

VENOUS THROMBOEMBOLISM RISK ASSESSMENT RCEM QUALITY IMPROVEMENT PROJECT



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Background

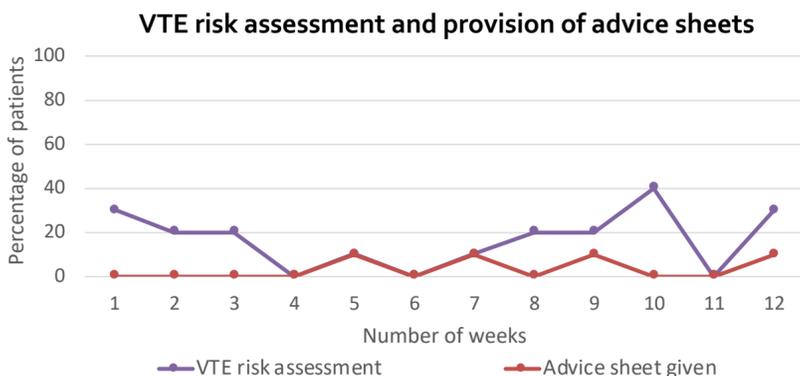
Temporary lower limb immobilisation, with a walker boot or below knee cast has a 2.7% incidence of venous thromboembolism (VTE).¹ Use of low molecular weight heparin (LMWH) is believed to almost halve the risk of DVT in lower limb immobilisation.² In 2018 NICE recommended consideration of LMWH or fondaparinux for those receiving lower limb immobilisation for up to the first 42 days of immobilisation.³

There is no nationally recognised risk assessment system however one of four recommended by RCEM is the Plymouth assessment.⁴ Between 1 August 2018 and 31 January 2019, our emergency department (ED) partook in an RCEM national audit, which assessed compliance with VTE risk assessment and management in adults being discharged with new lower limb immobilisation.

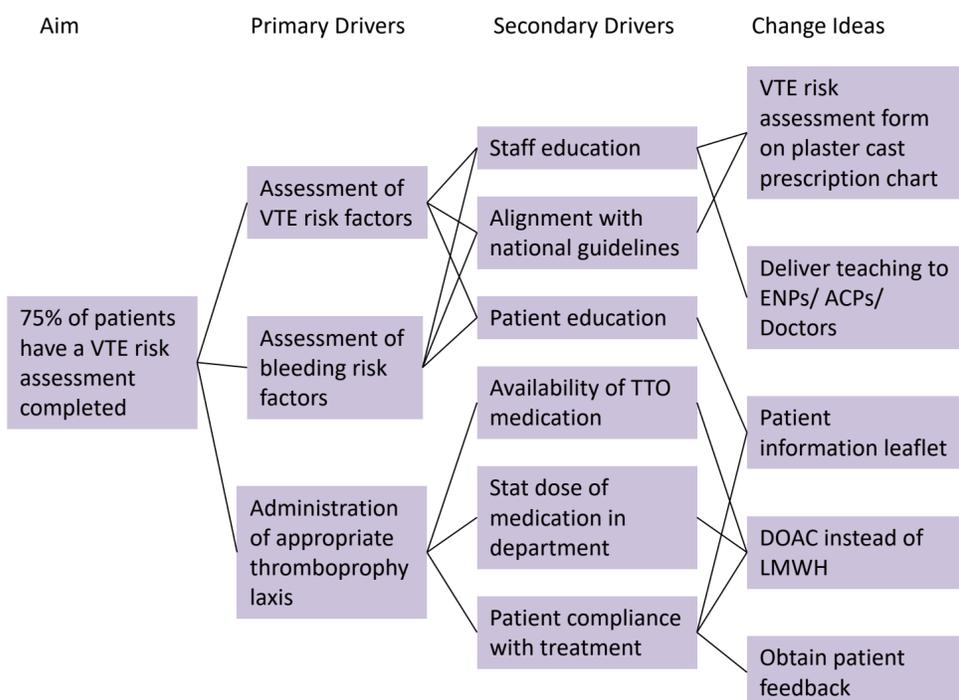
Aims

- 75% compliance with VTE risk assessments for patients who have temporary lower limb immobilisation at RDH ED by January 2019
- To compare outcomes of local risk assessment tools to a nationally recognised standard, the Plymouth assessment.

