

**Health and Social Care Committee**  
**One-day inquiry into venous thrombo-embolism prevention**  
**VTE 14 – Hywel Dda Health Board**



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Hywel Dda Local Health Board, response to the National Assembly for Wales Health and Social Care Committee One Day Inquiry into venous thrombo-embolism (VTE) prevention in hospitalised patients in Wales.

**Purpose of Paper**

This paper provides evidence to the Health & Social Care Committee's One Day Inquiry into venous thrombo-embolism (VTE) prevention in hospitalised patients on the extent to which the guidance by the National Institute for Clinical Excellence (NICE) and the risk assessment tool by 1000 Lives Plus have been implemented by Hywel Dda Local Health Board (LHB).

**Background**

Hywel Dda LHB is at the heart of local healthcare for mid and south west Wales. The organisation, formed in 2009, is responsible for providing all the necessary healthcare services for Carmarthenshire, Ceredigion and Pembrokeshire and also improving the health and general wellbeing of its community. The organisation brings together community, primary and secondary care services for around 375,000 people across all their counties and beyond.

There are four acute hospitals:

- Bronglais General Hospital, Aberystwyth;
- Prince Philip Hospital, Llanelli;
- Glangwili General Hospital, Carmarthen;
- Withybush General Hospital, Haverfordwest.

Acute and community services are also provided by:

- 8 community hospitals;
- 15 health centres, and other accommodation.

Primary care services are provided mainly through contractors, including:

- 55 GP practices (main sites)
- 51 Dental Practices (67 dental contracts);
- 99 Community Pharmacies;
- 51 Optometric Practices

There are further numerous locations and settings providing Mental Health, Learning Disabilities, Rehabilitation, Psychotherapy and Neurophysiology services.

**Health and Social Care Committee**  
**One-day inquiry into venous thrombo-embolism prevention**  
**VTE 14 – Hywel Dda Health Board**



### **Introduction**

Any VTE occurring within 90 days of a hospital admission is classed as a hospital-acquired VTE.

Hospital-acquired VTE, ranging from asymptomatic deep vein thrombosis (DVT) to massive pulmonary embolism (PE), is common during and after hospital admission and is considered a significant cause of morbidity and mortality in hospitalized patients. There could be an estimated 60,000 deaths due to pulmonary embolism (PE) in the UK, although the Office for National Statistics for England records the recognised figure on death certificates in 2010 as 6,000. It is recognised that death due to PE is under diagnosed and that for every case where PE is stated as a cause of death in hospital, there are usually another two patients where the diagnosis was missed. There were 284,000 hospital deaths in England and Wales in 2007, and the VITAE European study estimated that 12% of these deaths were due to PE. However post-mortem studies describe a falling incidence from around 10% of hospital deaths around 1980 to around 2% in more recent studies. Of course the use of primary thromboprophylaxis will have impacted on this decline, change in practice means patients mobilise quickly and will be sent home earlier, and that most PE deaths will occur after discharge.

It is estimated that two thirds of PE are hospital-acquired and that 70% of deaths occur in medical rather than surgical patients. The risk of VTE in medical admissions varies from 15% in general medical patients to 50% in stroke patients, while clinically recognised PE occurs in 1% of general medical patients.

It is also recognised that the risk of VTE exists for up to 90 days after admission, and that many VTE occur post discharge. Furthermore VTE is often clinically silent, for 80% of DVT have no clinical signs and yet can result in long term sequelae of the post thrombotic syndrome.

### **Implementation of NICE guidance**

Policies and protocols for the prevention of venous thrombo-embolism in both surgical and medical in-patients, were in place in the constituent NHS Trusts of the Hywel Dda LHB, for a number of years prior to the publication of the NICE guidance.

**Health and Social Care Committee**  
**One-day inquiry into venous thrombo-embolism prevention**  
**VTE 14 – Hywel Dda Health Board**



In April 2007, NICE published Clinical Guideline (CG) 46 'Reducing the risk of venous thrombo-embolism in in-patients undergoing surgery'. This guidance was updated and replaced in January 2010 by CG92 'Reducing the risk of venous thrombo-embolism (deep vein thrombosis and pulmonary embolism) in patients admitted to hospital.

Following the publication of CG 46, an audit programme was initiated to monitor and facilitate its implementation within the surgical specialties. In July 2009, the Hywel Dda Thrombosis Committee (which reports to the Medicine Management Group) held its inaugural meeting. The overall purpose of the Thrombosis Committee is 'to develop and oversee the implementation of guidelines for prevention and management of thrombo-embolism across Hywel Dda Local Health Board'.

In December 2009, the All Wales Thrombosis Group launched the All Wales Thromboprophylaxis Risk Assessment Tool which following review and inclusion of a limited number of drug options by the Hywel Dda Thrombosis Committee was adopted within Hywel Dda LHB, initially within surgical pre-assessment clinics. However, further discussion across Hywel Dda LHB was required to move towards a consistent approach in the product prescribed for low molecular weight Heparin and this was referred to the Medicine Management Group. This delayed the roll out of the All Wales Thromboprophylaxis Risk Assessment tools across all relevant specialties.

