

# Venous Thromboembolism (VTE) Prevention

January 2008

## Case Study – Wimmera Health Care Group

### Setting

WHCG is based at Horsham and Dimboola in the Wimmera sub-region of the Grampians region, 300 km west of Melbourne.

The Wimmera covers 30,622 square kilometres over a large proportion of western Victoria, extending to the South Australian border. Our primary catchment area is the Wimmera sub-region with around 54,000 people.

WHCG is the major specialist referral centre for the Wimmera region, providing emergency and critical care services. Last year WHCG treated 9,800 inpatients, 15,200 emergency patients and provided in excess of 127,000 outpatient services.

WHCG provides general medicine and general surgery; gynaecology and obstetrics; aged care; and a range of specialities including orthopaedics, chemotherapy, ENT, urology, dialysis and gastroenterology.

WHCG is recognised as a training and teaching centre for undergraduate and postgraduate students, including medicine, nursing and allied health disciplines.

### Background

Wimmera Health Care Group (WHCG) became aware of the upcoming VTE Prevention Project after visiting the NICS stand at the 3rd Australasian Conference on Safety and Quality in Health Care in 2005. WHCG believed that participating in the project would provide the organisation with the appropriate tools and support to implement a consistent approach to venous thromboembolism (VTE) prevention. WHCG had the infrastructure and culture to readily adopt these tools into clinical practice.

WHCG's Clinical Risk Management program had previously identified adverse events related to ineffective VTE prophylaxis. A medical record audit, focusing on patients who developed deep vein thrombosis while an inpatient at WHCG, was conducted over a six-month period during 2004.

This audit identified issues with orthopaedic day procedure patients, obstetric patients, medical patients, failure to identify those patients at high risk of developing a thromboembolism and inappropriate management of those patients identified as high risk of developing a thromboembolism.

The lack of a coordinated approach to VTE prophylaxis had previously been recognised as a high risk within our organisation and the executive were keen to take action to reduce this risk.

The funding provided by the Victorian Quality Council to WHCG for participating in the NICS project provided further incentive. This meant the organisation had funding to adequately resource this project, which we believed increased the chances of success.

### Implementation

Prior to announcing that WHCG had received funding to help implement a VTE prevention program, our clinical risk manager and project officer carried out a comprehensive pre-implementation audit, which provided data that could not be disputed.

Following the funding announcement, information sessions were held on the VTE project. These sessions introduced the need for the program, reported the pre-implementation audit results, and sought support for the project and interest to participate in the project team from medical, nursing and allied health staff.

We then set up a multidisciplinary VTE working party comprising:

- executive champion (director of medical services)
- clinical champion (nurse unit manager)
- clinical risk manager
- clinical risk project officer

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- visiting medical officers (VMOs) (surgeons, physicians and anaesthetists)
- registrars (medical, surgical and gynaecology)
- nurses (medical, surgical, emergency, operating suite and pre-admission clinic)
- pharmacist.

Anyone who had an interest in VTE was invited to attend.

Gaining VMO 'buy in' was an important factor. We were aware that other VTE projects had been unsuccessful because the risk assessment tool was completed by nursing staff and prophylaxis ordered by medical staff. For this project to be successful, the project team believed the risk assessment and appropriate prophylaxis were part of the same process and needed to be undertaken as one step rather than two. The VMOs agreed and the risk assessment tool and VTE prophylaxis become the responsibility of the medical staff.

A draft VTE policy and guidelines and a risk assessment tool for adult non-obstetric patients was developed. A launch date was set to trial the VTE policy, guidelines and risk assessment tool for a three-month period. Education sessions were undertaken prior to the launch of the VTE package. The risk assessment tool was included in all admission packs and clinical pathways.

An ongoing cycle of auditing and feedback was created with results and progress published in the monthly clinical newsletter, thus keeping the project visible among clinical staff.

## Review

Audits assessing whether the patient had received the recommended VTE prophylaxis, and whether the VTE risk assessment tool had been completed correctly, were undertaken approximately every three months.

