VTE: a journey to meet that 90pc goal

According to the latest Department of Health figures, 68 per cent of adults admitted for acute care in the NHS in England were risk assessed for venous thromboembolism. Trusts failing to reach the 90 per cent target this month will find themselves penalised financially. Oweikumo Eradiri, lead medication safety pharmacist at Colchester Hospital University NHS Foundation Trust, gives insight into how his trust has been working to prevent VTE deaths.

Venous thromboembolism (VTE) prevention has become a patient safety priority for the NHS VTE (ie, deep vein thrombosis and pulmonary embolism) is responsible for 10 per cent hospital inpatient deaths in the UK. A House of Commons report in 2005 led to guidance from the National Patient Safety Agency in 2007, the Chief Medical Officer and the National Institute for Health and Clinical Excellence (2010, clinical guideline 92), for the safe use of anticoagulants and other measures to prevent VTE.

Commissioning for quality
In the UK, hospital trusts are commissioned by primary care organisations to provide clinical services, with financial remuneration following the achievement of agreed targets. In 2008, the Department of Health set a Commissioning for Quality and Innovation (CQUIN) payment framework to guide the process. The goal is to enable commissioners to reward excellence by linking a portion of provider income to local quality improvement goals. In addition to local priorities, the NHS Operating Framework sets national targets, one of which is to reduce avoidable death, disability and chronic ill health from VTE.

Commissioners will be able to withhold up to 1.5 per cent of a provider’s annual income if “at least 90 per cent of all adult inpatients have not had a VTE risk assessment on admission to hospital, using the clinical criteria of the national tool”. For my hospital, that meant the primary care trust could withhold around £600,000 if we did not achieve 90 per cent by April 2011.

The use of anticoagulants in VTE prophylaxis offers a range of opportunities for pharmacy involvement in the process illustrated in the Swiss cheese principle, as outlined in “Building a safer NHS for patients — improving medication safety”. This principle originally referred to the introduction of barriers to prevent a medication incident, but it can be reversed to introduce measures to ensure that the incident of VTE prevention takes place. Pharmacy is involved in all these stages (see Figure, p412) and can play a facilitatory role in aligning the holes in the cheese slices.

Early on, after the NPSA action plans had been released, I had approached the Colchester Hospital University NHS Foundation Trust (CHUFT) medical director with the suggestion that we set up an anticoagulation group to focus on VTE.

KEY POINTS
- Deep vein thrombosis and pulmonary embolism are responsible for 10 per cent of hospital inpatient deaths in the UK.
- Under the Commissioning for Quality and Innovation payment framework commissioners can withhold up to 1.5 per cent of a provider’s annual income if at least 90 per cent of admissions are not risk assessed for venous thromboembolism.
- The use of anticoagulants in prophylaxis offers a range of opportunities for pharmacy involvement in meeting targets.
- An electronic risk assessment tool is available.
- Executive VTE walkabouts, monthly feedback to wards and monthly drug lunches all help to keep VTE at the forefront of people’s minds.

Pressing for an electronic tool
After discussions with my colleagues, we decided to press for an electronic tool. We approached our trust’s e-learning panel, and it agreed we would develop an e-learning module and test. (A drawback for non-prescribing pharmacists undertaking the risk assessment is that they need a prescriber to sign the drug chart.)

Pharmacists screen the drug charts daily for clinical accuracy of prescribing and drug administration, and ensure adequate medication supplies. Patients without a completed risk assessment form or a signed LMWH prescription and a VTE risk assessment check box, which the prescriber signs. Doctors, nurses and pharmacists can all undertake the assessment after completing a simple training programme incorporating an e-learning module and test. (A drawback for non-prescribing pharmacists undertaking the risk assessment is that they need a prescriber to sign the drug chart.)

Pharmacists screen the drug charts daily for clinical accuracy of prescribing and drug administration, and ensure adequate medication supplies. Patients without a completed risk assessment form or a signed LMWH prescription are highlighted. Pharmacists running pre-admission clinics risk assess and prescribe appropriate prophylaxis for all elective surgery patients.

2. Prescription checking and dispensing
CHUFT developed a simple and quick online VTE risk assessment tool to provide decision support to prescribers, calculating risk and recommending appropriate prophylaxis (see Panel). Our tool provides a printout at the end of the assessment, which is attached to the drug chart. The drug chart has a pre-printed low molecular weight heparin (LMWH) prescription and a VTE risk assessment check box, which the prescriber signs. Doctors, nurses and pharmacists can all undertake the assessment after completing a simple training programme incorporating an e-learning module and test. (A drawback for non-prescribing pharmacists undertaking the risk assessment is that they need a prescriber to sign the drug chart.)

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Clinical guideline 92 recommends repeat VTE risk assessment as the patient’s condition changes, and pharmacists can ensure that this occurs.

