

# Implementing new NICE guidance for VTE prevention

All hospital inpatients in England and Wales should be assessed for their risk of venous thromboembolism on admission, according to new NICE guidelines. Shona Kirks finds out how clinical pharmacists can aid implementation of these guidelines.

**R**educing the risk of venous thromboembolism (VTE) requires the input of all clinical pharmacists. The new VTE guidance from the National Institute for Health and Clinical Excellence, published last month, is the latest resource for healthcare professionals in line with the Department of Health's initiative to prevent VTEs (see Background box).<sup>1</sup>

The NICE guidelines list a number of key priorities for implementation. These include:

- Assessing all patients on admission to hospital to identify those at risk of VTE
- Regarding all medical patients as being at risk of developing VTE if they have had reduced mobility for three days
- Regarding all surgical patients as being at risk of VTE if they have had a total anaesthetic and surgery time of over 90 minutes, or 60 minutes if this involves the pelvis or lower limbs

## Background

Venous thromboembolism (VTE) is the formation of a blood clot in the veins. Deep vein thrombosis and pulmonary embolism are serious manifestations of VTE.

VTE is a common cause of death in hospital inpatients, and treatment of non-fatal, symptomatic VTE and related long-term morbidities is associated with a considerable cost to the health service.<sup>1</sup>

In 2005, an enquiry into the prevention of VTE highlighted that there was no systematic approach to identifying and treating patients at risk.<sup>2</sup> This enquiry suggested that about 25,000 people in the UK die each year from preventable, hospital-acquired VTE.

A national VTE prevention programme in England was set up as a result of this work.

## Pharmacy implementation of VTE guidance

- Highlight the absence of any VTE and bleeding risk evaluation to medical and/or nursing colleagues
- Write or update trust policy and guidance for VTE prophylaxis. Make sure agreement is made with the individual business units or directorates involved, e.g. emergency care, medicine, surgery
- Make sure the updated VTE prophylaxis guidance is available and easily accessible to all healthcare professionals as well as being present on wards
- Audit VTE prophylaxis in practice and feed results back to the necessary business units or directorates, as well as to foundation doctors working on the wards, with effective and timely recommendations for the future
- Maintain vigilance on VTE prophylaxis on the wards and highlight areas that are weak.
- Lead by example: pharmacists can undertake VTE and bleeding risk assessments as well as prescribing suitable prophylaxis
- Embed guidance into protocols and/or incorporate it within patient group directions.
- Provide education and training sessions with foundation doctors, nursing staff and other healthcare professionals
- Include details of relevant NICE guidance in undergraduate medical, nursing and pharmacy curricula

Panel 1: How pharmacists can implement NICE VTE guidance

- Assessing all patients for bleeding risk before offering pharmacological VTE prophylaxis

Scott Barrett, senior clinical pharmacist in general surgery at Northumbria Healthcare NHS Foundation Trust, says that pharmacists have the opportunity to interact with the inpatient process at various stages: on admission, while the patient is in hospital and on discharge. "At all points, consideration should be given to whether initial and subsequent VTE and bleeding risk evaluations have been undertaken. Successful implementation is only likely if individual multidisciplinary team members have a clear understanding and ownership of what is required," he says. Mr Barrett suggests a number of specific roles for clinical pharmacists to help achieve compliance with NICE guidance; these are listed in Panel 1.

The NICE VTE guidelines state a number of methods that should be undertaken to reduce the risk of VTE.

These include:

- Offering pharmacological VTE prophylaxis for those at increased risk: namely fondaparinux sodium, low molecular weight heparin, or unfractionated heparin
- Giving patients sufficient information about VTE before starting prophylaxis, such as the risks and consequences of VTE, the importance of prophylaxis and the correct use of mechanical prophylaxis (e.g. anti-embolism stockings)

Mr Barrett says that the pharmacy team are in an ideal position to give patients information while on the wards as well as for discharge. Such information can include:

- Risks and possible consequences of VTE
- Signs and symptoms of potential adverse events and side-effects related to VTE prophylaxis
- How to reduce their risk of VTE (such as keeping well hydrated)

- Duration of VTE prophylaxis at home (if discharged with prophylaxis)
- Signs and symptoms of deep vein thrombosis and pulmonary embolism
- Who to contact if they have any problems using the prophylaxis or if they suspect they have developed deep vein thrombosis or pulmonary embolism
- Where to seek further supplies of drugs if a full supply is not given

Mr Barrett adds: “Our trust updated its VTE prophylaxis policies and procedures in response to NICE draft guidance for VTE prophylaxis. Now that detailed guidance has been published, further work is planned to refine what has been put in place.”

