Health and Social Care Committee
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One-day inquiry into venous thrombo-embolism prevention – Evidence from Aneurin Bevan Health Board

National Assembly for Wales' Health and Social Care Committee
Inquiry into Venous Thrombo-Embolism Prevention in Hospitalised Patients

Aneurin Bevan Health Board evidence

Introduction

The House of Commons Health Committee reported in 2005 that an estimated 25,000 people in the UK die from preventable hospital-acquired venous thromboembolism (VTE) every year. However, in addition to an unacceptable mortality rate due to preventable VTE, it is important not to ignore the effects of *harm* to patients who acquire a preventable venous thrombo-embolism. Reliable Risk Assessment and treatment, also engagement of patients and families in their care is of paramount importance to reduce the risks of mortality and harm due to Hospital Acquired Thrombosis (HAT).

Aneurin Bevan Health Board takes the risks to patients of hospital acquired thrombosis very seriously and has worked hard to implement the recommendations made in NICE Clinical Guidelines 92 and has fully engaged with the 1000 Lives Plus mini-collaborative work to reduce the risk of HAT. The Medical Director is the executive lead for this work and reduction of HAT is expressed as an ABHB priority to improve the safety of patient care through the ABHB Mortality Driver Diagram.

Implementation of NICE Guidance

The ABHB Thrombosis Committee is a multidisciplinary group which has a responsibility for implementing NICE Clinical Guidance 92: reducing the risk of VTE in patients admitted to hospital and the ABHB Haematologist Clinical Lead for this guidance chairs this group. The group's membership includes representation from the 1000 Lives Faculty, consultant staff, pharmacy, pathology, theatres, anticoagulation service and quality improvement. NICE Technology Appraisal recommendations around pharmacological interventions to prevent thrombosis are also discussed at this group. Clinical policies have been implemented including:

- Thromboprophylaxis in Surgical Patients
- ABHB Peri-Operative Anticoagulation in Elective Surgery for Patients on Warfarin
- ABHB Guidance on use of Rivaroxiban
- ABHB Guidelines on the prevention and treatment of thrombosis in pregnancy

In order to understand health board compliance with NICE CG92, the responsibility for audit of compliance with NICE guidance is predominantly held within each division. Recent audits have been carried out in Surgery, Medicine and Pharmacy. However measurement of compliance with Risk Assessment for VTE and thromboprophylaxis is being carried out through the 1000 Lives Plus work.

Implementation of the 1000 Lives Risk Assessment

A 1000 Lives Plus HAT Steering Group was set up to oversee the implementation of HAT prevention drivers which include the HAT Risk Assessment Tools. This multidisciplinary group is led by the consultant Clinical Lead for the All Wales mini-collaborative to reduce harm from VTE. Using the Model for Improvement to implement the Risk Assessment Tools, lead pharmacists in Surgery and Medicine have carried out PDSA cycles to test and alter the All Wales Risk Assessment Tools in pilot

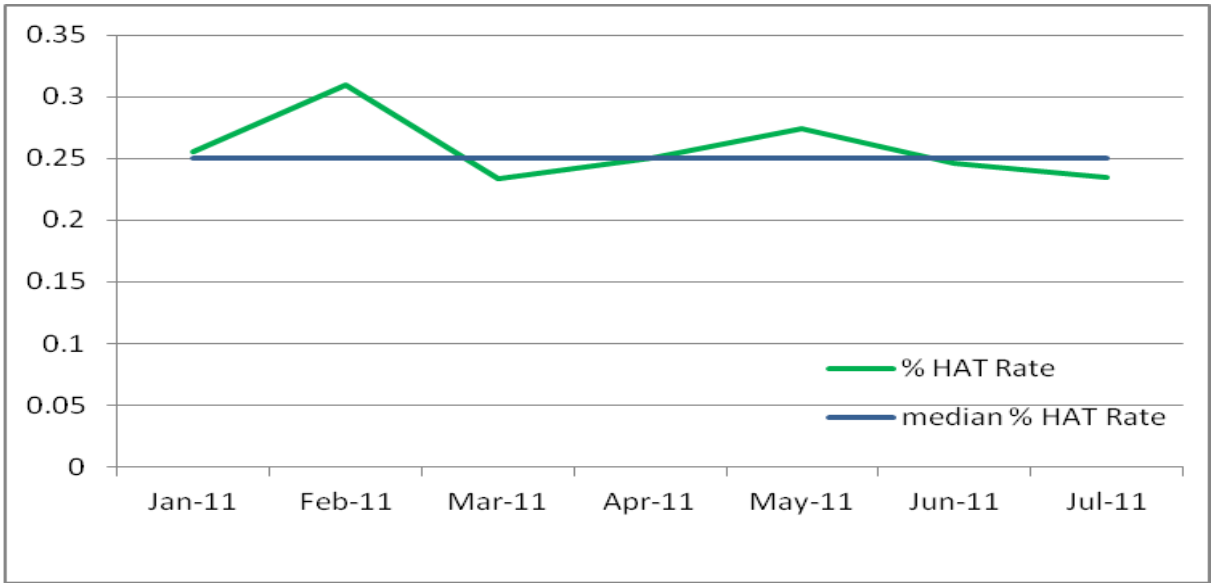
areas. The Risk Assessment Tools for Acute Surgery and Acute Medicine have recently been incorporated into doctors clerking packs. The tools for Acute Trauma and Elective Orthopaedics are being piloted on several wards and the Orthopaedic Surgical Unit. Specific drugs included in the ABHB formulary have been included on the Risk Assessment Tools in order to standardise the use of pharmacological intervention. An All Wales Risk Assessment Tool has been devised for obstetric patients and incorporated into the Admissions Bundle by the All Wales 1000 Lives Maternity Mini-Collaborative. This tool is currently being tested in pilot wards across ABHB who are achieving good compliance. Mental Health Services have also devised a Risk Assessment Tool for Healthcare Acquired Thrombosis which is being piloted and audited.

