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QUALITY IMPROVEMENT

Standardizing Best Practices: An Initiative Utilizing Surgical Ward Round Checklists to Enhance Patient Safety and Documentation in Our Trust

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Abstract

Aims/Background Comprehensive ward round documentation is crucial for ensuring effective communication and patient safety. Standardized checklists have been shown to improve documentation quality in various healthcare settings. This article presents the findings of a comprehensive audit consisting of two cycles, which incorporate feedback, bring about implications, and evaluate the impact of a standardized proforma on inpatient ward round documentation for General Surgery patients in a high-volume surgical unit.

Methods Initially, a staff survey was conducted to identify deficiencies in ward round documentation, highlighting the need for a standardized proforma. To establish a baseline, a retrospective review of 45 ward round entries assessed five key areas: diagnosis, disease management, objective assessments, discharge planning, and documentation logistics. Subsequently, within a month of implementing the changes, 20 ward round entries were analyzed based on the same criteria during a second cycle.

Results During Cycle 1, we found that 95.6% of the notes lacked information on Venous thromboembolism (VTE) prophylaxis, while nearly 88.9% were missing data on current issues, and 46.7% did not include pain scores. Additionally, we found that bowel function and fluid balance information were absent in 62.2% and 95.6% of ward round entries, respectively. Cycle 2 showed a significant improvement in terms of documentation for most of the items. Most of the variables were documented in all the reviewed proformas and others such as VTE prophylaxis and fluid balance showed a significant improvement being documented in 95% of the proformas.

Conclusion Employing a standardized ward round proforma demonstrably improved documentation completeness across all safety parameters within our surgical unit. This enhanced focus on crucial safety discussions during ward rounds is expected to further elevate patient safety outcomes.

Key words: quality improvement; checklist; patient care team; documentation

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Introduction

Ward rounds are a point of convergence during a patient's hospital care. It serves as a dynamic medium for integrating information between the various fractions of a Multi-Disciplinary Team (MDT) to aid in formulating patient-centered decisions. Functions of a ward round (WR) primarily involve coherent communication from the healthcare professionals to patients and updating them on their daily progress (Landry et al, 2007). Secondarily, it serves as a channel to enhance

education and foster the spirit of teamwork and leadership amongst staff (Stanley, 1998; Verghese et al, 2011)

Although WR forms the foundation of a patient's management during their in-patient stay, it is often noted that the documentation for this is substandard. A multitude of factors contribute to this quality of documentation. A predominant factor is the significant variability in how ward rounds are conducted. Other elements include the pace of WR, interruptions during WR, inadequate delegation to the most junior doctors, missing out vital information, and misinterpretation of instructions. These aberrations conduce a high potential for error and consequently a direct compromise on patient care and safety (Al-Mahrouqi et al, 2013).

Within the context of a surgical ward round (WR) at our Trust, the need for enhanced WR documentation emerged, particularly in the setting of King George Hospital's Surgical Hub with its emphasis on rapid patient turnover. Barking, Havering and Redbridge University Hospitals (BHRUT), a large North East London teaching hospital comprising Queens and King George Hospitals, serves a substantial patient population exceeding 750,000, leading to significant caseload challenges (Hospitals BHR, 2024). Our surgical hub has been recognized by the Get It Right the First Time (GIRFT) program for high-volume, low-complexity procedures. However, the fast-paced nature of ward rounds and high patient turnover at our district general hospital pose challenges for adequate documentation. Acute staffing shortages and reliance on handwritten records further increase the risk of missing or misinterpreting information, underscoring the urgent need for improved documentation practices (Carter, 2023).

Poor quality WRs can lead to a greater number of adverse events, thereby cascading an increased financial strain on our elective hub. To address the questions surrounding uniformity with WR, Herring et al (2011) streamlined the process and developed a concise approach highlighting the key aspects of care. Furthermore, Pitcher et al (2016) introduced the advantages of having a surgical checklist approach to combat the deficiencies in surgical ward rounds. The concept of surgical checklists is not novel and has been utilized in multiple fields to maintain a set standard for the execution of tasks and reduce human errors (Fernandes and Eneje, 2017; Galloway and Choudhury, 2022; Patel et al, 2019; Thompson et al, 2004). Moreover, the General Medical Council provides guidelines for clinical documentation in Good Medical Practice 2013, which states that clinical paperwork must be clear, accurate, and legible. Certain key elements are noted to be mandatory to be present in every entry: clinical findings, decisions made and actions agreed upon; clearly specifying who is making these decisions and who is agreeing on the actions; information provided to the patients; drugs prescribed or any other investigation or treatment executed; and who is documenting and when it is being documented (GMC, 2024; Ogrinc et al, 2016).

