5 key points

1. Venous thromboembolism is a significant cause of preventable death in patients admitted to hospital for medical and surgical care.

2. VTE can cause long-term complications and morbidity.

3. Appropriate risk assessment and thromboprophylaxis can reduce mortality by two-thirds.

4. One in three patients with deep vein thrombosis will develop post-thrombotic syndrome within five years.

5. Patients who survive a pulmonary embolism may develop pulmonary hypertension—a life-limiting condition.

Recognised VTE risk assessment as a priority goal and has linked performance to the payment that trusts receive from their commissioners. This requires trusts to audit VTE risk assessment and submit data monthly, which the DH publishes.

The DH has developed a national VTE risk assessment tool to be used by all trusts (DH, 2010). This includes the assessment of both clotting and bleeding risk factors to assist in deciding on thromboprophylaxis that would be appropriate and safe.

The tool requires all patients admitted to hospital to have their mobility assessed. Medical patients whose mobility is not significantly lower than it is normally will not need further VTE assessment or thromboprophylaxis. Other medical and all surgical patients should be assessed for patient-related and admission-related risk factors and, subsequently, bleeding risk factors if pharmacological prophylaxis is indicated.

Day-case patients who meet certain predetermined criteria such as chemotherapy, minor day-case interventions and minor surgery requiring no general anaesthesia are covered under a generic (cohort) risk assessment and are not usually individually assessed. If these patients subsequently require an overnight stay, the risk assessment must then be completed.

Decisions about who should complete risk assessments are made locally. In many trusts, they are initiated by nurses and completed, with a prescription, by doctors. All nurses should be aware of their role and responsibility with regard to VTE risk assessment within their hospital.

Nurses can ensure NICE guidance is followed by promptly reassessing VTE risk within 24 hours of admission and whenever a patient’s clinical condition changes. This ensures that patients continue to receive appropriate prophylaxis throughout their stay and on discharge.

Box 1. VTE Prevention Quality Standard

- All patients, on admission, are assessed for VTE and bleeding risk against the clinical risk assessment criteria set out in the national tool.
- Patients/carers are offered verbal and written information on VTE prevention as part of the admission process.
- Patients provided with anti-embolism stockings have them fitted and monitored in accordance with NICE guidance.
- Patients are reassessed within 24 hours of admission for risk of VTE and bleeding.
- Patients assessed to be at risk of VTE are offered VTE prophylaxis in accordance with NICE guidance.
- Patients/carers are offered verbal and written information on VTE prevention as part of the discharge process.
- Patients are offered extended (post-hospital discharge) VTE prophylaxis in accordance with NICE guidance.

Source: NICE (2010b)

Box 2. Key Considerations in Administering Thromboprophylaxis

- Technique for administering subcutaneous heparin, identifying contraindications and complications.
- Contraindications to and usage of anti-embolic stockings, foot pumps and intermittent pneumatic compression (right).
- Hydration.
- Early and effective mobilisation.
- Patient education before admission, on admission, during inpatient stay and on discharge.

Best practice

Risk assessment is essential to ensure all patients admitted to hospital receive appropriate thromboprophylaxis. Nurses must work collaboratively with doctors and pharmacists to make sure appropriate thromboprophylaxis treatments are selected and that contraindications have been considered. They also administer the medication (Box 2) and must ensure patients are well hydrated and encouraged to mobilise as soon as possible.

Pharmacological thromboprophylaxis

The choice of pharmacological thromboprophylaxis will be based on local policies, the clinical condition and patients’ preferences. NICE (2010a) recommends a choice of fondaparinux sodium, low molecular weight heparin (LMWH) or, for patients with renal failure, unfractionated heparin. As LMWH dosage is based on weight, nurses must ensure that patients are weighed and their weight is documented.

Prophylaxis should start as soon as possible after the risk assessment has been completed and should continue until the patient is no longer at an increased risk of VTE. Nurses should observe patients on admission for VTE and bleeding.

The correct technique for administering...