5. Multidisciplinary communication
Implementation of the revised anticoagulation guidelines required extensive publicity and training. At CHUFT, the pharmacy department developed a VTE prevention training module for nurses as part of the Patient Safety First campaign for high risk medicines. E-learning modules and courses, such as the University of Hertfordshire VTE champions course, are now available.

6. Discharge planning
For some patients, the NICE guidelines recommend extended prophylaxis after their hospital stay. This needs to be communicated to GPs via accurate discharge letters to ensure that treatment continues and that patients are monitored. Pharmacists are usually involved in counselling and supplying medicines at discharge. At CHUFT, pharmacy is involved with finalising electronic discharge letters, and ensuring that these are transmitted to the GP as soon as possible. Furthermore, pharmacists on the joint (CHUFT and North East Essex Primary Care Trust) anticoagulation working group review medication incidents across the area and ensure safe anticoagulation pathways and practices.

7. Accuracy checking
In addition to daily monitoring, pharmacists, as part of a VTE project board, can play an oversight role in ensuring safe anticoagulation and VTE prophylaxis across the trust. At CHUFT, this involves setting strategy, monitoring audits of compliance with guidelines, agreeing and meeting targets set by external agencies, and rewarding high performing wards.

Meeting targets
Barriers we encountered included agreeing guidelines (eg, dose of agent) with clinicians, lack of computers and printers, differences between trust and national criteria (eg, age of patient as a risk factor), staff training, human resources (eg, no anticoagulant pharmacist and lack of dedicated VTE nurses) and that the requirement to double check enoxaparin administration (as with trust policy for all parenteral drugs) caused delays.

Our VTE prophylaxis increased from below 50 per cent in 2007 to over 90 per cent in 2008/09 with the pre-printing of LMWH on the drug chart. VTE risk assessments increased from zero to over 70 per cent by the end of 2008/09. But it has not been a completely smooth ride. By 2010/11, although our VTE prophylaxis percentage remained relatively high, our risk assessment percentage dropped to 30.8 per cent in quarter 2 (July to September) and 68.8 per cent in quarter 3 (October to December). In comparison, the national average was 53 per cent (ranging from 8.8 to 100 per cent, with 11 out of 153 NHS acute providers meeting the target) and 68 per cent (ranging from 0.2 to 100 per cent, with 25 out of 158 meeting the target), respectively.

Why the drop after doing so well? If you do not keep pushing, things do not get done. We had to keep VTE at the forefront of people’s mind daily. We held a brainstorming session on how to regain momentum. We relaunched a campaign to get consultants to remind junior doctors. In order to expedite risk assessments, we developed a “nurse-led-doctor-complete” scheme in which nurse non-prescribers completed the risk assessments and passed them to doctors to ratify and prescribe the LMWH. Pharmacists clarify doses and duration of treatment, and reconcile the risk assessment with prescribing guidelines for thromboprophylaxis. We had executive VTE walkabouts to support wards, gave monthly feedback to wards and held monthly drug lunches and teaching sessions for doctors.

By February 2011, we got to 93 per cent so the outlook is positive. The five key pillars to our success have been:

- VTE team structure (particularly having a project board and ward champions for the nurse-led risk assessment programme)
- Systems tools (especially our electronic risk assessment tool)
- Training
- Communication (eg, VTE awareness days, league tables on the intranet, root cause analysis)
- Performance management (eg, consultant score cards, skill/will analysis of staff and records on training)

Other benefits
The multiplier effects of pharmacists working with multidisciplinary colleagues on VTE prophylaxis are enormous. First, it provides another platform to highlight and tackle patient safety incidents that can arise from high-risk medicines. Second, it creates and strengthens communication with clinical colleagues, raising the clinical profile of pharmacists as advocates for the safe use of medicines. Third, at CHUFT, it led to the redesign of the drug chart with multidisciplinary buy-in, and an opportunity to incorporate NPSA recommendations for prescribing and administering other high-risk medicines. CHUFT was the fifth acute trust to be awarded VTE Exemplar Centre status in November 2008 and winner of the 2010 NHS Innovation Award for Patient Safety, for its risk assessment tool and VTE champions programme.

For 2011/12, the targets remain: over 90 per cent of our admissions must be risk assessed and all must receive proper prophylaxis. For each month that we do not meet the target, our commissioner will be able to take away a 12th of that 1.5 per cent sum under CQUIN. Sustaining momentum will be a challenge.

The Pharmacy VTE steering Group at the DoH advocates the catalyst role the profession can play. Perhaps the question is not whether pharmacy can perform a steering role but to what extent individual pharmacists choose to bring their expertise to bear on this crucial patient safety issue.

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Reference article available online

Reversed Swiss cheese principle (Callie Jones)