An Audit undertaken in Prince Philip Hospital (PPH) in 2005 identified that approximately 40% of patients received prophylaxis. And a further audit in 2010 identified that approximately 46% of patients received prophylaxis.

**Implementation of the 1000 Lives Plus VTE Risk Assessment Tools**

Following the launch of the 1000 Lives Plus Programme area 'Reducing Harm from Hospital Acquired Thrombosis' (HAT) in May 2010, the implementation of HAT became an organizational priority for Hywel Dda LHB as demonstrated by the appointment of an executive lead for HAT. In order to progress the HAT collaborative a Hywel Dda HAT Implementation Group was established which enabled a more focused approach to progressing the various elements in support of the successful implementation of HAT across the 4 District Hospitals, within all specialties.

VTE Risk Assessment Tool: the VTE Risk Assessment Forms were 'localised' for use across Hywel Dda LHB, including achievement of consistent approach to the prescribing of low molecular weight Heparin, therefore harmonizing practice across Hywel Dda LHB.

**Health and Social Care Committee**  
**One-day inquiry into venous thrombo-embolism prevention**  
**VTE 14 – Hywel Dda Health Board**



Launch of 1000 Lives Plus HAT

On the 17<sup>th</sup> October 2011 following awareness raising through a variety of means such as letter by Medical Director, notification via Global Email, introduction at Grand Round, the VTE Risk Assessment forms were launched in the acute hospitals for all specialties.

Audit

See Effectiveness & utilisation of pharmacological & Mechanical prophylaxis for VTE.

Given the progress made, the Hywel Dda HAT Implementation Group has now been disbanded to be replaced by 4 hospital based HAT Implementation Groups, which will engender greater local ownership of the continued implementation of HAT across the 4 District Hospitals. These 4 Hospital HAT Implementation Groups will report directly to the County Quality & Safety Committees in line with the other 1000 Lives Plus Collaboratives as well as to the Hywel Dda Thrombosis Committee.

The Hywel Dda Thrombosis Committee fulfils the role of HAT Steering Group and will support the implementation of HAT within each of the District Hospitals by addressing organisation wide issues such as development of Thrombosis Policy, education of medical staff, monitoring/performance management including the development of process for the calculation of a reliable VTR rate and management operational systems, patient information leaflets and future spread of HAT prevention into the Community Hospitals.

Thrombosis Policy

All thrombosis related guidance, protocols, and policies currently in place within Hywel Dda LHB have been collated and reviewed by the Hywel Dda Thrombosis Committee. An overarching Thrombosis Policy will be drafted which will 'house' all the relevant guidance, protocols, policies.

An Anti-Embolic Stocking (AES) Policy has been approved which ensures a consistent approach to the care of all patients admitted to hospital that have been prescribed AES and in line with the 1000 Lives Plus HAT Programme.

Education of Medical Staff:

Clinical Leads and Consultant Haematologists in each area have provided education to clinicians on the introduction and completion of the VTE Risk Assessment forms. In addition, they have also attended Senior Nurse Meetings and met with Anaesthetic and Orthopaedic Teams to promote the importance of

**Health and Social Care Committee**  
**One-day inquiry into venous thrombo-embolism prevention**  
**VTE 14 – Hywel Dda Health Board**



the prevention of HAT and completion of the VTE Risk Assessment forms. Furthermore, the Quality Improvement Managers within each of the district hospitals and the Clinical Nurse Leads undertake spot checks of compliance on the wards and reinforce the need for VTE Risk Assessment forms to be completed.

To improve compliance, VTE Risk Assessment forms are kept with the drug chart at the bottom of the patient's bed and it is intended that Consultants will reinforce the need for a VTE risk assessment on the post take ward round.

Presentation of audit results on the compliance with VTE risk assessments at the Whole Hospital Clinical Audit Meetings, contribute to medical staff learning and contribute to ongoing awareness for the requirement of VTE risk assessments to be undertaken.

It is recognized that formal ongoing education with regard to preventing venous thrombo-embolism (VTE) in hospitalised patients is required given the four monthly rotations of Junior Doctors; the clinical leads and consultant haematologists will address this through using the teaching slots at the Junior Doctors Induction.

Monitoring/Performance Management/VTE rate:

The 1000 Lives Plus HAT programme stipulates that 'the number of VTE risk assessment forms completed' is the only compulsory outcome measure required. Although, in addition there are the following 1000 Lives Plus Process Measures:

- % of all adult in-patients who have had a HAT risk Assessment on admission to hospital using a national tool.
- % receiving appropriate HAT prophylaxis: % of in-patients receiving the prophylaxis identified by their risk Assessment.
- % of in-patients whose risk Assessment is reviewed and documented at 48 hours.
- % of patients who have been in hospital in the last 3 months who developed a DVT or PE (VTE rate)

Monitoring/Performance Management processes are required to be put in place for the data collection and subsequent performance reporting of the outcome/process measures, particularly the VTR rate for Hywel Dda LHB.

