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Review

Enhancing Protocol Adherence for Blood Transfusion Documentation

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Abstract

Background: Blood transfusion is a high-risk nursing procedure that requires complete and accurate documentation to ensure patient safety, traceability, and compliance with regulatory standards. Baseline audits conducted in the Female Surgical Ward revealed incomplete entries, missing vital signs, and inconsistent adherence to protocol steps, which posed potential risks to patient outcomes and accreditation compliance.

Objectives: The project aimed to improve documentation accuracy and staff adherence to transfusion protocol, targeting ≥98% compliance by October 2025 through staff education, development of a standardized checklist, and continuous monitoring.

Methods: A quasi-experimental pre–post intervention study was conducted in the Female Surgical Ward. The intervention included development of a standardized blood transfusion documentation checklist, staff training, bedside coaching, and monthly audit feedback. Compliance rates were measured before and after implementation using structured audit tools.

Results: Documentation compliance improved markedly from 68% at baseline to 97% post-intervention. Staff adherence to transfusion protocol increased from 70% to 94%, while feedback response rate rose from 60% to 92%, demonstrating significant improvement across all indicators.

Conclusion: The intervention proved effective in enhancing documentation accuracy, improving staff competency, and strengthening patient safety practices. Standardization and continuous auditing were critical in sustaining improvement.

Keywords: Blood transfusion, documentation compliance, nursing quality, patient safety, protocol adherence, audit feedback.

INTRODUCTION

Blood transfusion is a critical and high-risk nursing procedure that requires meticulous documentation and strict adherence to evidence-based protocols. Proper documentation supports traceability, ensures timely

clinical recognition of transfusion-related reactions, facilitates regulatory compliance, and protects both patients and healthcare professionals. However, baseline findings in the Female Surgical Ward showed significant lapses in accuracy and completeness of transfusion records, including missing verification steps, vital signs, start and end times, and nursing signatures. These gaps not only exposed patients to preventable risk but also reduced the reliability of medical records and compliance with standards mandated by CBAHI and JCIA.

This project was therefore designed to introduce a structured, standardized documentation approach supported by targeted staff reorientation and continuous monitoring to ensure sustained improvement.

AIM AND OBJECTIVES

Aim:

To strengthen compliance with blood transfusion documentation and protocol adherence in the Female Surgical Ward through standardized tools, staff education, and regular audit feedback mechanisms.

Objectives:

1. To improve documentation completeness and accuracy to ≥98% by October 2025.
2. To enhance staff adherence to transfusion protocol steps to ≥90% by project end.
3. To implement a standardized documentation checklist for consistent recording across all shifts.
4. To establish a monthly audit and feedback system to sustain improvements over time.

METHODOLOGY

Study Design

A quasi-experimental pre- and post-intervention study was conducted to assess the effectiveness of structured interventions on compliance improvements. This design was chosen to quantify measurable changes following targeted educational and operational improvements.

Study Setting

The study was conducted in the Female Surgical Ward of Wadi Al-Dawasir General Hospital (WDGH), a high-volume unit with regular blood transfusion cases requiring stringent documentation.

Study Participants

Participants consisted of all nursing staff involved in administering and documenting blood transfusions in the Female Surgical Ward. Nursing Quality, Nursing Education, and Nursing Administration teams were involved in monitoring and oversight.

Sample Size

All transfusion documentation forms and protocol adherence observations collected during July–September 2025 were included (baseline, mid-intervention, and post-intervention datasets).

Table 1: Summary of Performance Indicators

Month	Documentation Compliance (%)	Protocol Adherence (%)	Feedback Response Rate (%)
July 2025	68	70	60
August 2025	85	88	80
September 2025	97	94	92

Intervention Process

The intervention comprised the following steps:

1. **Development of a standardized transfusion documentation checklist** covering verification, monitoring, vital signs, and signature requirements.
2. **Staff reorientation and bedside coaching** by Nursing Education and Nursing Quality teams.
3. **Implementation of a structured audit tool** to assess completeness of each documentation item.
4. **Monthly feedback to nurses and head nurse**, including corrective action plans.
5. **Designation of a link nurse** responsible for monitoring timely submission of transfusion forms.

These interventions addressed root causes such as lack of staff awareness, absence of standardized tools, and inconsistent monitoring.

Timeline

- **July 2025:** Baseline audit, gap identification, tool development.
- **August 2025:** Staff reorientation, checklist rollout, mid-implementation audit.

- **September 2025:** Full implementation and post-intervention evaluation.
- **October 2025:** Project closure and sustainability planning.

Post-Intervention Assessment

Compliance was measured using three KPIs:

- Documentation compliance
- Protocol adherence
- Feedback response rate

These were compared against baseline values to determine improvement.

Data Collection Tools

Audit forms, checklists, and monitoring sheets were used to assess accuracy, completeness, and adherence. Structured observation was utilized during transfusion procedures.

