incomplete and illegible handwritten operative notes can weaken a surgeon's defense in medical malpractice claims [2]. The authors have observed that this trend has worsened over the last two decades and is continuing to worsen at an alarming rate [3]. To rectify this anomaly of a crucial document, the Royal College of Surgeons (RCS) published official guidelines in 2014 [1]. These recommendations are clear, precise, and easy to apply to any surgical specialty. This template has been proven to significantly improve the overall quality of surgical note writing and has become the gold standard for operative notes, serving as the foundation of good medical practice [1]. The majority of hospitals in India have developed their own operative note formats, which are deficient in multiple areas when compared to the RCS guidelines. Hence, the present clinical audit was conducted with the primary objective of evaluating the accuracy of operating notes using the RCS guidelines as the gold standard.

## MATERIALS AND METHODS

A retrospective clinical audit was conducted to assess the quality of the operative notes in the Department of General Surgery at St. John's Medical College and Hospital in Bengaluru, Karnataka, India, from June 2022 to October 2022.

### Study Procedure

A total of 75 surgical notes were examined, encompassing patients who underwent elective (n=45) and emergency operations (n=30). The audit utilised all 19 parameters mentioned by the RCS, which were assessed as standard guidelines for good surgical practice [Table/Fig-1] [1]. A master sheet was created to record the analysed variables, and each variable was categorised as present, absent, or not applicable.

## STATISTICAL ANALYSIS

The statistical analysis was performed using the software SPSS, version 21.0, and the results were expressed as percentages.

## RESULTS

The documentation regarding the surgeon's name, diagnosis, intraoperative findings, and procedure performed was accurate in both groups, comprising elective 45 (100%) cases and emergency 30 (100%) cases. The lowest compliance was observed in DVT prophylaxis for both groups, with elective 10 (22%) cases and emergency 4 (13%) cases [Table/Fig-2].

Royal College of Surgeons of England Operation Note Guidelines, 2014	
Date	
Time	
Elective/emergency procedure	
Name of theatre anaesthetist	
Anaesthesia	
Names of operating surgeon and assistant	
Operative procedure carried out	
Incision	
Operative diagnosis	
Operative findings	
Problems/complications	
Extra procedure performed and why it was performed	
Details of tissue removed, added or altered	
Details of closure technique	
Anticipated blood loss	
Antibiotic prophylaxis	
DVT prophylaxis	
Detailed post operative instructions	
Signature	

**[Table/Fig-1]:** Operation Note Guidelines [1].

S. No.	Parameters	Elective notes (n=45)	Emergency notes (n=30)
1	Date and time	40 (90%)	21 (70%)
2	Case type (elective/emergency)	41 (91%)	23 (77%)
3	Name of anaesthetist with anaesthesia type	45 (100%)	26 (87%)
4	Name of surgeon and assistant	45 (100%)	30 (100%)
5	Diagnosis	45 (100%)	30 (100%)
6	Procedure	45 (100%)	30 (100%)
7	Findings	45 (100%)	30 (100%)
8	Incision	44 (98%)	25 (83%)
9	Complications	45 (100%)	24 (80%)
10	Extra procedure, if done	45 (100%)	28 (93%)
11	Tissue removed	45 (100%)	26 (87%)
12	Closure technique	43 (96%)	24 (80%)
13	Anticipated blood loss	42 (94%)	26 (87%)
14	Antibiotic prophylaxis	45 (100%)	28 (93%)
15	Postoperative orders and sign	40 (90%)	25 (83%)
16	DVT prophylaxis	10 (22%)	04 (13%)

**[Table/Fig-2]:** Data showing specific details.

## DISCUSSION

Operative theatre notes are an important component of patient records. They have gained significance due to their professional quality, legal implications, and economic impact on each hospital. In recent times, operation notes have become a weak spot in medicolegal cases, often serving as a source of weakness in a surgeon's defense in court. Unfortunately, operative note instructions are rarely explored or recognised in published medical literature. It is even less commonly acknowledged as a fundamental surgical skill that must be learned [2]. Writing an operating note is a critical skill in surgery as it is essential for postoperative management and follow-up [2].

In the present study, approximately 20% of the notes contained unintelligible and undecipherable areas, which is consistent with findings from other studies [4]. The accuracy of surgical notes is crucial to understand what transpired in the operating room during the procedure. They serve as significant components of patient case notes and are important from both professional and legal perspectives, requiring completeness and readability [5].

Regarding the present study, a relatively good percentage of the operative notes contained sufficient information (>90%). However, documentation was relatively lower in emergency set-ups, which has not been compared in previous studies. One possible explanation for this is the late hour of surgery, with a junior colleague often responsible for writing the notes. Notes that are illegible are considered missing or indicative of documentation failure, as they do not provide valuable

information. Using name stamps can help improve the legibility of signatures [6]. Regular audits of operative note quality help identify failures to meet the required standards. These concerning findings are often limited to specific specialties within hospitals, but they may provide a snapshot of potentially more widespread issues [5].

In a study comparing the quality of operative notes made on special proformas versus those created using word processors, computer-generated notes demonstrated superior performance across the board. They exhibited high accuracy (98%) and completeness of all data (92.5%), and were produced in the same amount of time, with only 2.5% missed entries [7]. However, the option of computer-based operating notes systems and electronic documentation is still impractical for many hospitals in India. Factors such as cost, staff training, and ongoing maintenance may limit the use of electronic documentation to only a few major hospitals [8]. Nevertheless, as a quaternary teaching hospital, these issues are not considered significant. Therefore, the authors have suggested to the hospital administrators to incorporate the use of electronic documentation into the new software, Kranium. This would greatly improve the existing system.

The present study revealed poor documentation of DVT prophylaxis, which is consistent with the findings of Khan MU et al., the Severn Audit and Research Collaborative in Orthopaedics (SARCO), and Blackburn J [9,5]. One possible explanation for this is the general surgeon's concern about postoperative bleeding. Similar results were also observed in terms of documenting only the surgeon's name and for most of the other variables, such as the timing of surgery, diagnosis, type of incision, operative findings, antibiotic data, and postoperative orders. The present study demonstrated much higher compliance, ranging from 83% to 100%.

As evident from the present study, the documentation of operative notes was significantly better compared to other studies. This is crucial for the department's success in research, audit, teaching, and medicolegal significance. Considering these factors, the authors recommend the incorporation of operative note documentation as a necessary and basic requirement in the computer software of every hospital.

## Limitation(s)

The only limitations of the present study were its short duration and small sample size.

## CONCLUSION(S)

The present study identified several areas of deficiency, particularly in the documentation of emergency surgical notes. The management of patients, training of future surgeons, and defense in medicolegal cases all rely on accurate operation records. Therefore, promoting a culture of accurate reporting and conducting regular audits is essential.

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