Ongoing measurement of the process of risk assessment and management of patients at risk of VTE is being carried out in several areas. For patients undergoing surgery this is audited through the ORMIS Theatre Management System. Baseline measurement data is being collected for specific areas across medicine to be followed up with ongoing measurement. Links between this work and that of the Enhanced Recovery After Surgery Programme (ERAS) has been made in the Orthopaedic Surgical Unit because risk assessment for HAT is included in the ERAS bundles. Baseline data in the unit had shown that formal risk assessment for elective knee replacement patients had been around 20% and this has improved to 80% after the risk assessment form had been implemented.

Measurement is a key component of the Model for Improvement used to implement change. Progress has been made to measure the processes of care at ABHB. However, it is important to assess the effect the improvement work is having on outcomes. One of the most important components of this work is to derive a Hospital Acquired Thrombosis Rate (HAT Rate) for the Organisation and to be able to split this rate into specialties and divisions to inform local quality improvement work. The HAT Rate is important not only to assess the progress of improvement work but may be used to engage differing specialties. For instance, often patients admitted under a surgical specialty, who acquire a HAT up to three months following discharge, are either not re-admitted, or re-admission is under a different specialty, eg. medicine. This means that the original staff caring for patients perioperatively may never know that their patient has had a HAT post discharge. Therefore they may not know the effects of not adequately risk assessing and managing patients at risk of HAT. The HAT Rate will enable clinical staff to know the incidence of HAT post-discharge for their patients.

Aneurin Bevan Health Board is currently pulling together data to produce a HAT rate for specialties, divisions and the health board. This is based on a method devised in Betsi Cadwaladr Health Board which has been tailored for use in ABHB. Once validated, this data will be reported each month to the health board. Each case of hospital acquired thrombosis is currently being reviewed by consultant staff leading this work. Root Cause Analysis enables further learning about the care provided for each patient. For instance, if risk assessment tool place, was the risk managed appropriately, was the HAT preventable. Preliminary data, that has not been fully validated through casenote review indicates that the Health Board has a median HAT Rate of 0.25%, and that around half of the cases of HAT were preventable, although it is acknowledged that even with appropriate risk assessment and thromboprophylaxis, HAT may not always be prevented. The run chart below shows the HAT rate between January to July 2011, next steps are to collect ongoing monthly data.

ABHB HAT Rate – January to July 2011



Effectiveness and Utilisation of pharmacological and mechanical prophylaxis for VTE

Mechanical thromboprophylaxis is being used for surgical patients however for medical patients this is not evidence based. Nurses have been trained as per NICE guidelines. For pharmacological thromboprophylaxis there continues to be variation in practice sometimes due to the fact that some clinicians doubt the evidence base. However the drugs recommended by NICE have been incorporated into the Risk Assessment Tool.

Particular Problems in the implementation and delivery of VTE prevention actions

Engagement and Leadership – Despite having strong executive and clinical leadership for this work, in some cases it has been difficult to engage champions within specialties to lead work there. Some clinicians doubt its evidence base, therefore hearts and minds are not behind this change.

Variation in Practice – Different clinicians may use different thromboprophylaxis regimens between directorates or even within directorates despite efforts to standardise practice.

Awareness – The 1000 Lives Plus Programme has achieved a lot to raise the awareness and visibility of the risks to patients of hospital acquired thrombosis. However, many clinicians may not fully understand the importance of prioritising risk assessment of patients.

Conclusions

Staff at Aneurin Bevan Health Board have worked hard to implement the recommendations of NICE CG92 and 1000 Lives Plus drivers for preventing hospital acquired thrombosis. Hospital acquired thrombosis is preventable in many cases therefore it is imperative that health boards provide reliable preventative care. In order to achieve this the health board sees the following as essential:

- Reliable risk assessment for venous thrombo-embolism
- Reliable treatment and management of patients identified as being at risk of HAT

- Ongoing measurement of processes for risk assessment and thromboprophylaxis
- Ongoing measurement of outcomes, more specifically a Hospital Acquired Thrombosis Rate split by specialty, divisional and organisational level
- Root Cause Analysis of each case of Hospital Acquired Thrombosis
- Prevention of HAT to be a national priority