Venous Thromboprophylaxis Policy

Version 4

Summary: Policy for the management and prevention of venous thrombosis for patients whilst in the care of Southern Health NHS Foundation Trust.

Keywords (minimum of 5): Venous Thromboprophylaxis, thrombosis, VTE, DVT

Target Audience: Medical, Nursing and support healthcare staff

Next Review Date: September 2019

Approved & Ratified by:
- Medicines Management Committee
- Patient Safety Group
  
  Date of meeting:
  - 20 September 2017
  - 21 November 2018

Date issued: January 2019

Author: Giles Durward, Consultant Physician

Sponsor: Karl Marlowe, Medical Director
# Version Control

## Change Record

<table>
<thead>
<tr>
<th>Date</th>
<th>Author</th>
<th>Version</th>
<th>Page</th>
<th>Reason for Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.12.14</td>
<td>Giles Durward</td>
<td>2</td>
<td></td>
<td>Updated forms and policy</td>
</tr>
<tr>
<td>9/6/15</td>
<td>Giles Durward</td>
<td>2</td>
<td></td>
<td>Comments and e learning link</td>
</tr>
<tr>
<td>13/11/15</td>
<td>Giles Durward</td>
<td>2</td>
<td>15 - 18</td>
<td>Amendment to appendices 3 &amp; 4</td>
</tr>
<tr>
<td>4/11/16</td>
<td>Giles Durward</td>
<td>2</td>
<td></td>
<td>Amendment to enoxaparin dosing in patients &gt;100kg Appendix 3, 4, 5 and 6</td>
</tr>
<tr>
<td>4/8/2017</td>
<td>Giles Durward</td>
<td>3</td>
<td></td>
<td>Sponsor changed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Updates on areas covered</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Consent and capacity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Training access</td>
</tr>
<tr>
<td>27/9/17</td>
<td>Giles Durward</td>
<td>3</td>
<td></td>
<td>Edoxaban added and lead page for VTE learning</td>
</tr>
<tr>
<td>14/5/18</td>
<td>Giles Durward</td>
<td>4</td>
<td></td>
<td>Nice guidance update NG89 All patients to be assessed</td>
</tr>
</tbody>
</table>

## Reviewers/contributors

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Version Reviewed &amp; Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raj Parekh</td>
<td>Operational Lead Pharmacist</td>
<td>V2</td>
</tr>
<tr>
<td>Giles Durward</td>
<td>NICE lead Senior</td>
<td>V2</td>
</tr>
<tr>
<td>Steve Mennear</td>
<td>Clinical Pharmacist</td>
<td>V2</td>
</tr>
<tr>
<td>Juanita Pascal</td>
<td>Consultant Physician</td>
<td>V2</td>
</tr>
<tr>
<td>Tim Coupland</td>
<td>Associate Director of Nursing, AHP &amp; Quality</td>
<td>V2</td>
</tr>
<tr>
<td>Tracy Eddy</td>
<td>Consultant OPMH</td>
<td>V2</td>
</tr>
</tbody>
</table>
## CONTENTS

1. Introduction 4
2. Scope 4
3. Definitions 5
4. Duties/ responsibilities 5
5. Main policy content 6
6. Thromboprophylaxis Prescribing 7
7. Duration of Treatment for Thromboprophylaxis 7
8. Contraindications for Treatment 8
9. Anti-Embolism Stockings 8
10. Training Requirements 8
11. Monitoring compliance 8
12. Policy review 8
13. Associated documents 9
14. Supporting references 9
15. Procedure for VTE Prophylaxis at SHFT 10

### Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Risk factors for thrombosis and bleeding</td>
<td>11</td>
</tr>
<tr>
<td>A2</td>
<td>DOH Generic Form</td>
<td>13</td>
</tr>
<tr>
<td>A3</td>
<td>Risk assessment form for Adult medicine</td>
<td>15</td>
</tr>
<tr>
<td>A4</td>
<td>Risk assessment form for Rehabilitation</td>
<td>17</td>
</tr>
<tr>
<td>A5</td>
<td>Risk assessment form for Surgery and endoscopy</td>
<td>19</td>
</tr>
<tr>
<td>A6</td>
<td>Risk assessment form for mental health settings (Discretionary)</td>
<td>21</td>
</tr>
<tr>
<td>A7</td>
<td>Form and flow chart for Lower Limb plaster casts MIU Lymington</td>
<td>24</td>
</tr>
<tr>
<td>A8</td>
<td>Anti-Embolism stocking guidance</td>
<td>27</td>
</tr>
<tr>
<td>A9</td>
<td>Equality Impact Assessment (EqIA)</td>
<td>29</td>
</tr>
<tr>
<td>A10</td>
<td>Trust VTE information leaflet</td>
<td>35</td>
</tr>
</tbody>
</table>
Venous Thromboembolism Policy

1. Introduction

1.1 The House of Commons Health Committee\textsuperscript{[1]} reported in 2005 that an estimated 25,000 people in the UK die from preventable hospital-acquired venous thromboembolism (VTE) every year. This includes patients admitted to hospital for medical care and surgery. The inconsistent use of prophylactic measures for VTE in hospital patients has been widely reported. A UK survey suggested that 71% of patients assessed to be at medium or high risk of developing deep vein thrombosis did not receive any form of mechanical or pharmacological VTE prophylaxis\textsuperscript{[2]}.

1.2 VTE is a condition where blood clots (thrombi) form in the deep veins. Commonly this is due to immobility but can also be related to other factors such as disease and medication. These clots can break away (emboli) and travel to the lungs (Pulmonary Embolism). VTE affects approximately 1 in every 1000 of the UK population and is a significant cause of mortality, long term disability and chronic ill-health problems.

1.3 Southern Health NHS Foundation Trust (SHFT) aims to protect patients from VTE by careful assessment of those at risk and appropriate preventative measures. This includes all patients admitted to Southern Health inpatient settings and those treated in Minor Injuries units.

1.4 This Policy has been developed to enable compliance with the recommendations of the “Report of the Independent Expert Working Group on the Prevention of VTE in Hospitalised Patients” DoH VTE Report (2007), Venous Thromboembolism in over 16s: Reducing the Risk of hospital acquired deep vein thrombosis or pulmonary embolism NICE NG89 and NICE Quality Standard 3 VTE.

1.5 These reports recommended that every hospital patient should have a risk assessment for VTE and if at risk be treated appropriately. This policy covers the process to enable all patients admitted to SHFT to have a VTE risk assessment completed within 24 hours of admission and reassessment within 24 hours in acute settings and within 1 week in rehabilitation settings where the patient has been established on treatment at the acute hospital prior to transfer.

1.6 In those lacking capacity refer to GMC best practice guidance and trust policy Consent.

2. Scope

2.1 This Policy is intended to ensure that all inpatients in the care of SHFT receive adequate and appropriate anti thrombotic care to prevent VTE. It also ensures that documentation of VTE risk forms a part of the overall care / assessment of the patient.

2.2 This Policy applies to all staff that provide care to patients within SHFT inpatient units in particular Doctors who will be required to undertake the Risk Assessment and prescribe preventative treatment and Nurses who will be providing daily clinical care to patients.

2.3 This policy will provide some guidance on prescribing but the choice of treatment remains the responsibility of the prescriber and this policy must not be used in isolation to make clinical decisions.
3. **Definitions**

3.1 **GP** – General Practitioner

3.2 **RN** – Registered Nurse (Registered with the Nursing and Midwifery Council, NMC)

3.3 **LMWH** – Low Molecular Weight Heparin

3.4 **VTE** – Venous Thromboembolism. Includes Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE)

3.5 **Immobility** – for the purposes of VTE prophylaxis immobility is defined as any medical or surgical patient with significantly reduced mobility or reduced mobility compared to normal for that individual for > 3 days. This needs to be read in conjunction with NICE Guideline 89 VTE and guidance in Appendix 1 regarding risk factors.

