AUDIT OF VENOUS THROMBOEMBOLISM (VTE) RISK ASSESSMENT AND PROPHYLAXIS WITHIN 24 HOURS FOR PATIENTS IN THE ACUTE MEDICAL UNIT (AMU) OF NOBLES HOSPITAL

Author: Dr Adeola Adetomi Orogun (STR, Acute Internal Medicine)
Supervisors: Dr Fanwell Mamvura (Audit Supervisor), Dr Ishaku Pam (Clinical Supervisor), Dr Axel Kaehne (Academic Supervisor)

BACKGROUND

- VTE is a primary global cause of preventable hospital death.
- Presents as Hospital Associated Thrombosis (HAT) in ~ 60%.
- 58% of potentially preventable HATs are related to medical admissions.
- No of 90-day post-discharge VTE related deaths is one of national patient safety outcome indicators.
- Systematic implementation of national VTE prevention programs in local trusts led to significant reductions in mortality, morbidity and socio economic burden of VTE over the past decade.
- 27% of trusts are yet to meet the national quality requirement of monthly VTE risk assessment rate of ≥ 95% of hospitalized patients.
- VTE Prevention is currently a national patient safety strategic research need.

STANDARDS AND CRITREA; NICE QUALITY STANDARDS (QS)

- Quality Statement1; adult medical patients must have their VTE, and bleeding risk assessed using a national tool as soon as possible after admission to the hospital (QS3, 2010).
- Quality Statement1; adult medical patients who have been risk assessed as needing pharmacological VTE prophylaxis must start it as soon as possible and within 14 hours of hospital admission (QS201, 2021).
- Quality Statement4; adult medical patients must have their VTE, and bleeding risk re-assessed at consultant review or if their clinical conditions changes for suitability and correct use of VTE prophylaxis and development of adverse effects of prophylaxis (QS3,2010).

OBJECTIVES AND METHODS

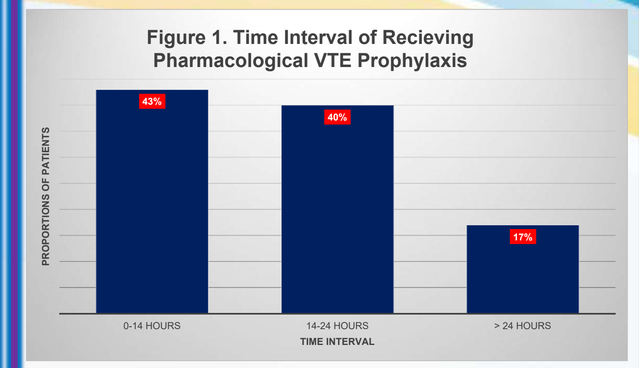
- Data of 124 patients who were admitted consecutively into AMU over a 3-week period in January 2023 were extracted prospectively from the time of medical clerking until the time of administration of the first dose of pharmacological prophylaxis
- Data included dates and time of VTE and bleeding risk assessment at clerking, pharmacological prophylaxis prescription, prophylaxis administration, and risk re-assessment.
- Data was analysed with Microsoft Excel and the proportions of patients who had VTE and bleeding risk assessment within 24 hours of admission, who received pharmacological VTE prophylaxis within 14 hours of admission, and who were risk re-assessment at the point of consultant review in line with NICE Quality standards were each measured against target compliance ≥95%.
- The proportions of patients who were risk assessed for VTE and bleeding but were not prescribed prophylaxis, and the reasons for non prescription and non administration of prophylaxis were also analysed.

RESULTS

- In AMU, the quality of VTE risk assessment practices met the national standards while those of VTE prophylaxis and risk re-assessment practices were below standards (Table 1, Figure 1).
- 17% of patients received prophylaxis after 24 hours of admission (Figure 1), 20% of whom had documented reasons for delay in administration
- 40% of patients received prophylaxis as scheduled but missed the recommended 14 hour window of administration due to fixed-time prescription of first dose of prophylaxis (18:00th hour) (Figure 2)
- During risk re-assessment, only 6 (22%) patients were eligible for assessment for development of adverse effects (Figure 3, arrows). The rest of the patients could not be assessed because they were yet to be due for prophylaxis administration.

