<table>
<thead>
<tr>
<th>Guidelines title</th>
<th>Venous Thromboembolism (VTE): thromboprophylaxis guidelines for inpatients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidelines reference</td>
<td>PHA70</td>
</tr>
<tr>
<td>Guidelines category</td>
<td>Clinical</td>
</tr>
<tr>
<td>Relevant to</td>
<td>All Staff in Inpatient and Community Settings including Residential Services</td>
</tr>
<tr>
<td>Date published</td>
<td>July 2019</td>
</tr>
<tr>
<td>Implementation date</td>
<td>July 2019</td>
</tr>
<tr>
<td>Date last reviewed</td>
<td>New Policy</td>
</tr>
<tr>
<td>Next review date</td>
<td>July 2022</td>
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<td>Medical Director</td>
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<td>Approved by (Group):</td>
<td>Physical Health &amp; Nutrition Group</td>
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<tr>
<td>Approved by (Committee):</td>
<td>Drugs and Therapeutics Committee</td>
</tr>
<tr>
<td>Document history</td>
<td>Date</td>
</tr>
<tr>
<td></td>
<td>July 2019</td>
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<td></td>
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<td>Consultation</td>
<td>Chief Pharmacist</td>
</tr>
<tr>
<td></td>
<td>Joint Formulary &amp; Medicines Optimisation Pharmacist, North Central London</td>
</tr>
</tbody>
</table>

DO NOT AMEND THIS DOCUMENT

Further copies of this document can be found on the Foundation Trust intranet.
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1. Introduction

1.1 In March 2018 the National Institute for Health and Clinical Excellence (NICE) launched an updated guideline “Venous thromboembolism in over 16s: reducing the risk of hospital-acquired deep vein thrombosis or pulmonary embolism” (NG89).

1.2 This guideline lays out a number of steps in the pathway for “Reducing the Risk of Venous Thromboembolism in Hospital Inpatients:

- Provision of patient information on prevention of VTE
- VTE risk reduction – general measures for all patients
- Assessment of VTE and bleeding risks – to assess if patients are at increased risk of VTE Choice of VTE prophylaxis- To decide if mechanical and/or pharmacological-thromboprophylaxis is indicated
- Re-assessment of risks: 24 hours post admission and whenever the patient’s clinical condition changes
- Discharge planning

1.3 The responsibility for the decision to administer thromboprophylaxis or not to an individual patient rests with the consultant.

1.4 Note advice regarding thromboprophylaxis should be obtained from Haematology in complex patient cases.

1.5 The key elements are summarized in (Appendix 1)

2. Scope

2.1 This guideline applies to all healthcare professionals working within inpatient settings to ensure assessment completed (Appendix 2)

2.2 This guideline applies to all inpatients

3. Definitions

<table>
<thead>
<tr>
<th>Venous Thromboembolism (VTE)</th>
<th>The blocking of a blood vessel by a clot (or part of a clot) that has broken off from the place where it formed and travelled to another location.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep Vein Thrombosis</td>
<td>The formation of one or more blood clots (a blood clot is also known as a “thrombus,” while multiple clots are called “thrombi”) in one of the body’s large veins, most commonly in the lower limbs (e.g., lower leg or calf)</td>
</tr>
<tr>
<td>Pulmonary Embolism</td>
<td>An obstruction of a blood vessel in the lungs, usually due to a blood clot, which blocks a coronary artery. Pulmonary embolism is a fairly common condition that can be fatal. Pulmonary embolism is difficult to diagnose.</td>
</tr>
</tbody>
</table>
4. Aims and Objectives

4.1 To assess and reduce the risk of venous thromboembolism (VTE or blood clots) and deep vein thrombosis (DVT) in all patients admitted to inpatient wards.

4.2 To ensure VTE risk assessment is completed on Carenotes within 24 hours of admission and re-assessed at least twice weekly or depending upon clinical condition.

4.3 This guidance aims to help healthcare professionals identify patients most at risk and describes treatments and interventions that can be used to reduce the risk of VTE.

5. Duties and Responsibilities

5.1. Medical Team

5.1.1 The medical team is responsible for:

- VTE assessment of all adult patients admitted to inpatient wards
- Completion of VTE risk assessment tool on Carenotes (Appendix 3)
- Discussing with patients the risks and benefits of thromboprophylaxis and recording this in Carenotes
- Prescription of appropriate thromboprophylaxis
- Documentation of reason(s) why thromboprophylaxis has not been prescribed for any patient deemed to be at higher risk for VTE
- Reassessment of the thrombosis and bleeding risk twice weekly and whenever the clinical situation changes. Thromboprophylaxis to be adjusted accordingly
- Ensuring follow-up and monitoring has been arranged for patients discharged with thromboprophylaxis
- Identification of any case of hospital acquired VTE (i.e. VTE occurring more than 24 hours after admission or within 90 days following discharge)
- Referral for specialist medical advice when necessary as per treatment plan

