

Venous Thromboembolism (VTE) Prevention

January 2008

Case Study – Barwon Health

Setting

Barwon Health serves a diverse population through more than 20 sites stretching down the coast to Torquay, Anglesea and Lorne. Facilities include one acute hospital (The Geelong Hospital), a separate subacute site for inpatient and community rehabilitation (The McKellar Centre), four residential aged care facilities and 16 community based sites providing mental health, rehabilitation and aged care. Barwon Health services the Geelong and coastal region with services extending north to Werribee and south to the South Australian border.

In March 2007 the Department of Human Services reported the region's demographics as an area of 29,637 square kilometres extending from Queenscliff in the east to the South Australian border. The region has an estimated residential population of 350,109. The entire region has a considerable ageing population with the life expectancy of males sitting at 74.9 years. This is somewhat lower than the Victorian average of 75.2 years. The regional life expectancy for females, at 81.1 years, is just below the state average of 81.2. Cardiovascular disease, cancer and mental disorders are the leading causes of burden in the region and the region had above average rates for cancer for both males and females.

With a total of 973 beds, Barwon Health's services include emergency, acute (392 beds), mental health, primary care, community services, aged care (322 residential beds), and subacute/rehabilitation (100 beds). With the exception of neurosurgery and organ transplantation, virtually all other specialities are covered. There were 61,888 separations in 2006–07.

Barwon Health is a tertiary teaching health service affiliated with Deakin and Melbourne universities and provides education for nurses, doctors and other staff. Undergraduate and postgraduate medical training is offered

Background

Barwon Health was aware that venous thromboembolism (VTE) was a major cause of morbidity and mortality in acute and subacute hospital patients. In 2005 an unfortunate sentinel event coupled with NICS calling for expressions of interest in a national VTE prevention project prompted an organisational commitment to prevention.

Following recommendations from the root cause analysis relating to the sentinel event, a working group comprising high-level medical, nursing and allied health staff was formed to look at issues arising in this area.

This group felt that participation in the NICS VTE project was timely and extremely relevant to their agenda. They formed a committee that included Barwon Health's risk manager and a NICS-VQC sponsored project officer was specifically employed to coordinate the VTE project.

The Barwon Health VTE Prevention Committee members included:

- Clinical Haematologist – Oncology
- Clinical Director – Surgical Services
- Director of Pharmacy
- Senior Safety Pharmacist
- Divisional Director – Surgical Services (or representative)
- Divisional Director – Medical Services (or representative)
- Divisional Director – Rehabilitation Services (or representative)
- Department of Anaesthesia representative
- Nurse Unit Manager – Medical Unit
- Nurse Unit Manager – Surgical Unit
- Nurse Unit Manager - Hospital in the Home
- Risk Manager
- VTE Prevention Project Manager.

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Implementation

The Barwon Health CEO secured executive sponsorship and buy in for the project before three senior members of the organisation attended the initial NICS VTE workshop. Following the workshop the project officer, with the support of the Barwon Health risk manager, set about developing an extensive project plan.

The plan's objectives included:

- analysing the many policies relating to therapeutic and prophylaxis already in place at Barwon Health
- collecting baseline DVT/PE data (acquired/on admission)
- LOS associated with DVT/PE
- WEIS associated with DVT/PE
- baseline data on the relationship between risk and VTE prophylaxis
- inpatient and outpatient medical imaging data related to rates of DVT/PE investigation and its financial burden
- an adverse event review through Barwon Health's clinical risk management structure.

A project team was established and, in collaboration with the VTE Prevention Committee, decided that the tool and VTE prophylaxis should be driven by the medical staff and be the responsibility of each unit speciality.

An audit of surgical/medical VTE prophylaxis compliance was commenced. The results of this audit were presented and discussed at the VTE Prevention Committee and were then distributed via a specifically dedicated newsletter to consultants, RMOs and HMOs.

During this time the creation of an electronic risk assessment tool utilising an outside IT company was taking shape. The electronic tool used a combination of the Australian and New Zealand VTE prevention guidelines and local experience based on the data obtained over the previous three years.

Once agreement on the risk assessment criteria and treatment guidelines had been obtained the electronic format was finalised.

During the first month of roll out the project officer met with a variety of HMOs to trial the tool. Recommendations put forward by this group were used to streamline the tool's effectiveness.

An outcomes report was developed. This was to enable audits of hospital-wide, real-time risk assessment completion. While this function took some time to get exactly right it has proven to be of outstanding value to the success and sustainability of the project.

Before rolling out the tools, posters were displayed throughout the hospital (those posted in the stairwell were particularly visible), consultant newsletters and memos were distributed manually and electronically via the governing Medical Resource Unit (the unit that manages the RMOs and HMOs).

For the next two months the project officer and an assistant met with teams to support them in using the tool.

