Adult General Surgery Prevention of Venous Thromboembolism – Risk Assessment and Prophylaxis

Contents
Purpose .......................................................................................................................... 2
Policy ............................................................................................................................ 2
Scope ............................................................................................................................ 2
Roles and responsibilities ........................................................................................... 2
Medical Officers .......................................................................................................... 2
Nursing Staff ................................................................................................................ 2
Associated documents ............................................................................................... 2
Risk Assessment Pathway procedure ......................................................................... 3
Risk assessment – Medical staff to complete ............................................................. 3
Prophylaxis management – Medical staff to complete ............................................... 3
Clinical variation ....................................................................................................... 4
Other VTE prevention strategies: ............................................................................... 4
Process for patients attending Day Surgery .............................................................. 4
Low risk category ....................................................................................................... 5
Medium to High Risk Category .................................................................................. 5
Process for Inpatients ............................................................................................... 5
Low risk Category ....................................................................................................... 5
Medium to High Risk Category .................................................................................. 6
Process for preparing the patient for VTE prophylaxis (Enoxaparin) on discharge ...... 6
Acute Patient .............................................................................................................. 7
Additional Clinical considerations: ............................................................................ 7
Measurement and Evaluation ..................................................................................... 7
References .................................................................................................................. 8

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Purpose

To minimise the incidence of patients developing venous thromboembolism (VTE) during, or after, hospitalisation.

Policy

All adult general surgery patients, including patients for day surgery will be assessed prior to or on admission for their individual risk of developing venous thromboembolism.

Those patients who are identified as at risk of developing VTE will receive prophylaxis as per current prescribing guidelines for prophylaxis.

Scope

Christchurch Hospital General Surgery Service

Medical Officers

Registered Nurses

Enrolled Nurses and Nursing Students under the direct supervision of a Registered Nurse

Roles and responsibilities

Medical Officers

Complete a risk assessment on all patients

Prescribe VTE as indicated from risk assessment

Reassess patients where indicated

Apply for community special authority if requires VTE prophylaxis on discharge

Nursing Staff

Administer LMWH (Low molecular-weight heparin) as prescribed

Ensure TED’s (Thrombo-Embolus Deterrant)/ IPCD’s (Intermittent Pneumatic Compression Device’s) are used and fitted properly daily – added to care plan for continued management

Ensure appropriate education is provided to the patient. Including verbal, visual, and written material

Associated documents

- Venous Thromboembolism Risk Assessment and Guidelines for Prescribing Venous Thromboembolism Prophylaxis for Elective
General Surgery Patients form, C240158. Reference Number: 2445.

- Reducing the Risk of Blood Clots, Patient Information Pamphlet Reference Number: 2475
- Thrombo-Embolus Deterrent (TED) Stockings, Patient Information Pamphlet, Reference Number: 2582.
- Fluid and Medication Management Policies - Subcutaneous Fluid and Medication Administration Policy.
- Related procedure documents, if any
- Relevant external documents

Risk Assessment Pathway procedure

Risk assessment – Medical staff to complete
All adult surgical patients including patients for day surgery must be assessed (using the VTE risk assessment form C240158) at preadmission or on admission to hospital by a doctor for risk of VTE.

If there are changes in the patient condition, reassessment of changes to risk must be undertaken.

Following risk assessment, the guidelines for prescribing VTE prophylaxis must be followed.

- Reasons for not initiating prophylaxis must be documented on the assessment form.
- Patients who do not fit the criteria for prophylaxis are discussed with the admitting Consultant and the outcome documented in the clinical record.

Prophylaxis management – Medical staff to complete
- After completion of the risk assessment at Pre-admission or on admission, all prophylaxis (pharmaceutical and mechanical) is to be prescribed on the drug treatment sheet QMR0004.
- The first dose of chemical prophylaxis is to commence at 2100hrs on the night of surgery to ensure it is given no sooner than approximately six hours post operatively to reduce the risk of bleeding complications.
- When subcutaneous Enoxaparin Sodium (Clexane) is prescribed, administration is as per subcutaneous fluid & medication administration policy documented in Volume 12, Fluid and Medication Management Manual.
- The patient/family/whanau must be provided with information, written and verbal regarding the VTE risk assessment, and
possible subsequent interventions, to enable informed consent to treatment.