VTE PARAMETERS	NATIONAL STANDARD	AMU	COMPLIANCE
VTE RA WITHIN 24 HOURS	≥95%	98%	OPTIMAL
VTE PROPHYLAXIS WITHIN 14 HOURS	≥95%	43%	SUBOPTIMAL
RISK RE-ASSESSSMENET	≥95%	64%	SUBOPTIMAL

Table 1. AMU Compliance



- 57% of patients were not prescribed prophylaxis due to presence of high risk of bleeding.
- Anticoagulant therapy (86%), Thrombocytopenia (4.3%), and GI Bleed (2.6%) were the major risk factors for bleeding.

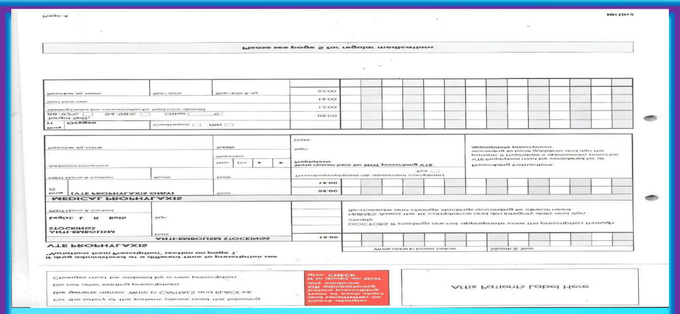
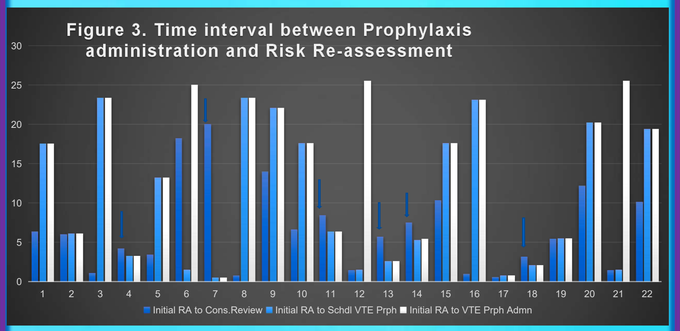


Figure 2. VTE Prophylaxis Prescription Chart



RECOMMENDATIONS FOR QUALITY IMPROVEMENT

- Include electronic reminders for VTE RA, Prophylaxis and Risk-reassessment in the hospital's Patient Track.
- Adjust drug kadex to include administration of the first dose of prophylaxis as a stat dose
- Include VTE risk re-assessment section within the medical consultant (Post Take) clerking proforma
- Reinforcement on importance of complete documentation practices to doctors and nurses

REFERENCES

1. Clapham RE, Roberts LN. A systematic approach to venous thromboembolism prevention: a focus on UK experience. Research and Practice in Thrombosis and Haemostasis. 2023 Jan;7(1).
2. Thrombosis UK. National Thrombosis Survey. In association with Getting, It Right First Time (GIRFT) Programme. 2021.
3. NHS. Digital. NHS Outcome Framework Indicators dataset. 5.1 Deaths from venous thromboembolism (VTE) related events within 90 days post hospital discharge. 2021.
4. NHS England. NHS standard contract 2019/2020. Technical Guidance.
5. NHS England. National patient safety strategic research needs 2022/23.
6. Venous Thromboembolism in adults: reducing the risk in hospital. NICE Quality Standard (QS3). June 2010.
7. Venous Thromboembolism in adults: reducing the risk in hospital. NICE Quality Standard (Q201). June 2021.

Declaration of Interests; None