Review

Barwon Health's review process involved:

- offering users a contact point and invitation for feedback
- presenting a weekly audit report to each unit detailing the number of patients available to be risk-assessed versus the number actually assessed – this was distributed to all registrars via e-mail and those gaining 100 per cent risk assessment completion for the week earned a gold star
- contacting units reporting poor compliance results and supporting them with additional needs such as rectifying system problems or providing further education
- compiling monthly VTE risk assessment audit reports with a covering information letter and sending them out to all medical consultants
- conducting three-monthly spot chart audits covering the acute and subacute services of high-risk patients appropriately ordering prophylaxis – these results were entered into the NICS database and also presented at the anti-thrombotic committee meetings and other relevant venues
- sending out a satisfaction survey to all users of the system.

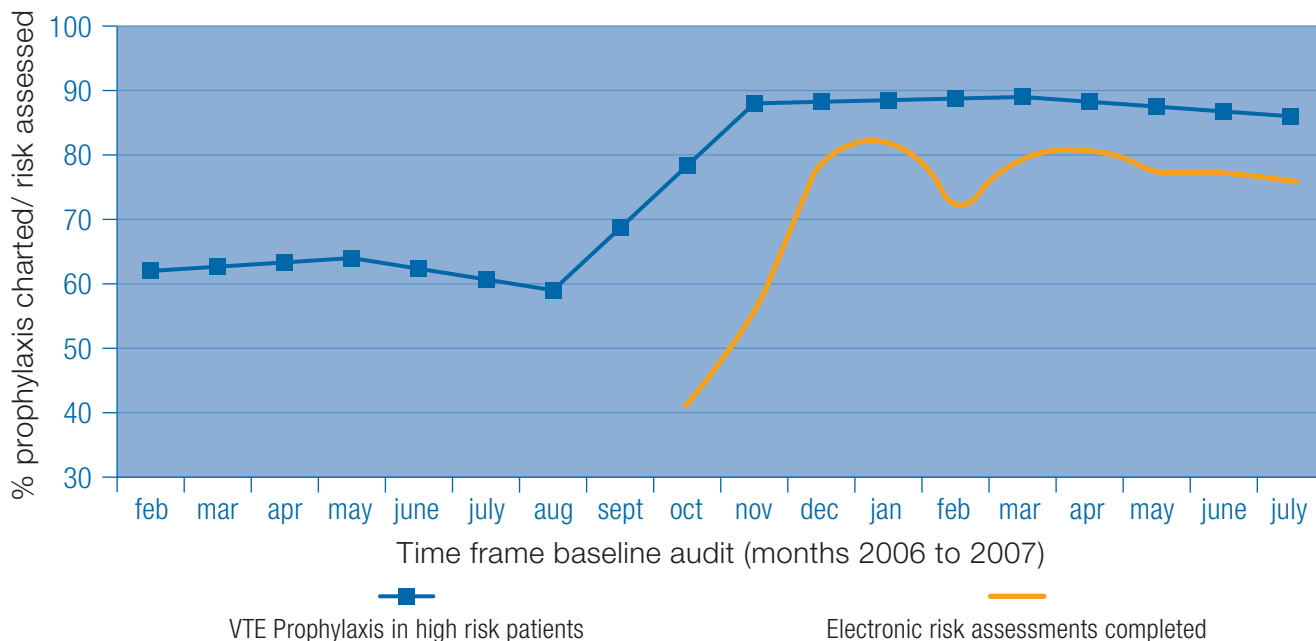
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Barwon Health Compliance Rates

Ordered VTE Prophylaxis in High Rate Patients vs Completed Electronic VTE Risk assessments



VTE prophylaxis compliance – high-risk patients

Patient type	August 2006	August 2007
Medical	40 %	83.72%
Surgical	76.92%	88.46%
Subacute	82.92%	88.30%
Barwon Health total	66.61 %	86.82%

- forming and ratifying a VTE prophylaxis policy
- establishing a contact point for users to express concerns
- continuing the audit/feedback process
- ensuring high project visibility through consumer involvement (this has been achieved through distributing the NICS public VTE pamphlets and displaying VTE posters at all hospital admission points as well as conducting presentations at the consumer engagement committee and Barwon Health AGM)
- continuing medical involvement – making a VTE presentation at grand rounds and at medical orientations
- adding VTE risk assessment and prophylaxis responsibilities to HMO job descriptions.

Enablers

The success of the project at Barwon Health was due primarily to:

- local expert ownership
- electronic risk assessment and decision support
- integration into daily work activities
- regular audit and feedback
- ensuring high-level staff were continually involved and informed regarding the project.

Barriers

The barriers to the project's success included:

- physician compliance with VTE risk assessment
- lack of compliance with VTE prevention guidelines
- bleeding concerns
- clinical information system limitations
- engaging with locums.

Turning the project into a ongoing program

The continuation of the project at Barwon Health is reliant on a number of factors including:

Final word

The relaying of current information and support from NICS has been an important and useful part of the project's success and sustainability.