Preventing Blood Clots in Hospitals

National Recommendations

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National Medication Safety Improvement Programme

HSE Quality Improvement Division

Seirbhís Sláinte Níos Fearr á Forbairt | Building a Better Health Service

Recommendations to reduce the incidence of hospital-acquired VTE

Essential requirements to effectively reduce hospital-acquired VTE

Each patient admitted to hospital for an in-patient stay requires:

- The VTE prevention protocol to be followed when the decision to admit is made and repeated if clinical situation changes. The protocol comprises standardised:
    - VTE risk assessment
    - Bleeding risk assessment
    - Clinical decision support to guide the appropriate choice of prophylaxis, in line with the patient's VTE risk, bleeding risk, contra-indications to mechanical prophylaxis and any dose adjustment required due to renal impairment or weight
    - The appropriate prophylaxis prescribed, administered and/or applied.
- All of these steps should be completed as soon as possible after admission and appropriate prophylaxis received within 24 hours after the decision to admit.

- Patient information about any prophylaxis they are receiving, their continued risk for 90 days after hospitalization, the signs and symptoms of VTE and what to do if they occur.

Hospitals must ensure that:

1. Oversight for monitoring and improving VTE prevention is assigned to the appropriate governance committee and is an agenda item at meetings at least twice a year. The Drugs & Therapeutics Committee or Quality & Safety Committee may be assigned governance oversight of VTE prevention. As improving VTE prevention is a large undertaking, establishing a dedicated hospital Thrombosis Committee or Thrombosis Prevention Committee may be required, with reporting structures to higher levels of governance. This should be chaired by the VTE champion clinician, with membership which may include a specialist nurse, pharmacist, data manager, member of hospital risk management and member of hospital quality team.

2. There is a standardised hospital VTE prevention protocol, comprising VTE risk assessment, bleeding risk assessment and clinical decision support for choice and dose of prophylaxis according to the patient's risk, weight, renal function and contra-indications to prophylaxis.

The HSE template in Appendix 1 may be used to guide local decision-making when developing a hospital VTE prevention protocol.

3. Standardised VTE risk assessment following the VTE protocol is carried out for each in-patient as soon as possible after the decision to admit is made, and appropriate prophylaxis received asap and within 24 hours.

4. Tools and processes that have been tested and shown to effectively improve the provision of appropriate prophylaxis are in place. The combination of:

    a. VTE prevention protocol in an accessible location fitting into process flow, e.g. in the drug chart or electronic patient record
    b. Prompt(s) or alerts, e.g. pre-printed prescriptions (e.g. Appendix 2)
    c. Systematic process of independent check(s) of prophylaxis, e.g. by pharmacists, nurses or consultants, early in admission (e.g. at the post-take ward round) and
    d. Education and information for staff and patients

    is likely to result in high appropriateness of prophylaxis. We recommend any change or measure being considered is tested thoroughly and only implemented if tests confirm that it can be applied in the clinical context and its impact on the rate of appropriate prophylaxis has been evaluated, in line with good quality improvement practice.

5. Each in-patient receives information about any VTE prophylaxis they are receiving, their risk of VTE for 90 days after hospitalisation, the signs and symptoms of VTE and what to do if they occur, facilitated by providing the Patient Alert Card (Appendix 3). Where this is a new change, a dedicated improvement effort with at least one coordinator will be required to test, implement and support this change.

6. Responsibilities for prescribing according to the VTE prevention protocol, independently checking prophylaxis and providing patient information prior to discharge is assigned and these healthcare professionals are clearly aware of their responsibility.

7. All staff involved in the processes of risk assessment, prescribing, administering, monitoring and checking VTE prophylaxis have access to the VTE prevention protocol and information about preventing VTE.

8. Monitoring of key metrics takes place at least quarterly and is reviewed at the appropriate governance committee at least twice a year. This includes:

    a. Rate of Hospital-Acquired VTE (national KPI, reported to hospitals by the HSE).

    b. Percentage of sampled patients with appropriate prophylaxis (i.e. in line with the hospital's VTE prevention protocol) within 24 hours of the decision to admit. Standardised sampling, data collection and measurement instructions are available in Appendix 4 and www.safermeds.ie . If the hospital wishes to use the established HSE system, the Excel spreadsheet on www.safermeds.ie must be used as is with no changes (other than data entry using the drop-down menus), in the established fortnightly intervals and auditing no more than 10 patients per fortnight. This can then be loaded up to Sharefile® and pulled into QlikView®. Hospitals may choose to measure at less frequent intervals using the same system. If the HSE system is not being used, the percentage of patients with appropriate prophylaxis should still be measured at least quarterly and for a random sample of 10 patients at the very least. Where the hospital is focusing on improving VTE prevention for a particular patient group, the sample may be taken from that patient group only to track progress while the improvement project is underway.

    c. Percentage of sampled discharged patients who received information about VTE risk and signs and symptoms, for a random sample of 10 patients per quarter or greater.

    d. Hospitals may supplement the above with additional more detailed quantitative and/or qualitative research, audit and measurement for improvement.

9. Hospital-acquired VTE is reported and managed in accordance with the HSE Incident Management Framework, including open disclosure (www.hse.ie/opendisclosure). Where the VTE occurred following treatment in another hospital, that hospital is also informed.

10. Hospital-acquired VTE is listed as a risk on the hospital's risk register.

11. An adequately resourced multi-disciplinary VTE prevention improvement team Is supported to carry out quality improvement to reduce hospital-acquired VTE, ideally continuously. This team can coordinate the testing and implementation of the recommendations, as well as measure % appropriate prophylaxis. Appendix 4 includes a quality improvement and measurement guide, with additional material available on www.safermeds.ie . During VTE prevention quality improvement phases, the following is in place:

    a. a senior clinical management team sponsor
    b. an improvement team of a doctor, nurse and pharmacist, with additional members if available, e.g. a data manager. Experience in the collaborative has shown that a multidisciplinary team is crucial to success. This team is supported by the hospital to dedicate a minimum of a half day a week for 3 team members, applied to improvement activities and measurement, for the duration of the improvement work. Where teams were able to dedicate this time, improvement was achieved in 12 months. Teams dedicating less time are unlikely to achieve improvement in less than 18 months and should prioritise improvement activities over measurement, if a compromise is needed.
    c. a wider project team including a lead clinician with interest and knowledge in the area and a quality improvement coach are available to the improvement team to advise, make decisions, support the team through challenges and to engage with their peer group where necessary
    d. governance arrangements for the project and reporting

    This VTE prevention team would ideally be coordinated by a full- or part-time thrombovigilance nurse or pharmacist coordinating improvement, staff education, information, auditing and incident management.