Conducting efficient and patient-centered ward rounds poses a challenge to our department, as suggested by a survey conducted by us during this Quality Improvement Project (QIP). In order to address the questions surrounding inconsistency with ward rounds, our project aims at developing a standardized platform that organizes daily tasks and emphasizes relevant parameters during a surgical ward round.

Methods

This study utilized the Model for Improvement framework described by Langley et al (2009). The audit standards adhered to the clinician-focused guidelines on medical records and documentations published by the Royal College of Surgeons of England. The audit was granted institutional approval by the audit department, and results were presented within clinical governance meetings and registered in the audit department under the identifier LN-040-23.

Before Cycle 1, a survey was conducted among the members of the staff in the surgical wards (n = 86), which included junior doctors 60% (n = 52), surgical specialty registrars 13% (n = 11), nursing staff 6% (n = 5), senior nursing staff members 9% (n = 8), and allied health care professionals 12% (n = 10). We interrogated them about their opinion and experience on the following criteria: (1) Documentation of the conveyed information, (2) Frequent issues faced owing to missing pieces of relevant information, and (3) Practicality and benefit of digital apps used within the trust. In line with the survey responses, 87% of participants identified a standardized and feasible ward round documentation proforma as essential.

This proforma would address the shortcomings and inconsistencies in current documentation practices, ultimately improving the quality of patient care and enhancing safety.

To substantiate the survey findings, a first cycle of the audit was initiated, focusing on a review of daily ward round inputs. A comprehensive checklist was developed, drawing inspiration from the SHINE surgical toolkit (Royal College of Surgeons of Edinburgh, 2024), to assess the compliance and effectiveness of existing clinical ward round (WR) documentation. This checklist encompassed five key categories: documentation logistics, diagnostic details, disease management, objective assessments, and discharge planning. These categories were further subdivided into specific variables, including legible writing, contact information, time, date, names and grades of attending physicians, documented current issues, diagnosis and/or operation, recent recorded vital signs, most recent blood tests, results of relevant recent scans or investigations, pain score and management, wound review, bowel function, fluid balance, nutrition, and mobility (including occupational therapy and physical therapy planning). Forty-five daily ward round entries were randomly selected over a period of a month. The notes were reviewed by two of the authors (AB, NM) using a predetermined checklist (Table 1).

A standardized WR proforma was recommended as an intervention. A preliminary draft of the WR proforma was designed inspired by the SHINE surgical ward round toolkit by the Royal College of Surgeons of Edinburgh (2024). The structure was modeled on the results obtained from our survey. Following this, the initial version (Fig. 1) was shared among the surgical doctors, including registrars, consultants, foundation year doctors, clinical fellows, and senior house officers during a teaching session dedicated to ward round documentation.

Subsequently, we developed a second version (Fig. 2) of our proforma, taking into account the feedback received. Before introducing the new form, a training session was held for all clinical staff. Each version was trialed over 7 days, with a