Clinical variation
It is recognised that there will be times where it is appropriate for individual patients to deviate from this pathway.

If this is to occur, consultation with the Consultant Surgeon must take place.

If there is a variation, it is vital that it is clearly documented and prophylaxis appropriately prescribed.

In the event of pre-operative Enoxaparin being requested it is imperative that pre and post operative timing, and dose are clearly prescribed.

Other VTE prevention strategies:
Alongside pharmaceutical and other prophylaxis interventions, health professionals will ensure:

- Patients are encouraged to ambulate.
- Patients receive adequate hydration.
- Thrombo-Embolus Deterrent (TED) stockings are measured and fitted for each individual patient. The stockings should be worn continuously during the period of immobility, until the patient is fully ambulant. The patient/family/whanau must be provided with the patient information pamphlet “Thrombo-Embolus Deterrent (TED) Stockings” and have the contents explained.
- Those applying intermittent pneumatic compression (IPC) devices will have received training in their use. If applied in operating theatre the device must accompany the patient back to the ward as per the medical team.
- Refer all patients likely to be needing ongoing community support following discharge, such as continuation of chemical prophylaxis, as soon as possible to the appropriate service.

Process for patients attending Day Surgery

- VTE risk assessment form (C240158) and prescription as required will be completed by Medical staff at the Pre-admission appointment and the patient information pamphlet “Reducing the Risks of Blood Clots” explained (patients should bring this with them).
- Note: If the patient was not pre-admitted, medical staff need to complete the VTE risk assessment on admission to DSU or DOSA and explain patient information (If the House Surgeon is not available then contact the Registrar).
Low risk category
- Medical staff prescribe mechanical prophylaxis on the QMR0004 as required.
- QMR0004 checked by nursing staff as part of pre-procedure checklist.
- Nursing staff apply TED stockings pre-operatively and give and explain the information pamphlet on TED stockings. Patient to take stockings home and wear until fully ambulatory post-operatively.

Medium to High Risk Category
- Medical staff prescribe chemical prophylaxis on the QMR0004 as required with the first dose to be given at 2100hrs post-operatively as a stat dose and subsequent doses to be given at 1200hrs (or as near to) daily.
- QMR0004 checked by nursing staff as part of pre-procedure checklist.
- Nursing staff to contact Acute Community Liaison Nurse, phone: 3754 666 to organise administration of the first dose of post-operative chemical prophylaxis at 2100hrs. The Acute Community Liaison Nurse will visit the DSU and organise faxing of the patients QMR0004 and referral to a district nursing service to administer subsequent doses. Please also consider GP/Practice Nurse for follow up doses.
- Nursing staff apply TED stockings pre-operatively and give and explain the information pamphlet on TED stockings. Patient to take stockings home and wear until fully ambulatory post-operatively.

Process for Inpatients
- VTE risk assessment form (C240158) and prescription as required will be completed by Medical staff on admission and the patient information pamphlet “Reducing the Risks of Blood Clots” given and explained.

Low risk Category
- Medical staff prescribe mechanical prophylaxis on the QMR0004 as required.
- QMR0004 checked by nursing staff as part of pre-procedure checklist.
- Nursing staff apply TED stockings pre-operatively and give and explain the information pamphlet on TED stockings. Patient to
take stockings home and wear until fully ambulatory post-operatively.

