

PHARMACY

FOCUS *on* VTE



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Preventing VTE: how to implement the CMO's recommendations

Dr Roopen Arya, member of the Chief Medical Officer (CMO) for England's VTE Implementation Working Group and lead for VTE services at King's College Hospital, gives his expert view on implementing recent guidance to prevent VTE

"Earlier this year the CMO for England, Sir Liam Donaldson, published the independent VTE expert working group report on prevention of VTE in hospitalised patients. NICE soon after published its guidance on VTE risk reduction in surgical patients. To ensure implementation of national guidance, the CMO established a small national Implementation Working Group (IWG), chaired, like the VTE expert group, by Dr Anita Thomas OBE. The IWG will

implement the VTE strategy across England and provide oversight and leadership within the NHS and wider healthcare sector to ensure VTE risk assessment of every hospitalised patient becomes a reality. VTE exemplar centres will assist this process, with King's College Hospital leading the way as the first NHS centre.



Dr Arya, front centre, and the team at King's College Hospital.

THROMBOPROPHYLAXIS

The evidence that appropriate thromboprophylaxis (TP) reduces the burden of disease is well established. Prevention of VTE was classed by the US Agency for Healthcare Research and Quality as the highest-ranking safety practice in our hospitals. The CMO's expert group made recommendations for TP of VTE in medical patients and those surgical patients not covered by the NICE guidelines (*Table 1: see overleaf*). NICE guidance looks at high-risk surgical and orthopaedic patients and the expert group advises that for this group of patients NICE recommendations should be followed.

Once-daily injections of LMWH are the mainstay of pharmacological prophylaxis in medical and surgical patients for reasons of efficacy, safety and convenience. In the not too distant future, oral agents such as direct thrombin inhibitors and direct factor Xa inhibitors will add to the TP armamentarium. Hospital TP guidelines should contain clear guidance about appropriate use of LMWHs. To dispel confusion, most Trusts have switched to use of a single LMWH for all indications including

VTE expert working group's recommends:

- In medical patients low molecular weight heparins (LMWH) are the preferred prophylaxis and evidence for mechanical measures is lacking.
- In intermediate risk surgical patients, graduated compression stockings together with LMWH are recommended.
- Aspirin is inappropriate for VTE prevention.

NICE guidance for thromboprophylaxis in surgical patients:

- Includes both mechanical and pharmacological measures.
- Patients at high-risk of VTE such as surgical patients with additional risk factors and orthopaedic patients receive pharmacological prophylaxis in addition to graduated compression stockings.
- Extended prophylaxis is recommended for very high risk patients such as hip replacement patients with additional risk factors and all hip fracture patients.

prevention and treatment of VTE as well as for cardiac patients. Local TP guidelines should contain clear recommendations on LMWH dosing especially in renal failure and extremes of body weight. *continued on page 2* →

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There should also be clear guidance on epidural and spinal analgesia in patients receiving LMWH and the timing of LMWH prophylaxis in relation to surgery. Implementation of NICE guidelines on extended prophylaxis also requires special attention. Close collaboration with local PCTs is essential for extended prophylaxis to be a success.

After it has been agreed as a local policy by clinicians and the thrombosis committee, resource issues need to be addressed along with practical matters such as arrangements for prescription and administration of LMWH and for performing a full blood count to exclude heparin-induced thrombocytopenia.

“Close collaboration with local Primary Care Trusts is essential for extended prophylaxis to be a success.”

TABLE 1. The independent expert working group recommends:

- A systematic integrated approach to VTE prevention.
- Documented mandatory risk assessment of every hospitalised patient on admission.
- VTE risk assessment be embedded within Trust risk management framework and be monitored by the Healthcare Commission.
- Improved public and professional education regarding VTE.
- Strategies for thromboprophylaxis.
- VTE exemplar centres to promote best practice.