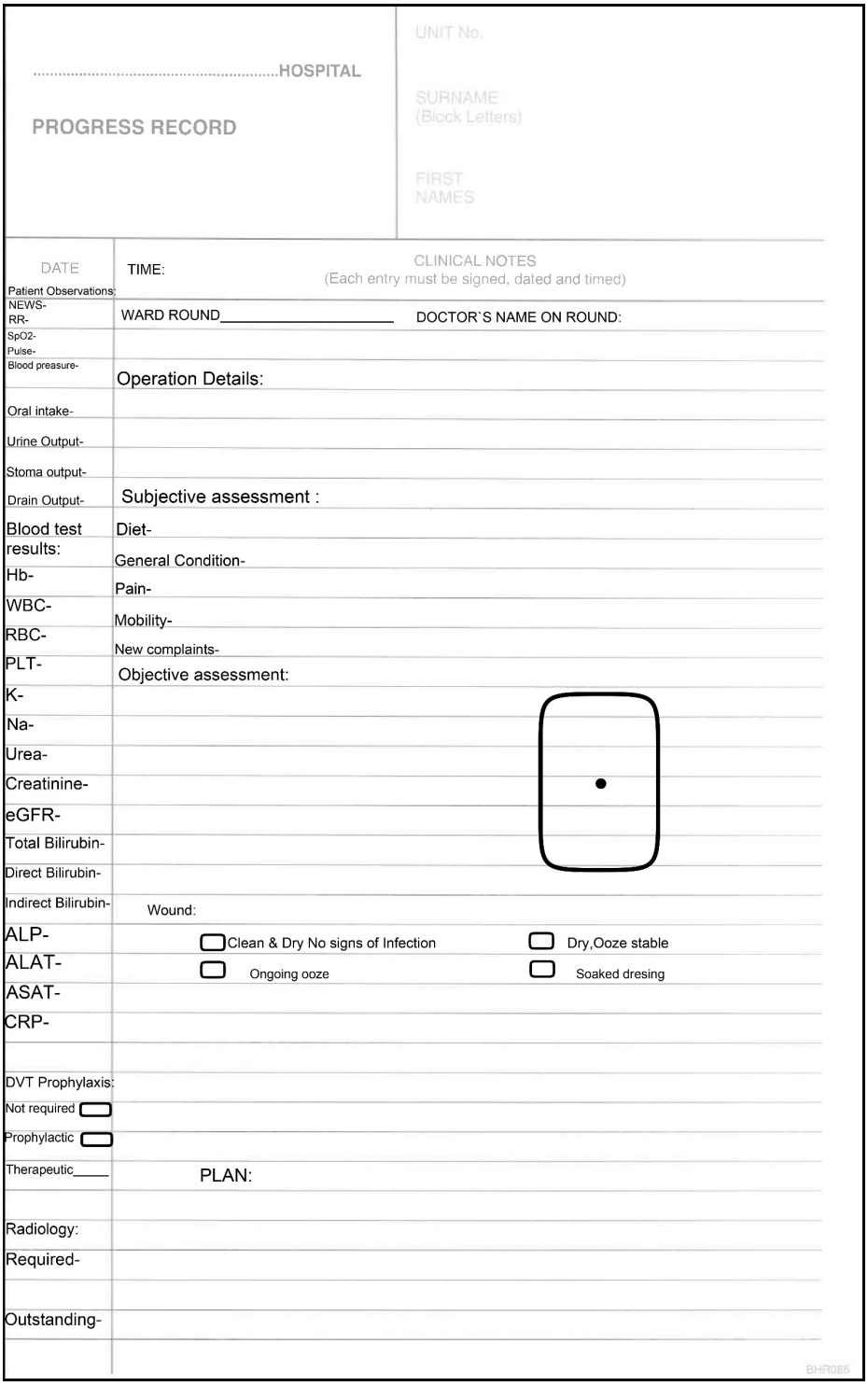
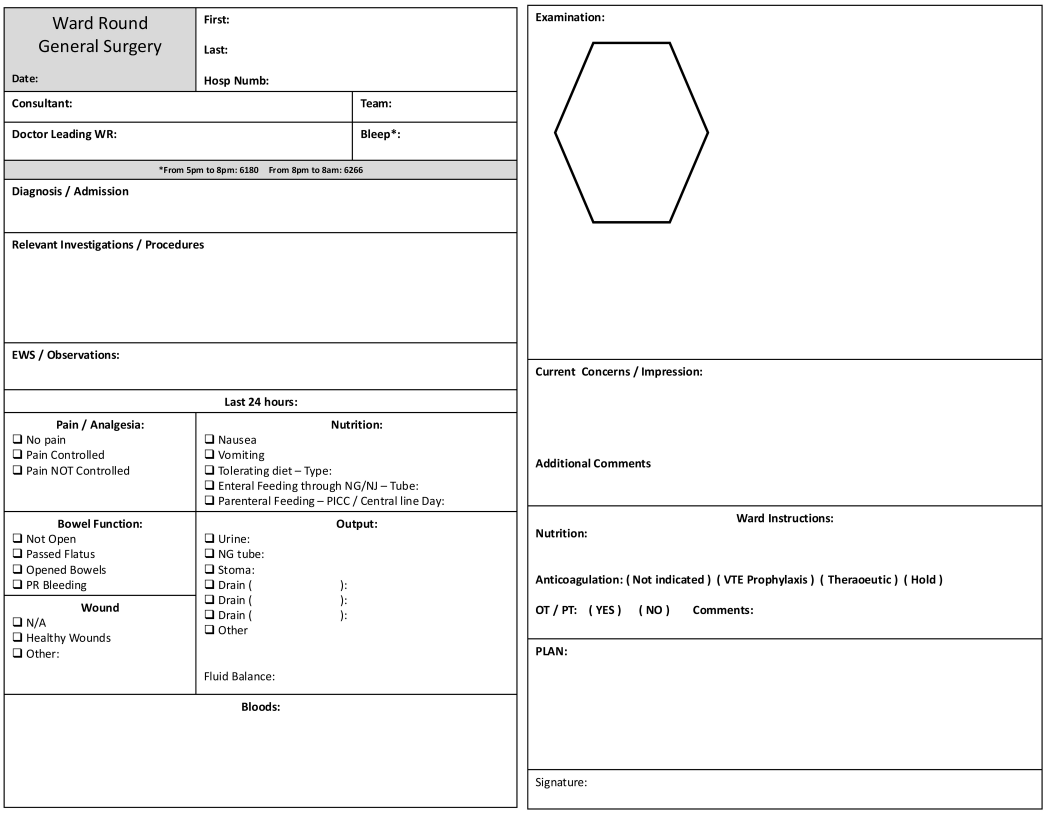


