VTE... Going beyond Risk Assessment

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20 April 2015

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National VTE Prevention Programme Manager
What is VTE?

- Venous Thromboembolism is a collective term for deep vein thrombosis (DVT) & pulmonary embolism (PE)
- Incidence 1-2 per 1000 population
- Around 64,000 cases in England every year
- Mortality rate ~10%
- Risk of developing VTE increases with age
- Estimated that 50% of cases are associated with hospitalisation
- As many as 2/3 of cases of Hospital-Associated Thrombosis (HAT) are preventable

www.england.nhs.uk
Adaptive strategy and consistent pressure ensures VTE prevention is made a clinical priority.

NHS Prioritisation leads to Focal Point for Change, which includes initiatives such as NICE CG46, Exemplar Centre website, APPTG, CMO announcements, Leadership Summit, Risk Assessment template, NICE QS3, CQUIN, RA data collection, CQUIN goal reached, and VTE in NHS standard contract.

Over time, from 2005 to Present, the journey includes milestones such as 2009: Risk Assessment figs now at 96%, 2011: Present, and new e-learning modules, Self-assessment tool, and VTE in NHS standard contract.
NHS England: Global Leaders

- Comprehensive, systematic approach to VTE prevention
- NHS England VTE Prevention Programme is the first national initiative of its kind anywhere in the world
- Key patient safety initiative:
  - Delivering high quality care
  - Reducing avoidable harm from VTE
  - Making hospitals safer
- Leadership from NHS, parliamentarians, charities….
- Striving for excellence – VTE Exemplar Centres Network
- Delivered change, enabled by levers provided by NHS
- Risk Assessment rates have risen from <50% in 2010
- Now stand at 96%
The impact of CQUIN

Figure 1: Proportion of adult hospital admissions risk assessed for VTE, England (Quarter 2 2010/11 to Quarter 3 2014/15)

- **NHS acute providers**
- **Primary Care Trust Providers**
- **Independent Sector Providers**
- **All providers of NHS funded acute care**

Note: 'NHS acute providers' & 'All providers of NHS funded acute care' overlap.
**Former national CQUIN indicators**

34.15 Where national CQUIN indicators have been in place for a number of years, with most providers having embedded the good practice described in the indicator within their local working arrangements, it is normal for the indicator to be retired from the national CQUIN scheme, with its place taken by new, more challenging national indicators.

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34.16 In such cases, additional requirements in relation to the ‘retired’ indicators will be included in the NHS Standard Contract – and this is now the case for three such indicators.

- **Venous Thromboembolism (VTE).** The national quality requirement (set out in Schedule 4B) remains that acute providers must undertake risk assessments for at least 95% of Service Users each month, with financial sanctions applying where this is not achieved. Requirements to undertake root cause analyses and audits of provision of prophylaxis are set out in SC22, and the provider must report on these under the Reporting Requirements (Schedule 6B).
VTE Risk Assessment is a National Quality Requirement

NHS Standard Contract 2015/16

Schedule 4B:

| VTE risk assessment: all inpatient Service Users undergoing risk assessment for VTE, as defined in Contract Technical Guidance | 95% | Review of monthly Service Quality Performance Report | Where the number of breaches in the month exceeds the tolerance permitted by the threshold, £200 in respect of each excess breach above that threshold |
Service Conditions in the Contract

2015/16 NHS STANDARD CONTRACT SERVICE CONDITIONS

SC22 Venous Thromboembolism

22.1 The Provider must:

22.1.1 comply with Guidance (including NICE Guidance) in relation to venous thromboembolism;

22.1.2 perform Root Cause Analysis of all confirmed cases of pulmonary embolism and deep vein thrombosis acquired by Service Users while in hospital (both arising during a current hospital stay and where there is a history of hospital admission within the last 3 months, but not in respect of Service Users admitted to hospital with a confirmed venous thromboembolism but no history of an admission to hospital within the previous 3 months); and

22.1.3 perform local audits of Service Users’ risk of venous thromboembolism and of the percentage of Service Users assessed for venous thromboembolism who receive the appropriate prophylaxis,

and the Provider must report the results of those Root Cause Analyses and audits to the Co-ordinating Commissioner.
Going beyond Risk Assessment…

• Reducing harm from VTE is about so much more than just ‘ticking the risk assessment box’

• Need to ‘get behind’ the headline data

• Need to look at the quality of care that patients are receiving

• **NICE QS3**
What does Best Practice look like?..