3.6 **Thrombo-prophylaxis** – The prevention of thrombus forming in the veins by mechanical or medical means.

4. **Duties / Responsibilities**

4.1 The Chief Executive and the Board of SHFT are responsible for the discharge of care and obligations under this Policy. There is a requirement to report information (audit and performance data) arising out of this Policy to external organisations and investigate any reported incidents of VTE or failures of application of this Policy.

4.2 SHFT will ensure appropriate mechanisms and resources are in place to carry out these obligations.

4.3 It is the responsibility of the Consultant (for each clinical area / patient) to ensure that junior medical staff are aware of the procedure and assessment criteria.

4.4 It is the responsibility of the admitting doctor to undertake the risk assessment of each patient and prescribe the appropriate prophylaxis for the patient.

4.5 It is the responsibility of ward managers and Matrons to ensure that their staff are aware of this Policy and monitor compliance.

4.6 It is the responsibility of all RN’s to ensure they understand prescribed treatments they are administering to patients, including mode of action and side effects.

4.7 It is the responsibility of all staff to escalate and feedback any concerns and / or errors immediately.

4.8 It is the responsibility of the RN admitting the patient to assess for compression hosiery if appropriate. The Anti-embolism Stocking Protocol (Appendix 6) should be completed and form part of the nursing notes.

5. **Main Policy**

5.1 **All** patients admitted to SHFT units should have a VTE risk assessment done on admission and appropriate management started. A reassessment should be done within 24 hrs taking into account weight, eGFR, and Platelet count (when known) if LMWH has been prescribed. This is to review correct dosing, also to assess if any bleeding has occurred and whether it warrants stopping treatment with LMWH. Where
doctors worklist is available this should be used for assessment otherwise Forms to be used are in Appendices 2, 3, 4 and 5.

5.2 **All Rehabilitation** patients should be assessed on admission and if currently on VTE prophylaxis (initiated in referring unit) this should be continued if still indicated. If not on prophylaxis new treatment should be started if indicated following assessment. Reassessment should be done within **24 hours for new prescriptions** (as above) or within **1 week** for continuation of regime from referral unit.

5.3 Assess **all acute psychiatric patients** to identify their risk of VTE and bleeding as soon as possible after admission to hospital or by the time of the first consultant review. **Appendix 4 can be used as additional guidance.**

5.3 Should any patient’s mobility change or they become confined to bed either on admission or during their inpatient stay (for whatever reason), the patient should have a VTE risk assessment **completed** by the Doctor responsible for their care.

5.4 **Reduced mobility in psychiatry has been suggested** as the inability to walk 10 metres for 1-2 weeks. Catatonia and prolonged physical restraint are notable causes of reduced mobility in psychiatry and it is suggested that reduced mobility for 3 days increases the risk of thrombosis tenfold.

5.5 When a patient is admitted over a weekend assessment remains the responsibility of the admitting doctor. Ward RN’s are responsible for ensuring this is completed, by contacting the appropriate doctor.

5.6 All patients should be periodically reassessed as above (5.1 and 5.2) and as follows;
- Upon any change in the patients physical condition or mobility.
- The status of risk assessment should be checked as part of any consultant led or other ward round.

5.7 All assessments and re-assessments must be recorded on Doctors worklist, the appropriate **VTE form** Appendices 2, 3, 4, 5 or the **Rio Assessment** form.

5.8 Risk factors identified on the VTE Risk Assessment (Appendix One) are not exhaustive and clinicians should consider additional risk factors in individual patients and manage appropriately.

5.10 The VTE assessment must be accurately completed, dated and signed prophylaxis should be prescribed where clinically indicated or reasons for not prescribing clearly documented.

5.11 Always consider alternatives to LMWH such as Anti-embolism Stockings or mechanical devices (See Appendix 8).

5.12 Patients being prescribed VTE prophylaxis should have the opportunity to **discuss treatment with the prescribing clinician.** This discussion should include risk, benefits and possible side effects. Written Patient Information should be given such as the Nice **Patient Information booklet** that can be downloaded from the NICE Website explaining the NICE Guidance or the **Trust leaflet** attached as Appendix 10. If the patient does not have capacity a best interest decision should be discussed involving next of kin.

5.13 **Enoxaparin** is the Low Molecular Weight Heparin (LMWH) predominantly used by SHFT.
5.14 Patients admitted for End of Life care do not need to be assessed for VTE prophylaxis but this does need to be clearly documented.

6. Thromboprophylaxis Prescribing

6.1 Patients taking therapeutic doses of oral anticoagulants do not require Low Molecular weight Heparin (LMWH) prophylaxis unless their oral anti coagulation therapy is sub-therapeutic or stopped.

6.2 If the patient has had heparin exposure in the last three months Full Blood Count (FBC) Urea and Electrolytes (U’s and E’s) should be checked after one day of treatment. In particular it should be noted that heparin can increase platelets and potassium levels.

6.3 FBC and U and E’s should be checked after 5-7 days and again at 12-14 days of therapy to exclude heparin induced thrombocytopenia (contact haematology department of local secondary care provider or transferring if platelet count drops by 30 – 50% or is less than 150x10⁹/L).

6.4 If significant bleeding occurs during anticoagulation, therapy must cease and immediate transfer to a secondary care provider by 999 ambulance must be arranged (unless already in Lymington New Forest Hospital). Significant bleeding can be defined as bleeding that cannot be stopped using simple first aid (ice, pressure and / or elevation) after 15 minutes or if there is significant loss of blood.

6.5 Where clinicians believe that a patient has suffered from a VTE event the patient should be discussed with an acute provider (unless already in Lymington New Forest Hospital) for advice on further assessment, diagnosis and treatment.

6.6 If pharmacological prevention carries a significant risk consider alternatives such as mechanical thromboprophylaxis.

6.7 All VTE events must be recorded on Ulysses and investigated.

6.8 A patient safety alert has been issued flagging the need for identifying those at risk of harm from LMWH (January 2015).

7. Duration of Treatment of Thromboprophylaxis

7.1 Treatment should be continued for a set number of days where there is definitive Guidance, see NICE Guideline 89 VTE or until the patient is mobile.

7.2 For patients immobile prior to admission, an individualised assessment should be made by the doctor to ascertain whether thromboprophylaxis should continue or not. Advice should be sought from senior clinicians such as the consultant in charge of the patient’s case.

8. Contraindications to LMWH Treatment

8.1 Contraindications to treatment are;

- Being on oral vitamin K antagonist anticoagulants with an INR > 2
- Being on a DOAC (dabigatran, rivaroxaban, apixaban and edoxaban)
- Thrombocytopenia (platelet count drops by 30 – 50% or is less than 75 x10⁹/L)
- Severe bleeding tendency
• Allergy to heparin or LMWH
• Malignant Hypertension
• Acute Liver failure

8.2 Contraindications to thromboprophylaxis should be documented on assessment form.

8.3 If there are contraindications to pharmacological thromboprophylaxis the patient should be assessed for Mechanical Prophylaxis.


9.1 Anti – embolism stockings are a potential means of preventing VTE in patients who are deemed to be at low risk of developing VTE, or for those who are unsuitable for pharmacological prophylaxis.

9.2 Guidance for the use of Anti Embolism Stocking can be found in Appendix 8.

10. Training Requirements

10.1 There is no formal training within the Trust on VTE prophylaxis. It is the responsibility of registered health professionals, as part of their Continuing Professional Development (CPD) to ensure they are up to date with the appropriate clinical knowledge to care for the patients they are employed to care for.

