

Audit of compliance with Venous Thromboembolism (VTE) prophylaxis guidelines across medical and non-medical wards in a tertiary care hospital

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Abstract

Background: Venous thromboembolism (VTE), which includes deep vein thrombosis and pulmonary embolism, is a significant and potentially preventable cause of morbidity and mortality among hospitalized patients. Evidence-based guidelines recommend routine risk assessment and appropriate thromboprophylaxis for all admitted patients unless contraindicated. Despite clear recommendations, adherence to these guidelines varies across clinical settings.

Aim: This audit aimed to assess compliance with VTE prophylaxis guidelines across medical and non-medical inpatient wards in a tertiary care hospital.

Methods: A retrospective clinical audit was conducted including 100 patients admitted to medical, surgical, and obstetrics and gynecology wards. Data were collected on VTE risk assessment and appropriateness of prophylaxis. Compliance was evaluated against hospital policy aligned with NICE guidelines.

Results: Compliance with VTE prophylaxis guidelines was higher in medical wards (95%) compared to non-medical wards (75%), demonstrating significant variability between specialties.

Conclusion: While compliance was generally high in medical wards, lower adherence in non-medical wards highlights the need for targeted interventions to improve patient safety.

Keywords: Venous thromboembolism; Thromboprophylaxis; Clinical audit; NICE guidelines; Patient safety

1. Introduction

Venous thromboembolism (VTE) remains a leading cause of preventable hospital-associated morbidity and mortality worldwide. Hospitalized patients are at increased risk due to factors such as immobility, acute illness, surgery, and underlying comorbidities.

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To reduce this risk, clinical guidelines—including those from the National Institute for Health and Care Excellence (NICE)—recommend that all hospitalized patients undergo formal VTE risk assessment, followed by appropriate pharmacological or mechanical prophylaxis where indicated.

Despite the availability of clear guidelines, studies have demonstrated variability in adherence across different specialties and healthcare settings. Medical wards often demonstrate higher compliance due to familiarity with medical protocols, whereas surgical and other specialties may show inconsistent adherence.

This audit was conducted to evaluate compliance with VTE prophylaxis guidelines across medical and non-medical wards and to identify areas for improvement.

2. Methodology

2.1. Audit Design

This study was designed as a retrospective clinical audit.

2.2. Setting

The audit was conducted in a tertiary care hospital across multiple inpatient wards, including medical, surgical, and obstetrics and gynecology departments.

2.3. Sample Size

A total of 100 patient records were reviewed.

2.3.1. Data Collection

Data were collected from patient records and included:

- Documentation of VTE risk assessment
- Prescription of thromboprophylaxis
- Appropriateness of prophylaxis according to guidelines

Standards

- The audit standards were based on hospital policy aligned with NICE guidelines:
- All admitted patients should undergo VTE risk assessment
- Appropriate thromboprophylaxis should be prescribed unless contraindicated

3. Results

A total of 100 patients were included in the audit.

Medical wards:

- Compliance with VTE prophylaxis guidelines was 95%
- Non-medical wards (surgical and obstetrics & gynecology):
- Compliance was 75%

These findings demonstrate a clear variation in adherence between specialties.

4. Discussion

This audit highlights a significant difference in compliance with VTE prophylaxis guidelines between medical and non-medical wards. The high compliance observed in medical wards likely reflects greater familiarity with guideline-based management and routine incorporation of risk assessment into clinical workflows.

In contrast, lower compliance in surgical and obstetrics and gynecology wards may be attributed to variability in clinical practices, competing priorities, or lack of standardized protocols. This gap in adherence is clinically important, as inadequate thromboprophylaxis increases the risk of preventable VTE events.

These findings are consistent with previous studies demonstrating variability in adherence to thromboprophylaxis guidelines across specialties. Addressing this issue requires both educational interventions and system-level changes, such as standardized documentation tools and reminders.

5. Conclusion

The audit demonstrates high compliance with VTE prophylaxis guidelines in medical wards but identifies suboptimal adherence in non-medical wards. Targeted interventions are necessary to ensure consistent implementation of guidelines across all specialties.

Recommendations

- Mandatory VTE risk assessment for all admitted patients
- Increased staff education in non-medical wards
- Implementation of standardized VTE assessment tools
- Regular monitoring and feedback
- Re-audit to assess improvement

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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