A number of hospitals in the UK have been identified as VTE exemplar centres by the Department of Health’s ‘VTE implementation working group’, to share best practice on the prevention of VTE in hospitals.

Rosalind Perrott, senior anticoagulation and clinical thrombosis pharmacist at King’s Thrombosis Centre, King’s College Hospital NHS Foundation Trust, which was one of the first VTE exemplar sites, says: “It is everyone’s responsibility to make sure that patients are risk assessed. This should be carried out as part of a standard screen by pharmacists in much the same way that we check for allergies before dispensing a drug.”

### **National goal**

Reducing the impact of VTE is one of two specified national goals in the 2010/11 ‘Commissioning for quality and innovation (CQUIN) payment framework’.<sup>4</sup> The aim of the CQUIN payment framework is to make quality improvement and innovation part of the commissioner-provider arrangement. It makes a proportion of providers’ income conditional on the achievement of locally agreed goals.

According to the recent CQUIN guidance for 2010/11, 1.5% of each provider’s income should be based on implementation of goals set out in their CQUIN scheme — the nationally defined goals are linked to about a fifth of the value of the scheme.

Achievement of the VTE goal will be measured by the percentage of all adult patients who have had a VTE risk assessment on admission to hospital, using

a national risk assessment template — payment will be dependent on achieving 90% or more.

Ms Perrott says: “We have a high rate of appropriate prescribing of thromboprophylaxis (>80%) but not of risk assessment; it can be a challenge to encourage all clinicians to do these risk assessments and there is room for improvement. We currently use our own paper-based risk assessment system but our ultimate goal is to carry out risk assessments electronically, we aim to do this using our electronic patient recording system.” She adds that using an electronic risk assessment will also make auditing easier. “The current paper risk-assessment makes auditing time consuming, so electronic auditing will lead to quicker audits, which is particularly useful since audits are likely to be required more frequently in the future.”

Ms Perrott says that the trust is also planning to use electronic patient status boards more frequently. This will alert the user if a risk assessment has not been carried out.

The NICE guidance also provides advice on VTE prevention in general medical patients, patients with stroke, cancer and central venous catheters, and patients in palliative care. It gives specific advice on VTE prevention in patients undergoing different types of surgery, including cardiac, neurological and orthopaedic surgery.

NICE is also planning to produce quality standards on VTE prevention.<sup>3</sup> The VTE quality standards are one of a set of four standards being produced by NICE to provide definitions of high quality care. The draft VTE quality standards, which went out for consultation last month, include risk assessing all inpatients for VTE and offering VTE prophylaxis in accordance with NICE guidance. For each quality standard statement the document gives advice on how to measure its implementation.

The final quality standards for VTE are expected to be published in April this year.

### **Tools for implementation**

A toolkit on preventing VTE, which can be used to aid implementation of the NICE guidelines has also been produced, sponsored by Bayer Schering Pharma, in collaboration with a multidisciplinary team of NHS healthcare professionals.<sup>5</sup> The toolkit is aimed at providers of VTE thromboprophylaxis and commissioners of healthcare. It contains three

sections: an introduction and background to VTE; an overview of organisational thromboprophylaxis and baseline assessment; and an organisational thromboprophylaxis assessment and implementation tool.

Carolyn Gates, senior pharmacist at University College London Hospitals NHS Foundation Trust, who was involved in the development of the toolkit, says: “Trusts will be keen to demonstrate compliance with both thromboprophylaxis and risk assessments. This VTE toolkit is a non-biased practical guide, aimed at multidisciplinary teams who will be implementing these national requirements. It identifies key themes and associated steps required to achieve particular goals as well as providing suggestions for expected outcomes and the evidence needed to demonstrate compliance. It also has a number of case studies.”

She added: “From a pharmacy perspective, it will be of value to anyone who is actively involved in driving forward and implementing Government initiatives within this area (for example, pharmacy clinical services managers or pharmacists working within thrombosis teams) or for any pharmacist working within a clinical area covered by the recent guidance.”

A number of resources are available to help prevent VTE and can be used alongside the NICE guidelines. These include the national risk assessment tool and an electronic learning resource, ‘e-VTE’ (available at [www.e-vte.org](http://www.e-vte.org); see *BJ Clin Pharm* 2009;1:199).

### **References**

1. National Institute for Health and Clinical Excellence. Venous thromboembolism: reducing the risk. London:NICE;2010.
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