<table>
<thead>
<tr>
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<th>NICE Quality Standard for VTE Prevention (QS3)</th>
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<tbody>
<tr>
<td>1</td>
<td>All patients, on admission, receive an assessment of VTE and bleeding risk using the clinical risk assessment criteria described in the national tool.</td>
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<td>2</td>
<td>Patients/carers are offered verbal and written information on VTE prevention as part of the admission process.</td>
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<tr>
<td>3</td>
<td>Patients provided with anti-embolism stockings have them fitted and monitored in accordance with NICE guidance.</td>
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<tr>
<td>4</td>
<td>Patients are re-assessed within 24 hours of admission for risk of VTE and bleeding.</td>
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<tr>
<td>5</td>
<td>Patients assessed to be at risk of VTE are offered VTE prophylaxis in accordance with NICE guidance.</td>
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<tr>
<td>6</td>
<td>Patients/carers are offered verbal and written information on VTE prevention as part of the discharge process.</td>
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<tr>
<td>7</td>
<td>Patients are offered extended (post hospital) VTE prophylaxis in accordance with NICE guidance.</td>
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Getting behind RA data….

- Commissioners: use available contracting levers to drive up quality and include quality statements in service specifications
- Primary Care: important role to play pre-elective admission & post discharge - ensuring appropriate pathways are in place so that patients with suspected VTE are seen in a timely fashion
- Exemplar Centres: important role in leading improvement locally
VTE Exemplar Centres
Providing leadership in thrombosis care

Please select the location for more information:
Improving Outcomes

Improvement has been demonstrated. Corroborated by 3 studies:

- QI data at trust level: increased risk assessment, decrease in rates of HAT, increased rates of appropriate TP, reduction of inadequate prophylaxis,

- QuORU: 15% reduction in mortality nationally when 90% risk assessment goal reached

- Catterick & Hunt: in 2011 & 2012, around 940 deaths owing to VTE have been avoided in England.
Case Study: King’s College Hospital

- Thrombosis committee established 1999 – an instrument for clinical governance and driving change
- Leader of VTE Exemplar Centres Network established 2007
- Director King’s Thrombosis Centre is clinical lead for the National VTE Prevention Programme and chair of VTE Board
- Considers programme to be the largest successful quality improvement initiative in the NHS over last 20 years
- Continuous monitoring of outcomes:
  - VTE risk assessment is key performance indicator
  - Regular audit vs NICE VTE prevention Quality Standard
  - Registry for RCA of cases of hospital-associated thrombosis
Preventing VTE

Link Nurse/Midwives

Thrombosis team

Staff education

Supportive managers

Audit programme

Patient information

Electronic VTEp systems

RCA of HAT cases

VTE Prevention

Preventing VTE
Comprehensive VTE Prevention Program Incorporating Mandatory Risk Assessment Reduces the Incidence of Hospital-Associated Thrombosis

Lara N. Roberts, MD; Gayle Porter, MSc Adult Nursing; Richard D. Barker, MD; Richard Yorke, BSc(Hons); Lynda Bonner, PGDip; Raj K. Patel, MD; and Roopen Arya, PhD
VTE Prevention Programme Reduces Hospital-Associated VTE

- QI project at King’s College Hospital 2010-12
- Mandatory, documented VTE risk assessment, thromboprophylaxis & guidance
- Mandatory VTE education
- Identification of hospital-associated VTE via root cause analysis

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<th>2010-11</th>
<th>2011-12</th>
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<tbody>
<tr>
<td>VTE risk assessment</td>
<td>63% (38-88)</td>
<td>93% (90-97)</td>
<td></td>
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<tr>
<td>HA-VTE</td>
<td>236</td>
<td>189</td>
<td>0.014</td>
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<tr>
<td></td>
<td>19.7/month</td>
<td>15.8/month</td>
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<tr>
<td>Inadequate prophylaxis</td>
<td>37%</td>
<td>21%</td>
<td>0.005</td>
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<tr>
<td>among HA-VTE</td>
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Roberts et al - Chest 2013;144:1276; Geerts 2014
The importance of Ongoing Education

• Over the last 12 months, the national programme has been working in partnership with HEE to develop suite of e-learning modules

• Aimed at:
  • Secondary Care
  • Undergraduates
  • Commissioners
  • Primary Care

• Launched November 2014
• Free to access on e-LfH
• http://www.e-lfh.org.uk/programmes/vte
Venous Thromboembolism (VTE) Prevention

A 15-minute e-learning course designed for hospital training programmes

AUTHORS: Dr Lara Roberts
Professor Roopen Arya

This e-learning resource is designed to help nurses, pharmacists and junior doctors understand quickly the concept of hospital-associated venous thromboembolism, how to prevent it and to identify which steps of the prevention pathway are necessary to audit.