Fig. 1. First draft of ward round proforma. The circle is the abdominal region and the black dot in the centre is the umbilicus as an anatomical reference of the surface anatomy of the abdomen. This is a visual aid to document the findings on fisical examination. Hb, Haemoglobin; WBC, White blood cells; RBC, Red blood cells; PLT, Platelets; K, Potassium; Na, Sodium; eGFR, Estimated glomerular filtration rate; ALP, Alkaline phosphatase; ALAT, Alanine aminotransferase; ASAT, Aspartate aminotransferase; CRP, C-reactive protein; DVT, Deep vein thrombosis; RR, respiratory rate.

random sample of 20 notes reviewed. There was a minimum 2-week gap between the trials of version 1 and version 2. Additionally, feedback was gathered from other healthcare staff, including nurses, physiotherapists, and occupational therapists.



Ward Round
General Surgery

Date:

First:

Last:

Hosp Numb:

Consultant:

Team:

Doctor Leading WR:

Bleep*:

*From 5pm to 8pm: 6180 From 8pm to 8am: 6266

Diagnosis / Admission

Relevant Investigations / Procedures

EWS / Observations:

Last 24 hours:

Pain / Analgesia:
❑ No pain
❑ Pain Controlled
❑ Pain NOT Controlled

Nutrition:
❑ Nausea
❑ Vomiting
❑ Tolerating diet – Type:
❑ Enteral Feeding through NG/NJ – Tube:
❑ Parenteral Feeding – PICC / Central line Day:

Bowel Function:
❑ Not Open
❑ Passed Flatus
❑ Opened Bowels
❑ PR Bleeding

Wound
❑ N/A
❑ Healthy Wounds
❑ Other:

Output:
❑ Urine:
❑ NG tube:
❑ Stoma:
❑ Drain ( ):
❑ Drain ( ):
❑ Drain ( ):
❑ Other

Fluid Balance:

Bloods:

Examination:

Current Concerns / Impression:

Additional Comments

Ward Instructions:

Nutrition:

Anticoagulation: (Not indicated) (VTE Prophylaxis) (Theraoeutic) (Hold)

OT / PT: (YES) (NO) Comments:

PLAN:

Signature:

Fig. 2. Second version of ward round proforma. WR, ward round; EWS, Early warning system; N/A, Not applicable; VTE, Venous thromboembolism; OT/PT, occupational therapy/physiotherapy. NG/NJ, Nasogastric/Nasojejunal; PICC, Peripherally inserted central catheter; PR, Per rectal.

Data Analysis

The notes were reviewed by two of the authors using a predetermined checklist. The information was introduced into a Microsoft Excel sheet. Non-identifiable data was used. All statistical analysis was performed using Microsoft Excel 19.0 (Microsoft Corporation, Redmond, WA, USA). Statistical analyses included descriptive statistics (percentage for all categorical variables).