10.2 An E learning package available through E Learning for Healthcare on VTE which can be found at elearning for health

11. Monitoring Compliance

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>Lead</th>
<th>Tool</th>
<th>Frequency</th>
<th>Reporting arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieving local and national targets of number of patients needing to have received assessment and offered VTE Prophylaxis</td>
<td>Clinical Audit Team and Clinical Quality Manager</td>
<td>Forms part of the annual clinical audit programme for Southern Health</td>
<td>Reported quarterly</td>
<td>Quarterly reports to commissioners and DoH</td>
</tr>
<tr>
<td>Patient Safety Thermometer in ICS monitors monthly the number of patients receiving an assessment and treatment following assessment</td>
<td>Paula Hull</td>
<td>Patient Safety Thermometer</td>
<td>Monthly</td>
<td>Through quality account and quality contract via Clinical Quality Manager</td>
</tr>
</tbody>
</table>

12. Policy Review

12.1 September 2019

13. Associated Documents

Venous Thromboembolism: Reducing the Risk NICE Guideline 89 VTE and NICE Quality Standard NICE QS 3 VTE

14. **Supporting References**


4. Bleakley S. Taylor D. The clozapine handbook. Chapter 12 Venous Thromboembolism. Lloyd-Reinhold Communications PLC,


7. **Antipsychotic use and VTE risk** BMJ 2010; 341

Procedure for VTE Prophylaxis at SHFT

Step 1 Assess mobility
if significantly reduced consider thromboprophylaxis.
If reduced mobility compared to normal for individual and likely to persist for 3 or more days go to Step two.

Step 2 Assess thrombosis risk
Risk factors are detailed for specific locations on assessment forms see forms appendix 1 and RIO.

Step 3 Assess bleeding risk
Risk factors are detailed on assessment form and appendix 1 and RIO.

Step 4 Outcome of assessment
Options are pharmacological prophylaxis or mechanical prophylaxis.
If bleeding risk is high mechanical prophylaxis may be the best option.
If thrombosis risk is high and bleeding risk acceptable document weight, eGFR and platelet count (if known) or take blood to include Fbc, U&E, LFT and INR (if on Vitamin K anticoagulant e.g. Warfarin).

Step 5 Discussion with Patient
Note LMWH is of animal origin.
Document agreed treatment and give written information either trust leaflet or NICE patient information.
Prescribe dose according to weight and eGFR see Appendices 2,3,4 and 5 for guidance.
If using mechanical prophylaxis discuss options, i.e. antiembolism stockings, pneumatic compression devices, Gecko device and implement accordingly.

Step 6 Fit correctly
Anti-embolism stockings need to be tailored to the individual patient.
Note anti-embolism stockings should be avoided in stroke.

Step 7 Review
For acute admissions review within 24 hours taking into account blood results and any bleeding, document on form.
For transfers, if previously established on LMWH review within 1 week and check appropriate bloods (e.g. FBC and U&E)
Document any changes in clinical situation.

Step 8 Discharge
 Significant numbers of VTE events occur within 90 days post discharge so give written and verbal information on discharge on what to look for and who to contact.
Appendix 1

VTE Risk Factors and Patients at Risk of Bleeding

1. VTE Risk Factors

- Active cancer or cancer treatment
- Reduced Mobility **
- Age over 60 years
- Dehydration
- Known thrombophilias
- Obesity (BMI >30)
- One or more significant medical comorbidities i.e. heart disease, metabolic, endocrine or respiratory pathologies, acute infectious diseases, inflammatory conditions.
- Personal history or first degree relative i.e. parent or sibling with history of VTE.
- Use of Hormone Replacement Therapy (HRT).
- Use of oestrogen containing contraceptive therapy.
- Varicose veins with phlebitis
- Pregnancy or < 6 weeks post-partum.
- Traumatic injury or Critical care admission.
- Surgical procedure with a total anaesthetic time of >90 mins or 60 mins if the surgery involves the pelvis or lower limb.
- Acute surgical admission with inflammatory or intra-abdominal condition.
- Antipsychotics

* This list is not exhaustive and clinicians are advised that they should always consider other risk factors or conditions that may predispose their patient to a VTE.

** Reduced mobility in psychiatry has been suggested as the inability to walk 10 metres for 1-2 weeks

***. Catatonia and prolonged physical restraint is a notable cause of reduced mobility in psychiatry.

2. **Patients at Risk of Bleeding.**

- Active bleeding.
- Acquired bleeding disorders (such as acute liver failure).
- Concurrent use of anticoagulants known to increase the risk of bleeding (such as warfarin with INR >2)
- Current use of NOAC drugs, Apixaban, Rivaroxaban, Dabigatran and Edoxaban.
- Lumbar puncture / epidural / spinal anaesthesia within the previous 4 hours or expected within the next 12 hours.
- Acute stroke.
- Thrombocytopenia (with low platelet count – discuss with haematologist)
- Uncontrolled systolic hypertension.
- Untreated, inherited bleeding disorders such as haemophilia or von Willebrand’s disease.
- Antidepressants – particularly SSRI’s and Venlafaxine carry an increased risk of bleeding

3. **Antipsychotics**

VTE is a rare but potentially fatal adverse reaction of antipsychotics. Treatment of VTE begins with the appropriate and timely identification of those at risk.

Clozapine appears to have the most risks and current research suggests that patients on clozapine are 27 times more likely to develop a VTE than the general population*.

Other risk factors associated with developing VTE are listed above.

Immobility has also shown to increase the risk of VTE 10 fold and particular care should be taken with patients on antipsychotics and reduced mobility.

If unsure seek further advice from medical colleague / local haematology service.

Caution is advised with all antipsychotics but reports particularly highlight Clozapine and Olanzapine.

RISK ASSESSMENT FOR VENOUS THROMBOEMBOLISM (VTE)

All patients should be risk assessed on admission to hospital. Patients should be reassessed within 24 hours of admission and whenever the clinical situation changes.

STEP ONE
Assess all patients admitted to hospital for level of mobility (tick one box). All surgical patients, and all medical patients with significantly reduced mobility, should be considered for further risk assessment.

STEP TWO
Review the patient-related factors shown on the assessment sheet against thrombosis risk, ticking each box that applies (more than one box can be ticked).

Any tick for thrombosis risk should prompt thromboprophylaxis according to NICE guidance.

The risk factors identified are not exhaustive. Clinicians may consider additional risks in individual patients and offer thromboprophylaxis as appropriate.

STEP THREE
Review the patient-related factors shown against bleeding risk and tick each box that applies (more than one box can be ticked).

Any tick should prompt clinical staff to consider if bleeding risk is sufficient to preclude pharmacological intervention.

Guidance on thromboprophylaxis is available at:

http://www.nice.org.uk/guidance/CG92

This document has been authorised by the Department of Health
Gateway reference no. 10378
# Risk Assessment for Venous Thromboembolism (VTE)

## Mobility – all patients

<table>
<thead>
<tr>
<th>Mobility status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical patient</td>
<td>Medical patient expected to have ongoing reduced mobility relative to normal state</td>
</tr>
<tr>
<td>Medical patient NOT expected to have significantly reduced mobility relative to normal state</td>
<td></td>
</tr>
</tbody>
</table>

Assess for thrombosis and bleeding risk below: Risk assessment now complete.