RISK ASSESSMENT FOR VTE

To prevent VTE, the at-risk patient has to be identified, counselled and then given appropriate prophylaxis. Risk assessment is the first step in the thromboprophylaxis (TP) pathway

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hence the recommendation from the VTE expert group and NICE for a documented mandatory risk assessment of every hospitalised patient on admission. This is required to be incorporated into a Trust's risk management framework and open to inspection by the Healthcare Commission.

Risk assessment is a key performance measure as it at triggers the pathway and ensures appropriate delivery of prophylaxis provided local guidelines are in place. The target is 100% compliance with risk assessment within 24 hours of admission to hospital.

Risk assessment has always been part of TP practice and use of guidelines for surgical and medical TP is wide-spread in UK hospitals. What has changed is that risk assessment needs to be shown to have been performed and be amenable to audit. To allow this, a risk assessment tool will need to be developed and incorporated into a patient's medical and treatment record.

Risk assessment tools will evolve from existing guidelines for TP; there is no need to 'reinvent the wheel' – several models are already available and may be adapted to suit local requirements and consensus. The CMO's IWG will also develop a national risk assessment tool that will form part of Connecting for Health/NHS Choices.

DEVELOPING A RISK ASSESSMENT TOOL FOR VTE

It is important that a risk assessment tool accurately identify patients at risk of VTE (Table 2: see opposite). It should predict the correct risk level and reliably exclude patients without a beneficial risk-benefit ratio. Most importantly, it should be simple to use in practice. There are generally two approaches to VTE risk assessment.

The first is an individualised or 'opt-in' approach wherein the risk of VTE in each patient is considered based on his or her predisposing factors and current illness or procedure. Risk stratification or risk scores determine the composite risk estimate that enables a decision regarding TP. The second is the exclusion or 'opt-out' approach that delivers group-specific prophylaxis routinely for all patients in the major target groups. So far no risk assessment model has been formally validated but generally speaking the latter approach is less complex and encourages better compliance.

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At King's we have an exclusion protocol for medical patients. All patients in the main target group (Age >40 years and hospitalised with an acute medical illness) are considered for TP. All too often an exclusion protocol is equated to an unthinking approach where all patients will automatically receive TP with its attendant risks particularly of bleeding.

In practice this is not the case: the guideline triggers the action of risk assessment but also makes explicit



Anticoagulation Thrombosis team members assessing VTE risk in a surgical patient: Pharmacist Rosalind Perrott, Nurse Lynda Bonner and patient.

the contraindications to LMWH as well as the evidence-based acute conditions and risk factors that may lead to VTE when combined with immobility. The double-sided pocket card comprises our guidelines for medical TP but may easily be converted into a risk assessment tool by use of an accompanying sticker or form confirming that risk assessment has taken place.

'OPT-IN' APPROACH

In my opinion, surgical risk assessment is better served by an individualised or 'opt-in' approach since the surgical procedure carries its own risks of thrombosis and bleeding that combine with the patient-related VTE risk factors to determine the composite risk.

Most surgical guidelines are based on risk stratification into risk categories dependent on the type and length of surgery, the patient's age and presence of additional risk factors. Such guidelines have been in everyday use in most hospitals for over a decade. To convert such guidance into a risk assessment form would require explicit documentation of the risk categories, additional risk factors, contraindications and the recommended prophylaxis. When accompanied by tick boxes these parameters would constitute a risk assessment tool that would include

patient details and the doctor or nurse's signature conferring clinical accountability.

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With regard to risk assessment tools it is clear that 'one size does not fit all.' At the very least, separate risk assessment tools will be required for medical and surgical patients. Obstetric patients are already covered by clear guidance contained in the 'green top' guidelines from the Royal College of Obstetricians and Gynaecologists. With surgical patients there is a difference in the approach to thromboprophylaxis between orthopaedic patients, general surgical patients and neurosurgery patients. The balance between mechanical and

pharmacological prophylaxis should be calibrated according to the surgical setting. Most at-risk surgical patients should receive pharmacological prophylaxis but the risk-benefit ratio in some neurosurgical patients might favour mechanical prophylaxis due to the risk of intracranial bleeding.