Ethical Considerations

The research conducted in this study was categorized as a closed-loop audit, a quality improvement initiative aimed at enhancing the efficiency and effectiveness of ward rounds within our department. First loop audited the notes against the guidelines and second loop designed and implemented the proforma. As such, it was determined that ethical approval was not required. The study adhered to the guidelines outlined in our institution's ethical review policy for Quality Improvement Projects. Specifically, the study met the following criteria:

Minimal risk: The audit involved comparison of the current documentation standard against guidelines followed by the implementation of a new ward round proforma, which was designed to streamline existing processes and did not pose any additional risks to participants.

No direct patient involvement: The audit focused on the processes of care delivery, rather than directly involving patients. No patient identifiable information was collected.

Confidentiality: All data collected during the audit was anonymized and handled in accordance with our institution's data protection policies.

Informed consent was obtained from all staff members involved in the questionnaire. Participants were informed about the purpose of the questionnaire, the potential benefits, and their right to withdraw from the study at any time.

Results

Our survey revealed that most participants agree that it is often arduous to obtain accurate details of WR documentation. With an enormous majority of 94% of members reported spending considerable time learning the past documentation to understand the current concerns and 87% perceiving the WR documentation to be unstandardized. More than half of our participants (63%) noted inconsistencies in daily entries. Additionally, more than 60% of the members of the staff who participated in the survey, considered that the nutrition plan, Venous thromboembolism (VTE) prophylaxis, mobilisation and physiotherapy requirements are not clearly documented, and this creates difficulty with communication with the non-medical teams.

During Cycle 1, we reviewed a total of 45 patient notes following our initial survey. Before developing our surgical proforma, we analyzed these notes and identified the ward round entries. Notably, 95.6% of the notes lacked information on VTE prophylaxis, while nearly 88.9% were missing data on current issues, and 46.7% did not include pain scores. Additionally, we found that bowel function and fluid balance information were absent in 62.2% and 95.6% of ward round entries, respectively. Our analysis of biochemical and radiological findings revealed deficits in 66.7% of scan results and 20% of blood results. Other lacking variables are detailed in Table 1.

In Cycle 2, after the surgical WR proforma was implemented, we analyzed 20 patients notes. These showed a significant improvement in terms of documentation for most of the items. Most of the variables were documented in all the reviewed proformas and others such as VTE prophylaxis and fluid balance showed a significant improvement being documented in 95% of the proformas. The rest of the variables are shown in detail in Table 2.

Discussion

The conundrum of WR documentation revolves around the unmitigated volume of workload and patient turnover. This creates room for suboptimal and oftentimes, unsatisfactory levels of documentation. In order to solve this issue, we

Table 1. Quality of documentation in medical notes before implementation of the proforma (n = 45).

Documentation categories	Documentation identified in clinical entries before using the proforma (n = 45)	Documentation identified in clinical entries before using the proforma (%)
Legible writing	43/45	95.5%
Contact (beep) No	40/45	88.9%
Time	45/45	100%
Date	45/45	100%
Names and grade of the doctors leading ward round	45/45	100%
Diagnostic details		
‘Current Issues’ documented	5/45	11.1%
Diagnosis and/or operation	31/45	68.9%
Management of the disease		
Recent recorded vital signs	35/45	77.8%
Most recent bloods	36/45	80%
Results of relevant recent scans/biochemical investigations	15/45	33.3%
Pain score/management	24/45	53.3%
Wound review	4/45	8.9%
Bowel function	17/45	37.8%
Fluid balance	2/45	4.4%
Nutrition	19/45	42.2%
VTE	2/45	4.4%
Discharge planning		
Mobility including OT/PT planning	15/45	33.3%

created a standard proforma taking into consideration WR specific checklists and selecting parameters relevant and necessary for surgical patients. The introduction of our proforma addressed the inconsistencies in WR documentation and improved the overall quality of care received by surgical patients. Considering the variables utilized to design our proforma, WR efficiency can be enhanced as details on current issues, operation performed, pain score, nutrition status, vitals, and blood investigation paint an overall picture of the patient and help the treating surgeon comprehend a holistic picture associated with the current admission. This in turn leads to better management plan formulation. Moreover, issues surrounding post-operative and hospitalization-related complications are addressed, as pulmonary embolism can be prevented by consistent documentation and thereby reviewing the VTE prophylaxis (Segon et al, 2020). In addition, by routinely checking and obtaining information on bowel opening status, we can identify common and expected complications such as paralytic ileus and rule out common causes associated with electrolyte imbalance through noting blood investigation results (Harnsberger et al, 2019). While these prevent and accelerate early treatment, it also focuses on common surgical concerns. In the past QI study has shown a positive cognizance towards WR check-

Table 2. Quality of documentation in medical notes after implementation of the proforma (n = 20).