## Thrombosis Risk

<table>
<thead>
<tr>
<th>Patient related</th>
<th>Admission related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active cancer or cancer treatment</td>
<td>Significantly reduced mobility for 3 days or more</td>
</tr>
<tr>
<td>Age &gt; 60</td>
<td>Hip or knee replacement</td>
</tr>
<tr>
<td>Dehydration</td>
<td>Hip fracture</td>
</tr>
<tr>
<td>Known thrombophilias</td>
<td>Total anaesthetic + surgical time &gt; 90 minutes</td>
</tr>
<tr>
<td>Obesity (BMI &gt;30 kg/m²)</td>
<td>Surgery involving pelvis or lower limb with a total anaesthetic + surgical time &gt; 60 minutes</td>
</tr>
<tr>
<td>One or more significant medical comorbidities (e.g. heart disease, metabolic, endocrine or respiratory pathologies; acute infectious diseases; inflammatory conditions)</td>
<td>Acute surgical admission with inflammatory or intra-abdominal condition</td>
</tr>
<tr>
<td>Personal history or first-degree relative with a history of VTE</td>
<td>Critical care admission</td>
</tr>
<tr>
<td>Use of hormone replacement therapy</td>
<td>Surgery with significant reduction in mobility</td>
</tr>
<tr>
<td>Use of oestrogen-containing contraceptive therapy</td>
<td></td>
</tr>
<tr>
<td>Varicose veins with phlebitis</td>
<td></td>
</tr>
<tr>
<td>Pregnancy or &lt; 6 weeks post partum (see NICE guidance for specific risk factors)</td>
<td></td>
</tr>
</tbody>
</table>

## Bleeding Risk

<table>
<thead>
<tr>
<th>Patient related</th>
<th>Admission related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active bleeding</td>
<td>Neurosurgery, spinal surgery or eye surgery</td>
</tr>
<tr>
<td>Acquired bleeding disorders (such as acute liver failure)</td>
<td>Other procedure with high bleeding risk</td>
</tr>
<tr>
<td>Concomitant use of anticoagulants known to increase the risk of bleeding (such as warfarin with INR &gt;2)</td>
<td>Lumbar puncture/epidural/spinal anaesthesia expected within the next 12 hours</td>
</tr>
<tr>
<td>Acute stroke</td>
<td>Lumbar puncture/epidural/spinal anaesthesia within the previous 4 hours</td>
</tr>
<tr>
<td>Thrombocytopenia (platelets &lt; 75x10⁹/l)</td>
<td></td>
</tr>
<tr>
<td>Uncontrolled systolic hypertension (230/120 mmHg or higher)</td>
<td></td>
</tr>
<tr>
<td>Untreated inherited bleeding disorders (such as haemophilia and von Willebrand’s disease)</td>
<td></td>
</tr>
</tbody>
</table>
Risk assessment for Venous Thromboembolism (VTE) – All Patients

All patients should be risk assessed on admission to hospital. Patients should be reassessed within 24 hours of admission and whenever the clinical situation changes.

<table>
<thead>
<tr>
<th>Patient ID / addressograph</th>
<th>Assessment type</th>
<th>date</th>
<th>weight</th>
<th>eGFR</th>
<th>bleeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Assessment – Admission/Pre-assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Re-assessment – Within 24 hours of admission</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### STEP ONE – Assess mobility

All patients with significantly reduced mobility should be considered for thromboprophylaxis.

<table>
<thead>
<tr>
<th>Mobility – all patients (tick one box)</th>
<th>Tick</th>
<th>Patient NOT expected to have significantly reduced mobility relative to normal state</th>
<th>STOP HERE no further action needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient expected to have ongoing reduced mobility relative to normal state</td>
<td>Go to STEP TWO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### STEP TWO – Assess Thrombosis Risk

Any tick for thrombosis risk should prompt thromboprophylaxis according to NICE guidance. Clinicians may consider additional risks in individual patients and offer thromboprophylaxis as appropriate.

### Patient related

<table>
<thead>
<tr>
<th>Tick</th>
<th>Active cancer or cancer treatment</th>
<th>Personal history or 1st degree relative with a history of VTE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age &gt; 60</td>
<td>Use of hormone replacement therapy</td>
</tr>
<tr>
<td></td>
<td>Dehydration</td>
<td>Use of oestrogen-containing contraceptive therapy</td>
</tr>
<tr>
<td></td>
<td>Known thrombophilias</td>
<td>Pregnancy or &lt; 6 weeks post partum</td>
</tr>
<tr>
<td></td>
<td>Obesity (BMI &gt;30 kg/m²)</td>
<td>Antipsychotic medication (clozapine and others)</td>
</tr>
<tr>
<td></td>
<td>One or more significant medical co-morbidities (e.g. heart disease; metabolic, endocrine or respiratory pathologies; acute infectious diseases; inflammatory conditions)</td>
<td>Hip fracture</td>
</tr>
<tr>
<td></td>
<td>Significantly reduced mobility for 3 days or more</td>
<td>Hip or knee replacement</td>
</tr>
<tr>
<td></td>
<td>Varicose veins with phlebitis</td>
<td>other</td>
</tr>
</tbody>
</table>

### STEP THREE – Assess Bleeding risk

If any tick consider if bleeding risk is sufficient to preclude pharmacological intervention.

<table>
<thead>
<tr>
<th>Tick</th>
<th>Active bleeding</th>
<th>Admission related</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Procedure with high bleeding risk planned</td>
<td>Lumbar puncture expected within the next 12 hours</td>
</tr>
<tr>
<td></td>
<td>Acquired bleeding disorders (such as acute liver failure)</td>
<td>Acute stroke</td>
</tr>
<tr>
<td></td>
<td>Concurrent use of anticoagulants known to increase the risk of bleeding (such as warfarin with INR &gt;2)</td>
<td>BP 230/120 mmHg or higher</td>
</tr>
<tr>
<td></td>
<td>Thrombocytopenia (platelets&lt; 75x10^9/l)</td>
<td>No bleeding risk</td>
</tr>
<tr>
<td></td>
<td>Untreated inherited bleeding disorders</td>
<td></td>
</tr>
</tbody>
</table>

### STEP FOUR - Outcome of risk assessment

<table>
<thead>
<tr>
<th>Tick</th>
<th>Treat with Clexane for dosing see over page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not required (no VTE risk factors, or patients having surgery with local anaesthesia by local infiltration with no limitation of mobility)</td>
</tr>
<tr>
<td></td>
<td>Bleeding risk outweighs VTE risk</td>
</tr>
<tr>
<td></td>
<td>On other therapeutic anticoagulant</td>
</tr>
</tbody>
</table>

Adapted from the Department of Health Risk Assessment Tool – Gateway Reference 10278 March 2010 v3.0 – Sept. 2010
STEP FIVE - Treatment (give patient written information leaflet and discuss decision)

<table>
<thead>
<tr>
<th>Weight</th>
<th>eGFR&gt;30ml/min/1.73m2</th>
<th>Tick</th>
<th>eGFR 15-30ml/min/1.73m2</th>
<th>Tick</th>
<th>eGFR&lt;15ml/min/1.73m2</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 50kg</td>
<td>Enoxaparin 20mg O.D.</td>
<td></td>
<td>eGFR&lt;15ml/min/1.73m2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-100kg</td>
<td>Enoxaparin 40mg O.D.</td>
<td></td>
<td>Heparin 5000units B.D.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-150kg</td>
<td>Enoxaparin 40mg O.D.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;150kg</td>
<td>Enoxaparin 60mg O.D.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rivaroxaban 10mg once daily (only for elective hip or knee replacements, POP cast without surgery)

Extended prophylaxis (specify duration)

STEP SIX – Anti-embolic stocking measurement and fitting if being used

<table>
<thead>
<tr>
<th>Thigh circumference</th>
<th>Calf circumference</th>
<th>Leg length or knee length</th>
<th>Stocking size given to patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right leg cm</td>
<td>Right leg cm</td>
<td>Leg length cm</td>
<td>Knee length cm</td>
</tr>
<tr>
<td>Left leg cm</td>
<td>Left leg cm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stockings measured and fitted correctly by

Signature……………………….…………Name:……………………………Designation:..…………………Date:……….