Baseline performance



Driver Diagram

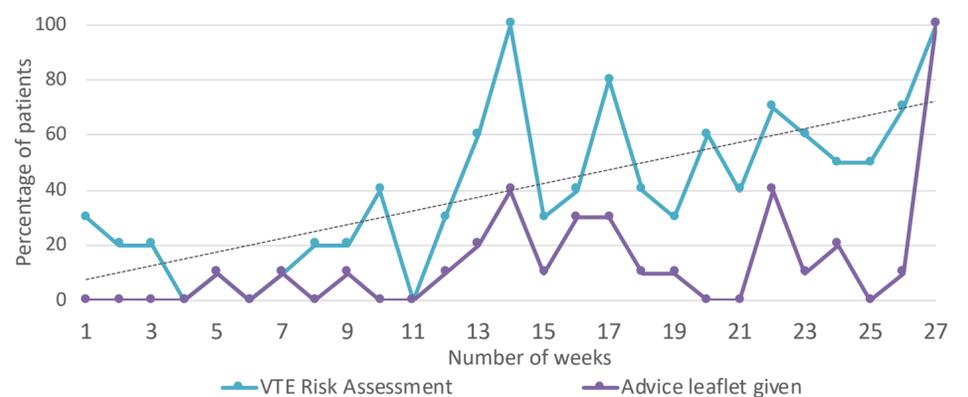


Interventions

- Secure agreement of inclusion of walker boots from Orthopaedic lead
- Posters to remind staff to complete risk assessment sheets and distribute advice sheets.
- Attachment of the VTE advice sheets to risk assessment sheets
- Staff emails and face-to-face reminders to consistently raise awareness
- Recruitment of an ENP to our audit team, to educate other ENPs via word of mouth
- Presentation of the audit findings after 16 weeks to show our progress and encourage continuation of good work
- Recruitment of an additional audit team member to ensure continued quality improvement

Results

Gradual improvement in risk assessments completed and advice sheets given



Comparison of local VTE assessment with a recognised assessment tool

N =70	Local VTE Assessment	Plymouth Assessment
% Patients for which VTE treatment was indicated	57.1%	17.1%
% High-risk patients (Enoxaparin treated)	24.3%	17.1%
% Medium-risk patients (Aspirin treated)	32.9%	N/A
% Low-risk patients (No medical therapy)	42.9%	82.9%

Future plans

- Continue to assess our performance and compare it with National Standards, aiming for higher levels of compliance
- Liaise with Orthopaedic colleagues, presenting our data and evidence for changing to the Plymouth Assessment

1. Meek R, Tong R. Venous thromboembolism in emergency department patients with rigid immobilization for lower leg injury: Incidence and risk factors. *Emergency Medicine Australasia*. 2012;24(3):277-284.
 2. Zee A, van Lieshout K, van der Heide M, Janssen L, Janzing H. Low molecular weight heparin for prevention of venous thromboembolism in patients with lower-limb immobilization. *Cochrane Database of Systematic Reviews*. 2017.
 3. National Institute for Health and Care Excellence. Venous thromboembolism in over 16s: reducing the risk of hospital-acquired deep vein thrombosis or pulmonary embolism. *Nice.org.uk*. 2018 [cited 7 March 2019]. Available from: <https://www.nice.org.uk/guidance/ng89>
 4. Royal College of Emergency Medicine. National Quality Improvement Project 2018/2019 VTE Risk in Lower Limb Immobilisation Information Pack. RCEM; 2018.