Documentation identified in clinical entries	Documentation identified in clinical entries after using proforma (n = 20)	Documentation identified in clinical entries after using the proforma (%)
Documentation logistic		
Legible writing	20/20	100%
Contact (bleep) No	20/20	100%
Time	20/20	100%
Date	20/20	100%
Names and grade of the doctors leading ward round	20/20	100%
Diagnostic details		
'Current Issues' documented	20/20	100%
Diagnosis and/or operation	20/20	100%
Management of the disease		
Recent recorded vital signs	20/20	100%
Most recent bloods	20/20	100%
Results of relevant recent scans/investigations	19/20	95%
Pain score/management	19/20	95%
Wound review	20/20	100%
Bowel function	20/20	100%
Fluid balance	19/20	95%
Nutrition	19/20	95%
VTE	19/20	95%
Discharge planning		
Mobility including OT/PT planning	19/20	95%

lists by junior doctors (Treloar et al, 2022). Likewise, other studies which utilized a standardized checklist found beneficial results across various specialties (Herring et al, 2011; Mattinson and Cheeseman, 2018; Monaghan et al, 2005; Pitcher et al, 2016).

However, our findings and conclusions have certain limitations. First, the diverse range of healthcare professionals involved in the initial survey introduces variations in field-specific experiences. While our goal is to address discrepancies in ward round documentation and improve communication, differences in the perceived importance of relevant documentation among various MDT groups may affect this objective. Additionally, such surveys often capture primarily negative experiences related to the topic.

Second, staff involvement may have been influenced by the high turnover of junior doctors during the study period, due to their rotational schedules.

Third, the duration of the study means that the changes implemented may not necessarily represent a long-term solution to the issues identified.

Finally, since our documentation relies on prompts, there is a risk of overlooking significant findings that fall outside the scope of the proforma, which may also lead to observer bias.

Conclusion

This study indicates that a structured ward round proforma can enhance documentation quality and interprofessional communication within healthcare settings. The current implementation efforts focus on the acute general surgery admission unit, but the long-term vision is to integrate this proforma into a comprehensive electronic medical record (EMR) system. The adoption of an EMR system is anticipated to yield superior results compared to traditional handwritten records. While this work encourages the utilization of structured proforma, further research is necessary to establish a definitive link between the quality of medical notes and patient outcomes.

Key Points

- The study applied the Model for Improvement framework and aligned audit standards with Royal College of Surgeons guidelines.
- 87% of surgical ward staff believed a standardized documentation proforma was crucial to address WR documentation inconsistencies.
- The first audit cycle reviewed 45 patient notes using a checklist based on the SHINE surgical toolkit, revealing documentation gaps.
- A significant improvement in documentation quality was observed in the second audit cycle, meeting all documentation standards.
- The study concluded that structured proformas improve documentation quality and communication among healthcare professionals.
- The long-term goal is to integrate this approach into an electronic medical record system to improve outcomes and streamline processes.

Availability of Data and Materials

All data included in this Quality Improvement Project are available upon request by contacting the corresponding author.

Author Contributions

Study concept: AB, HI, VB, NM, SF, DO, AM, FDN, RLB; Data curation: HI, VB, DO, AM, FDN, RLB; Writing and original draft: HI, AB, VB, NM, SF, DO, AM, FDN, RLB; Writing review and editing: AB, HI, VB, DO, AM, FDN, RLB; All authors contributed to important editorial changes in the manuscript. All authors have participated sufficiently in the work and agreed to be accountable for all aspects of the work.

Ethics Approval and Consent to Participate

The research conducted in this study was categorized as a closed-loop audit, a quality improvement initiative aimed at enhancing the efficiency and effectiveness of ward rounds within our department. First loop audited the notes against the guidelines and second loop designed and implemented the proforma. As such, it was determined that ethical approval was not required. Informed consent was obtained from all staff members involved in the questionnaire, and the study was conducted in accordance with the principles of the Declaration of Helsinki.

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Conflict of Interest

The authors declare no conflict of interest.

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