STEP SEVEN- Change in clinical situation post 24 hours

<table>
<thead>
<tr>
<th>Date</th>
<th>Change</th>
<th>Continue or Stop Prophylaxis</th>
</tr>
</thead>
</table>

STEP EIGHT- Give VTE leaflet to Patient on Discharge if not on discharge summary
Risk assessment for Venous Thromboembolism (VTE) Rehab

Appendix 4

All patients should be risk assessed on admission to hospital.
Patients should be reassessed within 24 hours of admission and whenever the clinical situation changes.

<table>
<thead>
<tr>
<th>Assessment type</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Assessment – Admission/Pre-assessment</td>
<td>weight</td>
</tr>
<tr>
<td>Re-assessment – Within 24 hrs (or 7 days if transferred on thromboprophylaxis)</td>
<td>eGFR</td>
</tr>
<tr>
<td>bleeding</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>

STEP ONE – Assess mobility

All patients with significantly reduced mobility, should be considered for thromboprophylaxis.

<table>
<thead>
<tr>
<th>Mobility – all patients (tick one box)</th>
<th>Tick</th>
<th>Patient NOT expected to have significantly reduced mobility relative to normal state Or END OF LIFE care (circle)</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient expected to have ongoing reduced mobility relative to normal state</td>
<td>Go to STEP TWO</td>
<td>STOP HERE no further action needed</td>
<td></td>
</tr>
</tbody>
</table>

Name……………………… signed……………………

STEP TWO – Assess Thrombosis Risk

Any tick for thrombosis risk should prompt thromboprophylaxis according to NICE guidance. Clinicians may consider additional risks in individual patients and offer thromboprophylaxis as appropriate.

<table>
<thead>
<tr>
<th>Patient related</th>
<th>Tick</th>
<th>Admission related</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active cancer or cancer treatment</td>
<td></td>
<td>Personal history or 1st degree relative with a history of VTE</td>
<td></td>
</tr>
<tr>
<td>Age &gt; 60</td>
<td></td>
<td>Use of hormone replacement therapy</td>
<td></td>
</tr>
<tr>
<td>Dehydration</td>
<td></td>
<td>Use of oestrogen-containing contraceptive therapy</td>
<td></td>
</tr>
<tr>
<td>Known thrombophlias</td>
<td></td>
<td>Pregnancy or &lt; 6 weeks post partum</td>
<td></td>
</tr>
<tr>
<td>Obesity (BMI &gt;30 kg/m²)</td>
<td></td>
<td>Antipsychotic medication (clozapine and others)</td>
<td></td>
</tr>
<tr>
<td>One or more significant medical co-morbidities (e.g. heart disease; metabolic, endocrine or respiratory pathologies; acute infectious diseases; inflammatory conditions)</td>
<td></td>
<td>Hip fracture</td>
<td></td>
</tr>
<tr>
<td>Significantly reduced mobility for 3 days or more</td>
<td></td>
<td>Hip or knee replacement</td>
<td></td>
</tr>
<tr>
<td>Varicose veins with phlebitis</td>
<td></td>
<td>other</td>
<td></td>
</tr>
</tbody>
</table>

STEP THREE – Assess Bleeding risk

If any tick consider if bleeding risk is sufficient to preclude pharmacological intervention.

<table>
<thead>
<tr>
<th>Patient related</th>
<th>Tick</th>
<th>Admission related</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active bleeding</td>
<td></td>
<td>procedure with high bleeding risk planned</td>
<td></td>
</tr>
<tr>
<td>Acquired bleeding disorders (such as acute liver failure)</td>
<td></td>
<td>Lumbar puncture expected within the next 12 hours</td>
<td></td>
</tr>
<tr>
<td>Concurrent use of anticoagulants known to increase the risk of bleeding (such as warfarin with INR &gt;2)</td>
<td></td>
<td>Acute stroke</td>
<td></td>
</tr>
<tr>
<td>Thrombocytopenia (platelets&lt; 75x10^3/l)</td>
<td></td>
<td>hypertension (230/120 mmHg or higher)</td>
<td></td>
</tr>
<tr>
<td>Untreated inherited bleeding disorders</td>
<td></td>
<td>No bleeding risk</td>
<td></td>
</tr>
</tbody>
</table>

STEP FOUR - Outcome of risk assessment

Treat with Clexane for dosing see over page

Not required (no VTE risk factors, or patients having surgery with local anaesthesia by local infiltration with no limitation of mobility)

Bleeding risk outweighs VTE risk

On other therapeutic anticoagulant

Adapted from the Department of Health Risk Assessment Tool – Gateway Reference 10278 March 2010 v3.0 – Sept. 2010
STEP FIVE - Treatment (give patient written information leaflet and discuss decision)

Patient declined thromboprophylaxis
Patient declined pharmacological prophylaxis
Patient declined mechanical prophylaxis

<table>
<thead>
<tr>
<th>Weight</th>
<th>eGFR&gt;30ml/min/1.73m²</th>
<th>Tick</th>
<th>eGFR15-30ml/min/1.73m² or unknown</th>
<th>Tick</th>
<th>eGFR&lt;15ml/min/1.73m²</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 50kg</td>
<td>Enoxaparin 20mg O.D.</td>
<td></td>
<td>Enoxaparin 20mg O.D.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-100kg</td>
<td>Enoxaparin 40mg O.D.</td>
<td></td>
<td>Enoxaparin 40mg O.D.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-150kg</td>
<td>Enoxaparin 40mg B.D.</td>
<td></td>
<td>Enoxaparin 40mg O.D.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;150kg</td>
<td>Enoxaparin 60mg B.D.</td>
<td></td>
<td>Enoxaparin 60mg O.D.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rivaroxaban 10mg once daily (only for elective hip or knee replacements, POP cast without surgery)

Extended prophylaxis (specify duration)

STEP SIX – Anti-embolic stocking measurement and fitting if used

<table>
<thead>
<tr>
<th>Thigh circumference</th>
<th>Calf circumference</th>
<th>Leg length or knee length</th>
<th>Stocking size given to patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right leg cm</td>
<td>Left leg cm</td>
<td>Right leg cm</td>
<td>Leg length cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Left leg cm</td>
<td>Knee length cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stocking size given to patient</td>
</tr>
</tbody>
</table>

Stockings measured and fitted correctly by

Signature……………………….…………Name:……………………………Designation:..…………………Date:……….

STEP SEVEN- Change in clinical situation post 24 hours

Date | Change | Continue or Stop Prophylaxis

STEP EIGHT- Give VTE leaflet to Patient on Discharge if not on discharge summary
Risk assessment for Venous Thromboembolism (VTE) – Adults SURGICAL
And Endoscopy

Appendix 5

**All patients should be risk assessed on admission to hospital.**
**Patients should be reassessed within 24 hours of admission and whenever the clinical situation changes.**

<table>
<thead>
<tr>
<th>Patient ID / addressograph</th>
<th>Assessment type</th>
<th>Tick</th>
<th>Date</th>
<th>Weight</th>
<th>EGFR</th>
<th>(EGFR) bleeding</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial Assessment – Admission/Pre-assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Re-assessment – Within 24 hours of admission</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STEP ONE – Assess mobility and procedure**
Assess all patients admitted to hospital for level of mobility. **All surgical patients** with significantly reduced pre or post-surgical mobility should be considered for further risk assessment. **Go to Step 2**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Tick</th>
<th>Mobility – all patients</th>
<th>Tick</th>
<th>STOP HERE no further action needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endoscopy or surgery under local anaesthetic by local infiltration</td>
<td>Go to</td>
<td>Normal post-surgical mobility.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other procedures</td>
<td>Go to Step 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STEP TWO – Assess Thrombosis Risk**
Any tick for thrombosis risk should prompt thromboprophylaxis according to NICE guidance. Clinicians may consider additional risks in individual patients and offer thromboprophylaxis as appropriate.