FORMAT

The format of the risk assessment tool should also be decided and might include an A4 form for filing in the notes or a sticker for the drug chart or patient notes.

In the short-term, risk assessment tools are likely to be paper based but should in future be replaced in our Trusts by an electronic alert system that ensures universal VTE risk assessment in hospitalised patients. Systems will also require to be instituted for regular audit of risk assessment.

As a minimum requirement it will be important to determine whether the patient has been risk assessed for VTE but all steps in the pathway should be amenable to audit including risk assessment, patient counselling and delivery of appropriate prophylaxis.

TABLE 2. How to develop a VTE risk assessment tool:

- Local champion or thrombosis committee to lead
- Consult with stakeholders in Trust
- Consider specialty-specific guidance
- Link risk assessment to delivery of thromboprophylaxis
- Agree on risk assessment strategy and appropriate prophylaxis
- Decide regarding 'opt-in' versus 'opt-out' approach
- Use simple format that is amenable to audit
- Ensure clinical accountability



Roopen Arya, VTE Services Lead, Pharmacist Rosalind Perrott and Nurse Lynda Bonner

AWARENESS AND EDUCATION

For too long VTE has been, in the CMO's words, a 'Cinderella issue'. The awareness of VTE amongst the public as well as healthcare professionals remains limited. The VTE expert group recommended measures to improve public and professional understanding at a national level.

Empowerment of patients and the public by better communication and the provision of suitable patient literature will be essential. The VTE expert group recommended improvements in professional education about VTE and recent initiatives should ensure that VTE prevention is included in medical, nursing and pharmacy curricula in the future.

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At a local level it is important to promote awareness of VTE amongst colleagues and patients. VTE should also be high up on the Trust's Clinical Risk Management agenda. The healthcare system is currently understandably obsessed with infection control but VTE in hospitalised patients is an equally important public health issue. Simple measures, such as notification letters from the DVT team to the responsible consultants if the DVT patient was recently a hospital inpatient, are extremely effective in raising awareness. Educational seminars for medical, nursing and pharmacy colleagues about the recent VTE risk assessment initiatives are also essential. It is anticipated that centralised educational and audit material will help support local implementation programmes.

THE WAY FORWARD: THE PHARMACIST ROLE

The CMO's expert group recommend a systematic approach to VTE prevention. This requires explicit policies and procedures within our Trusts to guide VTE risk assessment and thromboprophylaxis. While national guidance and templates for VTE risk assessment tools are likely to be available in the future, it is time to act now to transform existing thromboprophylaxis guidelines into risk assessment tools.

Existing examples of risk assessment tools are readily available from exemplar centres like King's as well as many other hospitals and it is down to local thrombosis committees and stakeholders to decide on the risk assessment strategy and intervention that is acceptable to them. Pharmacists will play a key role in VTE prevention. They should help develop the risk assessment tool and thromboprophylaxis guidance and have an important role in educating medical, nursing and pharmacy colleagues.

In many hospitals they have also taken the lead in ensuring compliance with VTE guidance and auditing risk assessment and thromboprophylaxis across different specialties. Ultimately, systems to monitor the impact of these interventions on patient outcomes in our Trusts are essential.”

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DVT Safety Zone

A comprehensive range of tools are available to download from the website including:

- training presentations
- template audit forms
- educational booklets for patients
- awareness posters to be displayed in staff areas and wards
- example protocols.

Templates that allow hospitals to share their DVT Safety Zone “good news story” with their local media are also provided. Housing all the materials on the website means it is possible to keep them continually updated and new items can be added when required.

To learn more on how you can help reduce VTE in your hospital, please visit www.dvtsafetyzone.co.uk

Register as a healthcare professional and start today by making your hospital a DVT Safety Zone. Provided as a service to medicine by sanofi-aventis.