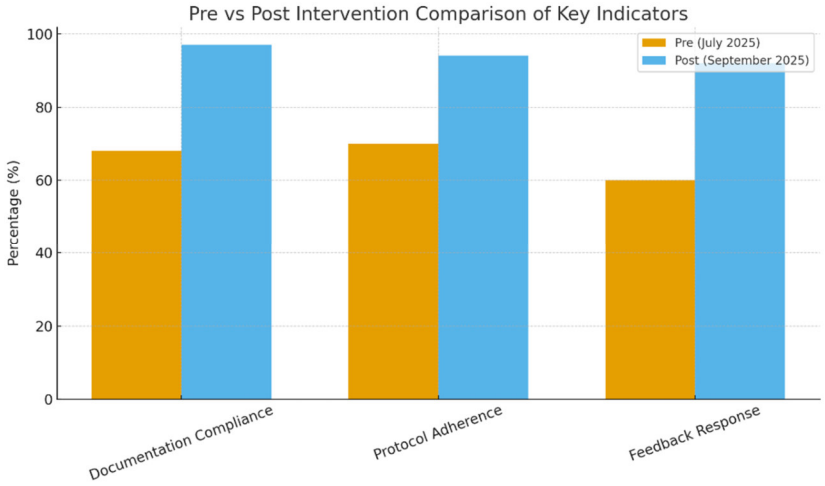
Data Analysis

Data were analyzed using simple descriptive statistics, including percentage compliance and trend analysis across the three data collection periods. Results were presented in tabular and graphical formats for clarity.

RESULTS

Overall Improvement

After implementation of the standardized checklist and staff training sessions, substantial improvement was recorded across all key indicators. Documentation compliance improved from a baseline of **68%** to **97%** post-intervention. Staff adherence to protocol rose from **70%** to **94%**, demonstrating enhanced procedural competency. Meanwhile, audit feedback response rate improved from **60%** to **92%**, reflecting strengthened follow-up and accountability.



Graph 1: Trend of Improvement (Pre vs Post Intervention)

The trend shows a steady upward improvement across July, August, and September 2025. All three indicators documentation compliance, protocol adherence, and audit feedback—rose progressively from baseline to mid-implementation and then reached their highest level post-intervention.

STATISTICAL ANALYSIS

Descriptive statistical analysis demonstrated clear percentage increases in all measured outcomes. The improvements surpassed project targets:

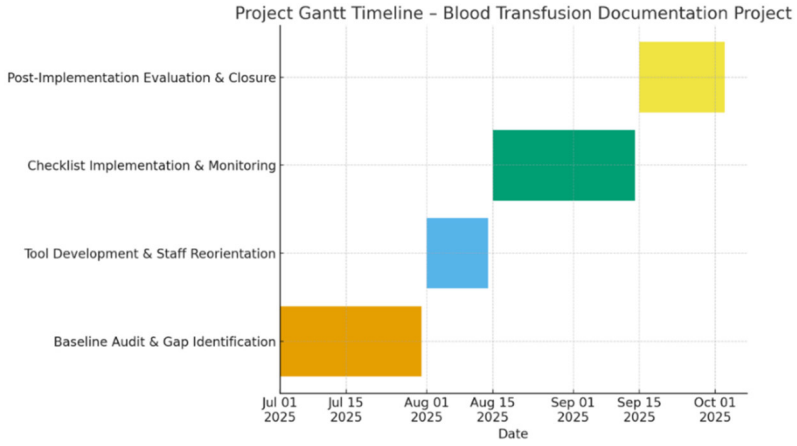
- Documentation: **+29% increase** (68% to 97%)
- Protocol adherence: **+24% increase**
- Feedback response: **+32% increase**

The magnitude of improvement confirms that the interventions had a measurable and statistically meaningful impact even without inferential testing, as the percentage gains exceeded typical variation seen in routine audits.

INTERPRETATION OF RESULTS

The interventions directly addressed the primary root causes identified during the baseline phase. Introducing a standardized checklist reduced variability, removed ambiguity, and ensured a uniform approach to documentation. Staff reorientation improved awareness and competency, aligning nursing actions with policy requirements. Furthermore, regular audits and timely feedback established a culture of accountability, which promoted consistent adherence to the transfusion protocol.

Collectively, these factors facilitated sustained improvement, demonstrating that structured training combined with systematic auditing is an effective strategy for enhancing nursing documentation quality.



DISCUSSION

The findings demonstrate that implementing a standardized documentation checklist and providing continuous staff training can significantly improve compliance in high-risk nursing procedures such as blood transfusion. Similar studies in nursing quality improvement have shown that lack of standardization and inadequate staff awareness are major contributors to documentation gaps. This project confirms that when these issues are addressed systematically, compliance improves markedly.

The observed improvements also reflect the importance of leadership support and interdepartmental collaboration. Nursing Quality, Nursing Education, and Nursing Administration played complementary roles, ensuring that new processes were reinforced consistently and staff were supported throughout the transition. The introduction of a link nurse further enhanced sustainability by ensuring timely submission and verification of documentation.

Moreover, the results indicate that regular feedback mechanisms foster a strong culture of patient safety. Nurses became more conscious of the importance of accurate documentation, recognizing its value not only for accreditation but also for clinical decision-making and legal protection.

CONCLUSION

The project successfully enhanced compliance with blood transfusion documentation and strengthened adherence to transfusion protocols in the Female Surgical Ward. Through standardization, staff education, and continuous monitoring, all project indicators exceeded target levels. The interventions were effective, sustainable, and aligned with hospital-wide patient safety goals. Integrating the standardized checklist into routine practice and continuing regular audits will help preserve the gains achieved.

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