<table>
<thead>
<tr>
<th>Patient related</th>
<th>Admission related</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active cancer or cancer treatment</td>
<td>Total anaesthetic + surgical time &gt; 90 minutes</td>
<td></td>
</tr>
<tr>
<td>Age &gt; 60</td>
<td>Significantly reduced mobility for 3 days or more</td>
<td></td>
</tr>
<tr>
<td>Dehydration</td>
<td>Surgery involving pelvis or lower limb with a total anaesthetic + surgical time &gt; 60 minutes</td>
<td></td>
</tr>
<tr>
<td>Known thrombophilies</td>
<td>Acute surgical admission with inflammatory or intra-abdominal condition</td>
<td></td>
</tr>
<tr>
<td>Obesity (BMI &gt;30 kg/m²)</td>
<td>Surgery with significant reduction in mobility</td>
<td></td>
</tr>
<tr>
<td>One or more significant medical co-morbidities (e.g. heart disease; metabolic, endocrine or respiratory pathologies; acute infectious diseases; inflammatory conditions)</td>
<td>Pregnancy or &lt; 6 weeks post partum (see “Thromboprophylaxis and Thrombophilia in Pregnancy Guideline” for specific risk factors and complete separate risk assessment document, both available via the SUHTranet)</td>
<td></td>
</tr>
<tr>
<td>Personal history or 1st degree relative with a history of VTE</td>
<td>Varicose veins with phlebitis</td>
<td></td>
</tr>
<tr>
<td>Use of hormone replacement therapy</td>
<td>Use of oestrogen-containing contraceptive therapy</td>
<td></td>
</tr>
</tbody>
</table>

**STEP THREE – Assess Bleeding risk**
Review the patient-related factors shown against bleeding risk and tick each box that applies (more than one box can be ticked). **Any tick should prompt clinical staff to consider if bleeding risk is sufficient to preclude pharmacological intervention.**

<table>
<thead>
<tr>
<th>Patient related</th>
<th>Admission related</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active bleeding</td>
<td>Eye surgery</td>
<td></td>
</tr>
<tr>
<td>Acquired bleeding disorders (such as acute liver failure)</td>
<td>Other procedure with high bleeding risk</td>
<td></td>
</tr>
<tr>
<td>Concurrent use of anticoagulants known to increase the risk of bleeding (such as warfarin with INR &gt;2)</td>
<td>Lumbar puncture/epidural/spinal anaesthesia expected within the next 12 hours</td>
<td></td>
</tr>
<tr>
<td>Hypertension (230/120 mmHg or higher)</td>
<td>Lumbar puncture/epidural/spinal anaesthesia within the previous 4 hours</td>
<td></td>
</tr>
<tr>
<td>Thrombocytopenia (platelets &lt; 75x10⁹/l)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Untreated inherited bleeding disorders (such as haemophilia and von Willebrand’s disease)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
STEP FOUR - Outcome of risk assessment

<table>
<thead>
<tr>
<th>Pharmacological prophylaxis to be prescribed</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not required (no VTE risk factors, or patients having surgery with local anaesthesia by local infiltration with no limitation of mobility)</td>
<td></td>
</tr>
<tr>
<td>Bleeding risk outweighs VTE risk</td>
<td></td>
</tr>
<tr>
<td>On other therapeutic anticoagulant</td>
<td></td>
</tr>
<tr>
<td>Other contraindication for pharmacological prophylaxis (please specify)</td>
<td></td>
</tr>
<tr>
<td>Extended prophylaxis (specify duration)</td>
<td></td>
</tr>
<tr>
<td>Mechanical prophylaxis required see below</td>
<td></td>
</tr>
</tbody>
</table>

STEP FIVE – Treatment (give patient written information leaflet and discuss decision)

Patient declined thromboprophylaxis

Patient declined pharmacological prophylaxis

Patient declined mechanical prophylaxis

<table>
<thead>
<tr>
<th>Weight</th>
<th>eGFR&gt;30ml/min/1.73m2</th>
<th>Tick</th>
<th>eGFR15-30ml/min/1.73m2</th>
<th>Tick</th>
<th>eGFR&lt;15ml/min/1.73m2</th>
<th>Tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 50kg</td>
<td>Enoxaparin 20mg O.D.</td>
<td></td>
<td>Enoxaparin 20mg O.D.</td>
<td></td>
<td>Heparin 5000units B.D.</td>
<td></td>
</tr>
<tr>
<td>50-100kg</td>
<td>Enoxaparin 40mg O.D.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-150kg</td>
<td>Enoxaparin 40mg B.D.</td>
<td></td>
<td>Enoxaparin 40mg O.D.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;150kg</td>
<td>Enoxaparin 60mg B.D.</td>
<td></td>
<td>Enoxaparin 60mg O.D.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rivaroxaban 10mg once daily (only for elective hip or knee replacements, POP cast without surgery)

Extended prophylaxis (specify duration)

Patient is able to self inject Enoxaparin (training required)

YES | NO | N/A

Patient information leaflet for extended prophylaxis provided (denote which product)

ENOXAPARIN | RIVAROXABAN

Mechanical prophylaxis required

Yes | No | Contra-indicated (specify reason)

Anti-embolic stockings (AES)

Foot Impulse or Intermittent Pneumatic compression device (IPC)

Thromboprophylaxis prescribed on the inpatient chart

(prescribe mechanical and pharmacological prophylaxis in separate boxes on the drug chart if indicated)

Tick

Risk Assessment completed and documented on drug chart by

Signature……………………….…………Name:……………………………Designation:..…………………Date:……….

STEP SIX – Anti-embolic stocking measurement and fitting

<table>
<thead>
<tr>
<th>Thigh circumference</th>
<th>Calf circumference</th>
<th>Leg length or knee length</th>
<th>Stocking size given to patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right leg</td>
<td>Left leg</td>
<td>Right leg</td>
<td>Left leg</td>
</tr>
<tr>
<td>cm</td>
<td>cm</td>
<td>cm</td>
<td>cm</td>
</tr>
</tbody>
</table>

Stockings measured and fitted correctly by

Signature……………………….…………Name:……………………………Designation:..…………………Date:……….

STEP SEVEN – Change in clinical situation post 24 hours

<table>
<thead>
<tr>
<th>Date</th>
<th>Change</th>
<th>Continue or stop thromboprophylaxis</th>
</tr>
</thead>
</table>

STEP EIGHT- give VTE leaflet to patient on discharge

Adapted from the Department of Health Risk Assessment Tool – Gateway Reference 10278 March 2010 v3.0 –Sept. 2010
Minor Injuries Unit
Clinical Pathway – Management of patients requiring non weight bearing lower limb immobilisation
– VTE Risk Assessment and Prophylaxis

Patient requires lower limb immobilisation in POP/dynacast

Complete VTE Risk Assessment Proforma

Risk identified and patient requires prophylactic anticoagulation

- Take baseline bloods and send to UHS – FBC/U&E/Coag screen
- Administer enoxaparin according to dosing schedule either via PGD 119/NMP
- Discuss with FAC and arrange appointment following day
- Take notes/VTE Risk assessment to FAC/OOH ask receptionist to take notes to FAC the following morning.

Advise patient to remain hydrated

Risk not identified – no anticoagulation required

Treat patient according to injury

Advise patient to remain hydrated and mobilise as much as possible and as injury allows.