Work has commenced on developing a process to establish the VTR rate based around the 'How to guidance' from Mel Baker. After discussions with

**Health and Social Care Committee**  
**One-day inquiry into venous thrombo-embolism prevention**  
**VTE 14 – Hywel Dda Health Board**



the Radiology and Information Departments it was highlighted that the use of Pathology codes would make this process more straightforward and these have been introduced from 01/02/2012. The first 3 months worth of data is currently being quality assured, with a view to report Hywel Dda's VTE rate in the near future.

Patient Information Leaflets:

Patient information leaflets provided by EIDO Healthcare are given to patients in pre-assessment clinic and for any patients requiring additional information, the NICE guidelines are available.

Patient information is also provided in line with the AES policy.

**Effectiveness & utilisation of pharmacological & Mechanical prophylaxis for VTE**

An Audit of the use of VTE Risk Assessment forms and whether VTE thrombophylaxis was prescribed in admitted medical patients at AMAU/CDU at Prince Phillip Hospital (PPH) in November 2011 demonstrated an increase in patients receiving appropriate prophylaxis. The audit found that 61% of medical patients received prophylaxis; however only 32% of patients admitted had a VTE Risk Assessment form completed. The recommendations from the initial audit therefore included:

- All admissions should have a documented risk assessment using the thromboprophylaxis form.
- All patients who are risk assessed as requiring Clexane should have it prescribed.
- Patients with deranged renal function should have their EGFR checked and Clexane dose adjusted appropriately.
- Patient weight should be documented on the VTE Risk Assessment form.
- The VTE Risk Assessment form should be kept with the drug chart and reviewed every 48 hours.

Comparison with previous audits does show that with the introduction of VTE Risk Assessment forms more medical patients received appropriate prophylaxis.

- 2005: 40% appropriately received prophylaxis
- 2010: 46% appropriately received prophylaxis
- 2011: 61% appropriately received prophylaxis

A re-audit at Prince Phillip Hospital will occur in the week starting 30/04/2012.

**Health and Social Care Committee**  
**One-day inquiry into venous thrombo-embolism prevention**  
**VTE 14 – Hywel Dda Health Board**



At Glangwili General Hospital the audit is being performed on 9 medical wards, over 9 different days during the month of May. The audit involves confirming whether a VTE risk assessment has occurred including the use of the VTE Risk Assessment form, whether appropriate VTE thromboprophylaxis has been prescribed and if not prescribed whether this has clearly been documented with the medical notes.

The implementation of the VTE Risk Assessment forms for Acute Medical Admissions was monitored during September and October in Bronglais General Hospital. During October 14 out of 15 (93%) patients had a VTE Risk Assessment form included in their medical notes. 13% of VTE Risk Assessment forms were completed correctly and 93% of patients received thromboprophylaxis. It was recommended for this compliance data to be shared with leads for the 1000 Lives Plus HAT collaborative for review and improvement in completing and evidencing the VTE risk assessment process is robust. During the month of January 2012, a sample of all admissions were audited Bronglais General Hospital. The results of this audit will be presented on the 10<sup>th</sup> May at the Bronglais Hospital Whole Hospital Audit.

In addition, audit of surgical / orthopaedic practice needs to be established in order to have a complete picture of implementation across all specialties across all the hospitals.

**Particular problems in the implementation and delivery of VTE prevention actions**

Whilst Nursing staff can facilitate through promoting and reminding the completion of the VTE Risk Assessment forms, the responsibility for the assessment of patients and completion of the VTE Risk Assessment forms lies with Medical staff. Due to the turnover of Junior Medical staff there is a requirement for ongoing education in order to increase the reliability of the completion of the VTE Risk Assessment forms but more importantly the timely provision of the appropriate thromboprophylaxis for patients.

The key nursing role is to facilitate the measurement, supply, application and subsequent in-hospital and home-based care of the appropriate size mechanical thromboprophylaxis i.e. the Anti Embolic Stockings (AES). Nursing staff also provide patient information and administer the prescribed low molecular weight Heparin and finally, ensure patients understand the regime they are undergoing for VTE prevention and why.

**Health and Social Care Committee**  
**One-day inquiry into venous thrombo-embolism prevention**  
**VTE 14 – Hywel Dda Health Board**



**Conclusion**

Hywel Dda LHB has taken positive steps towards reducing the risk of in-patients acquiring a venous thrombo-embolism and therefore reducing the harm to which patients may be exposed, reducing the variation of service delivery and clinical outcomes and reducing the waste through the avoidance of patients developing complications. This has enhanced the quality of the health care provided and patient safety.

However, Hywel Dda LHB has a number of areas to further progress in order to fully embed the VTE risk assessment process and achieve full compliance with the recommended prophylactic regime into the daily practice of all its staff in all clinical areas across the HB.

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