The programme in its original format belongs to King's College Hospital NHS Foundation Trust and intellectual property ownership of the original work belongs to Roopen Arya.

Developed with the assistance of Edge Medical (www.madebyedge.com)

www.england.nhs.uk
There are many risk factors for developing VTE when hospitalised. Some are pre-existing patient related factors, which are usually not reversible, e.g. advanced age, or a carrier of a particular type of thrombophilia (e.g. Factor V Leiden) and some are related to the reason for admission to hospital, e.g. orthopaedic surgery leading to prolonged immobility or community acquired pneumonia requiring a hospital admission in an elderly patient.

The risk of VTE in a hospitalised patient depends not only on the reason for their hospital admission, but also on pre-existing patient-related factors.

Some VTE risk factors are gender specific. For example, the gravid state is a well-recognised risk factor for VTE. For many years in the Western world, thrombosis and thromboembolism have been the leading causes of direct maternal morbidity and mortality. Risk assessing pregnant women for VTE is important throughout pregnancy and the postnatal period, and when appropriate, preventative measures should be prescribed.

Some risk factors can extend beyond their hospital admission. For example, elective orthopaedic surgery is a recognised risk factor for the development of VTE. In such patients, preventative measures extend beyond their hospital admission until the risk is thought to have diminished, and therefore pharmacological thromboprophylaxis is prescribed for up to 5 weeks post procedure.
Here is a quick checklist that commissioners can use when engaging with providers on the subject of VTE prevention. **Click on the checkbox.**

<table>
<thead>
<tr>
<th>Checklist Item</th>
<th>Status</th>
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<tr>
<td>Ensure that sanctions are applied for breaches of the threshold of 95% in the National Quality Requirement for VTE Risk Assessment, or consider using the flexibility that is now available to commissioners in the contract through local variation to determine how good performance can be incentivised</td>
<td>✔️</td>
</tr>
<tr>
<td>Ensure that providers are meeting SC20 in the NHS Standard Contract by requesting evidence of audits that have been undertaken locally to determine the percentage of patients receiving appropriate prophylaxis following VTE risk assessment. This will identify areas for improvement and ensure that risk assessment is not just a 'tick box exercise'</td>
<td>✔️</td>
</tr>
<tr>
<td>Ensure that providers are meeting SC20 in the NHS Standard Contract by requesting a report on the results of root cause analysis carried out on confirmed cases of VTE acquired by Service Users while in hospital. This will provide you, the commissioner, with a clear understanding of the number of cases of hospital acquired thrombosis in your local population and figures that can be used to monitor improvement in outcomes for patients</td>
<td>✔️</td>
</tr>
<tr>
<td>Consider using the measures within NICE Q53 to negotiate contracts and establish KPIs in service specifications. This will provide a baseline from which improvement can be measured and rewarded - enabling you the commissioner to address any gaps in service provision, support best practice and encourage evidence-based treatment and care in VTE prevention</td>
<td>✔️</td>
</tr>
<tr>
<td>Consider the use of local CQUINs for VTE prevention to incentivise performance</td>
<td>✔️</td>
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<tr>
<td>Ensure that appropriate metrics for VTE are included in local patient safety / quality dashboards and in terms of penalties for not reporting, consider the use of contract queries and performance notices</td>
<td>✔️</td>
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Click on the links below.

It is important to consider the possibility of DVT or PE in patients with the following clinical features, particularly if they are at increased risk of developing VTE, which includes the period after a hospital admission (3 months):

- [Presenting features of DVT](#)
- [Presenting features of PE](#)

These symptoms may be very subtle and therefore knowledge of risk factors is essential.

Patients with suspected VTE should be investigated and treated in a timely manner. If there is a delay in investigations being performed, an interim therapeutic dose of anticoagulation should be given.

For further information, please refer to NICE Quality Standard 29: The Diagnosis and Management of Venous Thromboembolic Diseases.

This picture shows skin changes that can be associated with chronic raised venous pressure from a previous DVT. These patients can develop new DVT and may describe an increase in pain or swelling.
Patient Empowerment

Providing Information for patients/families/carers goes hand in hand with professional education & engagement

NHS Choices:
- Self-Assessment tool
- Paul Robinson story in Video

www.nhs.uk/bloodclots
“I hope that me telling my story makes people think and that it helps even a few..”

Paul Robinson,
Blackburn Rovers & former England International Goalkeeper

September 2014