Venous Thromboembolism Risk Assessment for Adult patients requiring Lower limb Immobilisation

Adult Patient requires lower limb immobilisation

Non-weight bearing, acute severe injury (i.e. dislocation / fracture or complete tendon rupture

Patient requires POP immobilisation

VTE Risk Assessment
If the pt has 1 of these risk factors : then treat / refer to FAC (previous risk factors)
Recent malignancy
Prev hx of VTE
FHx of VTE
BMI >30
If the pt has 2 of these risk factors – then treat / refer to FAC (new risk factors)
Age >60
Dehydration
Known thrombophilia
Significant medical co-morbidities*
On the OCP or HRT
Varicose veins with phlebitis
Active smoker

If VTE risks identified = Thromboprophylaxis indicated

- Advice to patient; keep active and drink plenty of water every day.
- Take baseline bloods FBC/U+E/Clotting
- Commence patient on daily prophylactic Enoxaparin s/c injection for duration of immobilisation: for dosing schedule see PGD 119 Enoxaparin
- Administer 1st dose and arrange appointment in FAC for following day for review of blood results and teaching on self-injection of Enoxaparin.
MIU Checklist

Baseline bloods (FBC/U+E/Clotting) taken and sent

1st dose Enoxaparin given and prescription sent to pharmacy. (supply until # clinic appt.)

Fracture clinic appt arranged

FAC appt arranged following day

FAC checklist

Check blood results

Teach patient how to self inject

Patient assessed as competent to self-administer – if not, consider alternative and discuss with FAC Dr / On Call Consultant

Give patient supply of Enoxaparin and sharps box.

Fax letter to GP detailing treatment, attach baseline blood results

<table>
<thead>
<tr>
<th>Calculated Creatinine Clearance:</th>
<th>ml/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hb:</td>
<td>g/l</td>
</tr>
</tbody>
</table>

If any blood results outside expected parameters discuss with FAC Dr or On Call Consultant

*VTE Risk assessment criteria in accordance with UHS NHS Trust VTE Policy

*co-morbidities eg. Heart disease; metabolic, endocrine or respiratory pathologies; acute infectious diseases;
Appendix 8
Guidance Adapted from Nice (2010) Clinical Guideline 92 on VTE

Avoid Anti Embolism Stockings (AES) in Patients Who Have

- Suspected or proven peripheral arterial disease.
- Peripheral arterial bypass grafting.
- Peripheral neuropathy or other causes of sensory impairment.
- Any local conditions in which AES may cause damage, for example fragile, ‘tissue paper’ skin, dermatitis, gangrene or recent skin grafting.
- Known allergy of materials used in stockings.
- Heart failure.
- Severe leg oedema from Congestive Heart Failure.
- Unusual leg size or shape.
- Major limb deformity preventing correct fit.

Before Fitting AES

- All patients should have their vascular status checked by checking for the presence of pulses in both feet.
- Ensure that patients who need AES have their legs measured and that the correct size of stocking is provided, using the manufacturer’s guidance.
- Record the patient’s measurements on the Anti-embolism Stocking Protocol (Appendix Three).

Applying AES

- AES should be fitted and patients shown how to use them by staff competent to do so.
- Ensure that patients who develop oedema or swelling have their legs re-measured and stockings re-fitted as appropriate.
- If arterial disease is suspected seek expert advice before fitting stockings.
- Use AES that provide graduated compression and produce a calf pressure of 14-15 mmHg.
- Encourage patients to wear AES day and night until mobility has improved.
- AES should be removed daily for hygiene purposes and inspect skin condition. In patients at high risk i.e. poor skin integrity, significant mobility reduction or sensory loss this should be done more frequently.
- Discontinue the use of AES if there is any marking, blistering or discoloration of the skin under them. Pay particular attention to the heels and bony prominences as these are more susceptible to tissue breakdown.
- Always check patients who complain of pain or discomfort.
- If suitable consider a pneumatic compression device as an alternative.
- Ensure patients know how to use AES appropriately and that they understand that this will reduce their risk of VTE.
- Monitor the use of AES and offer assistance when they are not used appropriately.
- Record skin inspections.
- AES should be washed on a regular basis – if washing facilities are not available they should be replaced.
All in-patients must be screened and considered for VTE prophylaxis

Patient assessed as high risk of VTE but pharmacological prophylaxis contraindicated

**OR**

Patient assessed as high risk of VTE and has had previous DVT or PE

Assess patient's suitability for AES (see contraindications)

- No contraindication for AES
  - AES prescribed on patient's drug chart
  - Patient measured and fitted for stocking by appropriately trained staff
  - Check AES each shift – ensure no wrinkles/tourniquet
  - Remove AES and check condition of patient's legs daily. Refit stockings

- AES contraindicated
  - Note reason for contraindication in patient's health care record
  - Encourage mobilisation and ensure adequate hydration

- AES prescribed on patient's drug chart
  - Patient measured and fitted for stocking by appropriately trained staff
  - Check AES each shift – ensure no wrinkles/tourniquet
  - Remove AES and check condition of patient's legs daily. Refit stockings

- AES prescribed on patient's drug chart
  - Patient measured and fitted for stocking by appropriately trained staff
  - Check AES each shift – ensure no wrinkles/tourniquet
  - Remove AES and check condition of patient's legs daily. Refit stockings

- AES prescribed on patient's drug chart
  - Patient measured and fitted for stocking by appropriately trained staff
  - Check AES each shift – ensure no wrinkles/tourniquet
  - Remove AES and check condition of patient's legs daily. Refit stockings

Soiled AES

Supply patient with clean AES

Contraindications
- Open wound
- Severe arteriosclerosis or other ischaemic vascular disease
- Massive oedema of legs (including lymphoedema)
- Extreme deformity of leg
- Thigh circumference that exceeds the size specified in the manufacturer's fitting instructions for the stocking
- Patient refusal – this must be documented.

AES must be worn constantly until the patient is mobilising as normal (or 6 weeks)

If appropriate, patient to be discharged home with AES

Note reason for contraindication in patient's health care record

Soil AES

Supply patient with clean AES

Contraindications
- Open wound
- Severe arteriosclerosis or other ischaemic vascular disease
- Massive oedema of legs (including lymphoedema)
- Extreme deformity of leg
- Thigh circumference that exceeds the size specified in the manufacturer's fitting instructions for the stocking
- Patient refusal – this must be documented.
Appendix 9

Southern Health NHS Foundation Trust:

Equality Impact Analysis Screening Tool

Equality Impact Assessment (or ‘Equality Analysis’) is a process of systematically analysing a new or existing policy/practice or service to identify what impact or likely impact it will have on protected groups.

It involves using equality information, and the results of engagement with protected groups and others, to understand the actual effect or the potential effect of your functions, policies or decisions. The form is a written record that demonstrates that you have shown due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations with respect to the characteristics protected by equality law.

For guidance and support in completing this form please contact a member of the Equality and Diversity team

<table>
<thead>
<tr>
<th>Name of policy/service/project/plan:</th>
<th>Venous Thromboprophylaxis Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy Number:</td>
<td>SH CP 50</td>
</tr>
<tr>
<td>Department:</td>
<td></td>
</tr>
<tr>
<td>Lead officer for assessment:</td>
<td>Giles Durward</td>
</tr>
<tr>
<td>Date Assessment Carried Out:</td>
<td>June 2015</td>
</tr>
</tbody>
</table>

1. Identify the aims of the policy and how it is implemented.

<table>
<thead>
<tr>
<th>Key questions</th>
<th>Answers / Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Briefly describe purpose of the policy including</td>
<td>Southern Health NHS Foundation Trust (the Organisation) takes the prevention of Venous Thromboembolism (VTE) seriously. This includes patients admitted to community hospitals, mental health settings, discharged from other providers into our care and admitted from the community.</td>
</tr>
<tr>
<td>- How the policy is delivered and by whom</td>
<td>To provide clear framework for all clinical staff in the assessment, management and prevention of venous thromboembolism for patients.</td>
</tr>
<tr>
<td>- Intended outcomes</td>
<td>Intended Outcomes:</td>
</tr>
<tr>
<td></td>
<td>- Promote multi-disciplinary working in reducing the incidences of VTE and effective patient assessment.</td>
</tr>
<tr>
<td></td>
<td>- Develop a culture where VTE assessment, prevention and management is embedded</td>
</tr>
</tbody>
</table>
in acute clinical inpatient areas.