**Medium to High Risk Category**

- Medical staff prescribe chemical prophylaxis on the QMR0004 as required with the first dose to be given as charted. Ensure it is given no sooner than approximately six hours post operatively to reduce the risk of bleeding complications. Subsequent doses to be given at 2100.
- QMR0004 checked by nursing staff as part of pre-procedure checklist.
- Nursing staff apply TED stockings pre-operatively and give and explain the information pamphlet on TED stockings. Patient to take stockings home and wear until fully ambulatory post-operatively.
- Nurse will ensure appropriate education is provided to the patient. Including verbal, visual, and written material.

**Process for preparing the patient for VTE prophylaxis (Enoxaparin) on discharge.**

- **House Surgeon assesses patient**: Considers Venous Thromboembolism (VTE) risk factors/contraindications as per VTE risk assessment form C240158
- **Patient requires Enoxaparin prophylaxis**: House Surgeon prescribes VTE and places VTE sticker on QMR0004 (to alert staff and pharmacy). Application for subsidy by Special Authority is then completed and faxed to Ministry of Health for Approval.  
  NB: Patients undergoing major abdominal or pelvic cancer surgery should be considered for 28 days VTE, unless contraindicated. In patients with multiple medical risk factors, the use VTE for up to 28 days following discharge may also be indicated.
- **Application for Special Authority**: Placed in patient notes in preparation for discharge
- **Special Authority and VTE sticker to act as a flag to nurses re the need for Patient education on self administration of Enoxaparin before discharge.**
- **As soon as possible**: Patient should have self administration of Enoxaparin demonstrated to them and then be supervised with self administration for the length of their stay.
- **Nurse will ensure**: Appropriate education is provided to the patient. Including verbal, written and visual. On discharge patients will receive a bag containing a Confidence in Clexane
DVD, a pamphlet and sharps container (Sharps container to be disposed of at local pharmacy or Christchurch Hospital).

- G.P to be contacted if side effects are experienced.
- District Nursing to be involved if Patient is unable to manage independently, or if staff are unable to educate a family member.
- **On day of discharge:** Nurse faxes prescription and then posts to patient’s community Pharmacy. When faxing a prescription to an out of town Pharmacy, the nurse should also ring the Pharmacy to ensure they have an adequate supply of Enoxaparin.

**NB:** The community pharmacy has access to a database indicating that the patient has Special Authority if it has been faxed at pre admission. If Special Authority number has been received, it needs to be included on the prescription.

**Acute Patient**

- In the case of the acute inpatient, the special Authority may not be processed by the time of discharge. As a result the nurse will need to:
  - Provide the patient with a seven day bridging supply from the ward with a prescription from the House Surgeon. A second prescription will need to be faxed and posted to the community Pharmacy for ongoing supply.

**NB:** A record of these patients will need to be kept on the ward.

**Additional Clinical considerations:**

- **Anti-embolism stockings** refer to CDHB Graduated Compression Stockings (TED’s) Policy. [Graduated Compression Stockings (TED’s)]

- **Foot impulse and intermittent pneumatic compression devices**
  - [Sequential compression therapy procedure](#)
  - [Arterial-venous impulse foot compression therapy procedure](#)

**Measurement and Evaluation**

Auditing to ensure the risk assessment is completed

Auditing no. of patients discharged on VTE
References


National Health and Medical Research Council, Clinical Practice Guideline for the Prevention of Venous Embolism in Patients admitted to Australian Hospitals, November 2009

National Institute for Health and Clinical Excellence, VTE – Reducing the Risk, Clinical Guideline 92, 2010


Acknowledgements for adapting information for documents:

Waitemata District Health Board Surgical Thromboprophylaxis Assessment Tool, 2008

Australian National Institute of Clinical Studies (NICS), Risk Assessment Form, 2007; Stop the Clot Programme, Patient Information, April 2009

Bay of Plenty District Health Board, Prevention of VTE Policy & Clinical Practice Protocol and DVT Patient Information Pamphlet

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<thead>
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<th>Policy Owner</th>
<th>General Surgery Clinical Nurse Specialist</th>
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<tr>
<td>Policy Authoriser</td>
<td>Chief Medical Officer and Executive Director of Nursing</td>
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