

NIMC with VTE prophylaxis section

Rationale

Venous thromboembolism (VTE) which comprises pulmonary embolism (PE) and deep vein thrombosis (DVT) is a major source of morbidity and mortality for surgical and medical patients in hospital.

In 2008, it was estimated that there were over 14,700 cases of VTE and approximately 5,000 deaths due to VTE in Australia. The estimated financial cost of VTE was in excess of AUD \$1.7 billion, with 80% of these costs due to lost productivity as a result of premature death.¹

Most hospitalised patients have one or more risk factors for VTE. Surgery is a well established VTE risk factor and the use of thromboprophylaxis is generally higher among surgical patients than medical patients² however VTE cases in acute care are equally attributable to medical and surgical admissions.³

Studies show that pharmacological prophylaxis (i.e. low dose heparin to all patients above 40-45 years) for patients undergoing most types of surgery is more cost effective than no prophylaxis and results in a reduction in the frequency of fatal pulmonary embolisms.⁴

Despite the frequency with which VTE occurs in hospitalised patients and the well-established efficacy and safety of preventative measures, prophylaxis is often underused or used sub-optimally.

The use of a VTE prophylaxis section in the medication chart to encourage documentation of a VTE risk assessment and ordering of VTE prophylaxis, combined with education, has been shown to increase prescribing of VTE prophylaxis.

Why have a VTE prophylaxis section in the NIMC?

The VTE prophylaxis section has been developed to prompt:

- VTE risk assessment
- VTE pharmacological prophylaxis prescribing
- VTE mechanical ordering.

The section has been placed above the warfarin section to assist with the recognition of patients who are already receiving therapeutic anticoagulation and do not require additional VTE prophylaxis.

Who should document the patient's VTE risk?

Whoever has responsibility in your hospital for assessing the patient's VTE risk should sign and date the NIMC which notes that the assessment has been done. In some hospitals this will be done by the admitting medical officer, in others it will be done by the nursing staff. The risk assessment should be completed consistent with local hospital policy.

NIMC User Guide

The Commission has developed a user guide to the NIMC that explains all sections of the chart including information on how to use the VTE section. The NIMC user guide is available at:

www.safetyandquality.gov.au/publications/national-inpatient-medication-chart-user-guide-including-paediatric-versions/

REFERENCES:

- 1 Access Economics Pty Limited (2008) The burden of venous thromboembolism in Australia. Report for the Australian and New Zealand Working Party on the Management and Prevention of Venous Thromboembolism. <https://www.deloitteaccessseconomics.com.au/uploads/File/The%20burden%20of%20VTE%20in%20Australia.pdf>. Accessed 1 June 2013.
- 2 Cohen AT et al (2008) Venous thromboembolism risk and prophylaxis in the acute hospital care setting (ENDORSE study): a multinational cross-sectional study. *Lancet* 371(9610):387–394
- 3 University of Western Australia SoPH (2005) The Western Australian Venous Thromboembolism Study. Incidence and risk factors for venous thromboembolism in Western Australia 1999–2001. National Institute of Clinical Studies, Melbourne.
- 4 National Institute of Clinical Studies. Evidence-practice gaps report, vol 1. 2003.

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Your guide to the NIMC VTE prophylaxis section



AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

Using the VTE prophylaxis section on the NIMC

Tick this box to indicate VTE risk assessment has been done

Tick this box if VTE risk assessment has been done and VTE prophylaxis is **NOT** required

Tick this box if VTE prophylaxis is **contraindicated** and document contraindication in medical record

Sign and date to indicate risk assessment is complete

VTE risk assessed: Yes <input checked="" type="checkbox"/>		Prophylaxis not required <input type="checkbox"/>		Contraindicated <input type="checkbox"/>		Signature: <i>B. Jones</i>		Date: <i>12/5/13</i>	
Date	Medicine (print generic name)								
<i>12/5/13</i>	<i>ENOXAPARIN</i>								
Route	Dose	Frequency and NOW enter times							
<i>Subcut</i>	<i>40mg</i>	<i>Morning</i>		<i>0800 PD PD</i>					
Indication	Pharmacy								
<i>VTE prophylaxis</i>									
Prescriber signature	Print your name		Contact						
<i>B. Jones</i>	<i>Brian Jones</i>		<i>9847</i>						
Mechanical prophylaxis			AM check						
<i>TED STOCKINGS</i>			<i>PD PD</i>						
Prescriber/NI signature	Print your name		Contact	PM check					
<i>B. Jones</i>	<i>Brian Jones</i>		<i>9847</i>	<i>PD</i>					

Order mechanical prophylaxis if required

Document mechanical prophylaxis checks

Document administration of medication

Document discharge medication

Order pharmacological prophylaxis if indicated: name of medicine, route, dose, frequency and administration times

Step-by-step guide

Step 1: Document patient's VTE risk assessment

1. Authorised clinician to assess individual patient's risk for VTE based on their risk factors including the reason for hospitalisation utilising local hospital policy.
2. Assess patient's risk of bleeding or contraindications to VTE prophylaxis
3. Formulate an overall risk assessment - risks versus the benefits of VTE prophylaxis
4. Document if VTE prophylaxis is **NOT** required or is **contraindicated** by ticking the appropriate box. Document any contraindications to VTE prophylaxis in the medical record.
5. Document the assessment has been done by ticking the **VTE risk assessed** box and signing and dating in the field provided.

Step 2: Order pharmacological VTE prophylaxis

1. Prescriber to select an appropriate agent if indicated and specify:
 - Route
 - Dose
 - Frequency, and
 - Administration times.
2. Nurse to document the dose given and sign immediately after administration.

Step 3: Order mechanical VTE prophylaxis

1. Clinician (nurse or doctor) to order mechanical prophylaxis where appropriate (e.g. compression stockings). Nursing staff may have responsibility for ordering mechanical prophylaxis depending on local hospital policy.
2. Nurse to sign that mechanical prophylaxis is applied and checked.

For more information refer to:

- Your local hospital policy on VTE prophylaxis, or
- National Health Medical Research Council. *Clinical practice guideline for the prevention of venous thromboembolism in patients admitted to Australian hospitals*. Melbourne: National Health Medical Research Council; 2009.

National Inpatient Medication Chart
VTE section detailed above

Cut Off Section

Regular medicines

Year 20

Medicine (print generic name)	Dose	Frequency and NOW enter times	Pharmacy	Prescriber signature	Print your name	Contact
<i>Warfarin</i>	<i>5mg</i>	<i>Once daily</i>	<i>1600</i>			
<i>Marevan / Coumadin</i>	<i>5mg</i>	<i>Once daily</i>	<i>1600</i>			

VTE risk assessed: Yes Prophylaxis not required Contraindicated

VTE prophylaxis

Mechanical prophylaxis

AM check

PM check

Regular medicines

Year 20

DOCTORS MUST ENTER administration times

Medicine (print generic name)	Dose	Frequency and NOW enter times	Pharmacy	Prescriber signature	Print your name	Contact

Attach ADR sticker

Alleges and adverse drug reactions (ADR)

Date	Reaction type	Details

Warfarin education record

Prescriber education by: Sign: _____

Pharmacy education by: Sign: _____

Other education by: Sign: _____