- To raise staff awareness, identify lessons learned and recommend action through policy audit

### 2. Consideration of available data, research and information

Monitoring data and other information involves using equality information, and the results of engagement with protected groups and others, to understand the actual effect or the potential effect of your functions, policies or decisions. It can help you to identify practical steps to tackle any negative effects or discrimination, to advance equality and to foster good relations.

Please consider the availability of the following as potential sources:

- **Demographic** data and other statistics, including census findings
- Recent **research** findings (local and national)
- Results from **consultation or engagement** you have undertaken
- Service user **monitoring data**
- Information from **relevant groups** or agencies, for example trade unions and voluntary/community organisations
- Analysis of records of enquiries about your service, or **complaints** or **compliments** about them
- Recommendations of **external inspections** or audit reports

<table>
<thead>
<tr>
<th>Key questions</th>
<th>Data, research and information that you can refer to</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.1</strong> What is the equalities profile of the team delivering the service/policy?</td>
<td>The Equality and Diversity team will report on Workforce data on an annual basis.</td>
</tr>
<tr>
<td><strong>2.2</strong> What equalities training have staff received?</td>
<td>All Trust staff have a requirement to undertake Equality and Diversity training as part of Organisational Induction (Respect and Values) and E-Assessment</td>
</tr>
<tr>
<td><strong>2.3</strong> What is the equalities profile of service users?</td>
<td>The Trust Equality and Diversity team report on Trust patient equality data profiling on an annual basis</td>
</tr>
</tbody>
</table>
2.4 What other data do you have in terms of service users or staff? (e.g results of customer satisfaction surveys, consultation findings). Are there any gaps?

The Trust is preparing to implement the Equality Delivery System which will allow a robust examination of Trust performance on Equality, Diversity and Human Rights. This will be based on 4 key objectives that include:

1. Better health outcomes for all
2. Improved patient access and experience
3. Empowered, engaged and included staff
4. Inclusive leadership

2.5 What internal engagement or consultation has been undertaken as part of this EIA and with whom? What were the results? Service users/carers/Staff

2.6 What external engagement or consultation has been undertaken as part of this EIA and with whom? What were the results? General Public/Commissioners/Local Authority/Voluntary Organisations

In the table below, please describe how the proposals will have a positive impact on service users or staff. Please also record any potential negative impact on equality of opportunity for the target:

In the case of negative impact, please indicate any measures planned to mitigate against this
| Age       | The policy details the assessment and management of VTE in the adult patient. The assessment ensures that all patients are individually assessed for their risk of VTE, risk of bleeding and appropriate clinical intervention/management is delivered. | Each year, one in every 1,000 people in the UK is affected by DVT. Anyone can develop it but it becomes more common with age. As well as age, risk factors include:  
- previous venous thromboembolism  
- a family history of thrombosis  
- medical conditions such as cancer and heart failure  
- inactivity (for example, after an operation)  
- being overweight or obese | VTE Assessment |
| Disability | The VTE assessment tool provides a standardised approach that will help identify those with differential health outcomes and lead to positive action where required. Southern Health will respond positively to requests of reasonable adjustments. | There may potentially be an impact on patients understanding information. | VTE Assessment |
| Gender Reassignment | No adverse impacts identified at this stage of screening | | |
| Marriage and Civil Partnership | No adverse impacts identified at this stage of screening | | |
| Pregnancy and Low Molecular Weight Heparin (LMWH) is drug of choice but | VTE Assessment | | |
| Maternity | patients should be informed that it is not licensed for use in pregnancy. Obesity in pregnancy is associated with an increased risk of miscarriage, fetal congenital anomaly, thromboembolism, gestational diabetes, pre-eclampsia, dysfunctional labour, PPH, wound infection, stillbirth, and neonatal death. |
| Race | Southern Health will respond positively to support patients whose first language is not English by providing appropriate interpreting and translation services. No adverse impacts identified this stage of screening. |
| Religion or Belief | This policy potentially impacts religious beliefs that avoid animal products. The policy highlights staff responsibility to ensure patients are informed about other pharmacological choices considered. |
| Sex | The policy does not adversely impact on gender as it is based on clinical need. No adverse impacts identified this stage of screening. |
| Sexual Orientation | No adverse impacts identified this stage of screening. |
What happens when you go home?

If you have been prescribed medicine to prevent clots you may need to continue this after you leave hospital. If you have been fitted with stockings you should continue to wear these until you become more mobile.

✓ Continue to be as mobile as possible.
✓ Continue to drink plenty of fluids to avoid becoming dehydrated, especially water.

What are the signs and symptoms of a DVT?

- Pain in your leg
- Swelling in your leg
- Warm or discoloured skin to the legs
- Enlarged or more noticeable veins near the surface of the skin on your legs

What are the signs and symptoms of a Pulmonary Embolism (PE)?

- New shortness of breath
- Pain in your chest, back or ribs which can be worse if you take a deep breath
- Coughing up blood

Both DVT and PE can be treated effectively – so it is very important to contact your Doctor if you experience any of the above symptoms.

We're listening – tell us what you think

We welcome your comments about your care. When things go well we like to hear about it. If you have any suggestions about improving the service, please tell a member of staff.

Reducing your risk of developing a Deep Vein Thrombosis or Pulmonary Embolism when you are in hospital

For a translation of this document, an interpreter or a version in large print or Braille, please contact the Communications Team

☎ 023 8087 4666

@Southern_NMFT Southern Health

www.southernhealth.nhs.uk

Quality care, when and where you need it

© Southern Health NHS Foundation Trust, Communications. 2nd edition May 2013. Printed and distributed by the University of Southampton Printing Services. Designed by NHS Creative – SL0275d
There are several conditions that increase your risk of developing a blood clot – these are called risk factors.

**Examples of risk factors for developing blood clots**

- You or a close family member has had a blood clot before
- You have cancer
- You are known to have heart, bowel, kidney or lung disease
- You are very overweight
- You are over 60
- You have inflamed varicose veins (thrombosis)
- You are having an operation or have had an operation in the last 8 weeks
- You have had a long journey in the past few weeks
- You have a condition that makes your blood more likely to clot
- You are pregnant or have recently given birth
- You are on the oral contraceptive pill or hormone replacement therapy

When you are admitted to hospital you are at risk of developing a blood clot because you are less mobile than usual. If you also have one of the risk factors above, your risk of developing a blood clot increases further.

**Reducing your risk of developing a DVT or PE while you are in hospital**

There are several steps that you can take to reduce your risk of developing a DVT while you are in hospital.

- **Keep Mobile**: Try to stay as active as possible. If you are unable to walk around, exercise your legs in bed or out in your chair.
- **Drink plenty**: If you are able, try and take regular drinks, especially water, to stop yourself becoming dehydrated.

Sometimes these steps are not enough and your doctor or nurse may need to take steps to reduce your risk of developing a blood clot. Depending on your risk factors and medical condition:

- You may be fitted with compression stockings. These are tight stockings which are designed to squeeze the blood from the surface / superficial veins into the deep veins. They help to improve your circulation and reduce the risk of blood clots.
- If we think you are at a fairly high risk of developing a clot, we may give you some medication called heparin which stops the blood from clotting too quickly. The medicine is given by injection once or twice a day. **It is very important that you tell us if you are already taking medicine such as Warfarin that thins your blood to prevent clots**.
- You may be prescribed a once daily tablet to thin your blood.