Initially, audits were conducted on all patients admitted to WHCG on one day in each three month period (excluding day procedure patients, chemotherapy patients, dialysis patients and obstetric patients). Later, we audited 10 histories per surgical/medical unit on consecutive days in each period (again excluding day procedure patients, chemotherapy patients, dialysis patients and obstetric patients).

Doctors were sent aggregate data as well as their own individual audit results. Aggregate results of audits were reported to the hospital's Quality Committee and Board of Management and in the clinical newsletters.

## Enablers

The success of the project at WHCG was due primarily to:

- executive support
- creating a 'burning platform' – obtaining comprehensive data that could not be disputed
- VMO support and buy in
- involving/engaging staff members from all areas of the hospital (appropriate multidisciplinary team)
- being able to adapt the best practice guidelines to suit local conditions
- using audit data in feedback

- regular feedback/communication of results and progress
- NICS support
- the support and encouragement of other teams gained through participation in the workshops.

## Barriers

Those VMOs reluctant to participate in the program were treating most of the patients not receiving 'guideline-consistent' prophylaxis. More time was spent with these VMOs determining and addressing their issues.

Some VMOs were unwilling to use low molecular weight heparin due to the increased risk of bleeding. The best practice guidelines for Australia and New Zealand were therefore modified to suit local conditions, with low molecular weight heparin used only for patients of orthopaedic surgeons. Low-dose unfractionated heparin was used for all other patients.

There was no consistent approach to documenting graduated compression stockings for medical patients. At pre-implementation, patients did not have documented evidenced of stocking use – some audits were inconsistent with guidelines, perhaps erroneously because graduated compression stocking use was not documented. Nursing care plans and pathways were modified to include prompts for stocking use and a sticker added to the National Inpatient Medical Chart to enable documented use of graduated compression stockings.

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Resident medical officers (RMOs) rotate to WHCG every 10 weeks making it difficult to make permanent change. Despite all the work the organisation did to implement a separate VTE risk assessment tool the current version has not been used effectively. VTE risk assessment tools weren't part of existing processes, and we trialled various processes to improve utilisation of the risk assessment tool including:

- placing reminder stickers on patients' bedside folders with limited effectiveness
- having the director of medical services conduct daily rounds and asking RMOs to complete blank forms – very effective but time consuming and not sustainable
- feedback received from the registrars indicated that the tool would work better if it were incorporated into the medication chart – this was what their parent hospital were doing
- drafting a revised National Inpatient Medication Chart incorporating VTE risk assessment (in progress).

### Turning the project into a ongoing program

In our experience maintaining improvements over time requires continuous vigilance and reinforcement of the clinical importance of the improvement.

Sustainable changes include:

- monitoring utilisation of evidence-based guidelines for thromboprophylaxis – we plan to use either the ACHS or Quality Use of Medicines clinical indicators for thromboprophylaxis (it is hoped that this will allow external benchmarking in the future)
- ongoing audits (every three months) to monitor compliance with the VTE prophylaxis policy and procedures – this allows for early detection of any decline in compliance and the implementation of appropriate interventions to arrest this decline
- continuing to report results of future VTE audits and clinical indicators rates to the hospital's Quality Committee and in the clinical newsletters
- widening the program to include day procedure and obstetric patients.

If we could have our time again we would have spent more time with those VMOs who were reluctant to participate in the program to understand and address their issues.

We believe the VTE risk assessment tool is important for sustaining the VTE program. In an environment where clinicians move between hospitals frequently (in particular RMO rotations), a common risk assessment tool as part of existing process would improve tool utilisation.

### Final word

The support from NICS and the support and encouragement of other teams was invaluable throughout the project. The supportive environment and the sharing of ideas allowed the project to maintain momentum and have successes. Each time an obstacle arose we always had another possible solution (usually gained from another team) to try.

The funding provided by the Victorian Quality Council enabled us to adequately resource this project further contributing to the momentum and successes of the project.

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