5.2. Nursing Staff

5.2.1 Nursing staff are responsible for:

- Administration of pharmacological thromboprophylaxis with appropriate documentation on the medication chart and on Carenotes
- Ensuring mechanical VTE prophylaxis is used where applicable
- If indicated, ensuring mechanisms are in place for administration of thromboprophylaxis in the event a patient is prescribed this on discharge and to ensure the patient has been counselled

5.3. Pharmacy Staff

5.3.1 Pharmacy staff are responsible for:
• Liaising with medical staff to ensure that thromboprophylaxis is accurately prescribed and monitored
• Ensuring written information is available to patients
• If indicated, ensuring arrangements are in place for thromboprophylaxis on discharge as per treatment plan

5.4. All Staff

5.4.1 All staff are responsible for:

• Ensuring that all inpatients in their care have been assessed for their risk of VTE
• Ensuring VTE documentation is accurate and up-to-date
• Ensuring escalation to the medical staff regarding any changes or omissions in VTE risk assessment and treatment

6. Main body of the policy describing policy specific information

6.1. STEP 1 Provision of patient information

6.1.1 All patients should be provided with written and verbal information regarding the risks of VTE and how to reduce these. Please provide all patients with the VTE patient information leaflet (Appendix 4).

6.1.2 Provide written information on:

• The risks and possible consequences of VTE
• The importance of VTE prophylaxis and possible side-effects
• The correct use of VTE prophylaxis (for example, anti-embolism stockings)
• How patients can reduce their risk of VTE (such as keeping well hydrated and, if possible, exercising and becoming more mobile)

6.1.3 Staff will ensure information about the risk of VTE is provided in a format to meet the patient’s individual requirements.

6.1.4 Be aware that heparins are of animal origin and this may be of concern to some people. Discuss the alternatives such as synthetic alternatives (Fondaparinux Sodium) with people who have concerns about using animal products, after discussing their suitability, advantages and disadvantages with the patient.

6.2. STEP 2 Immediate general risk reduction measures – All patients admitted to hospital

• All patients should be provided with the VTE patient information leaflet APPENDIX 2
• Encourage mobilisation as soon as and as much as possible.
• Adequate hydration and prevention of dehydration.

6.2.1 Aspirin and other anti-platelet drugs are NOT considered adequate thromboprophylaxis.

6.3. STEP 3(a) Identification of Patients at increased risk of VTE

6.3.1 Risk assessment for all patients must be completed electronically on Carenotes.
6.3.2 The VTE risk assessment tool is part of the physical health screening.  
6.3.4 This tool is accessible via the Carenotes “medications” tab.

<table>
<thead>
<tr>
<th>Risk factors for VTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active cancer or cancer treatment</td>
</tr>
<tr>
<td>Known thrombophilia</td>
</tr>
<tr>
<td>Age over 60 years</td>
</tr>
<tr>
<td>Obesity (BMI &gt;30kg/m2)</td>
</tr>
<tr>
<td>Dehydration (clinically)</td>
</tr>
<tr>
<td>Use of HRT</td>
</tr>
<tr>
<td>One or more significant medical co-morbidities (e.g. heart disease, metabolic, endocrine or respiratory pathologies, acute infectious disease, inflammatory)</td>
</tr>
<tr>
<td>Varicose veins with phlebitis</td>
</tr>
<tr>
<td>Personal history or first degree relative with a history of VTE</td>
</tr>
<tr>
<td>Pregnancy/less than 6 weeks postpartum (Contact Haematology)</td>
</tr>
</tbody>
</table>

6.3.5 **Patients are considered at increased risk of VTE if they have ONE of the following:**

- Have had or are expected to have significantly reduced mobility (bedbound, unable to walk unaided or spending a substantial proportion of the day in bed/chair) for 3 or more days (including prior to hospital admission) **OR**
- Have reduced mobility relative to their baseline **AND One or more** risk factors (Table 2)

**Psychiatric risk factors to be aware of:**

- Typical antipsychotics
- Clozapine
- Poor oral intake
- Restraint
- Catatonia
- Neuromuscular syndrome (fever and rhabdomyolysis)

6.3 STEP 3(b) Identification of patients at increased risk of bleeding

6.3.6 All patients must be assessed for bleeding risk prior to prescription of pharmacological VTE thromboprophylaxis. Enoxaparin is the low molecular weight heparin of choice in the trust.
Table 3: **Contraindications to pharmacological thromboprophylaxis**

- Active bleeding
- Acquired bleeding disorders (e.g. acute liver failure)
- Concurrent use of anticoagulants known to increase the risk of bleeding (e.g. INR less than 2)
- Lumbar puncture / epidural / spinal anaesthesia within previous 4 hours or expected within 12 hours
  - Acute stroke
  - Thrombocytopenia (platelets <75 x 10^9/l)
- Uncontrolled systolic hypertension (>230/120 mmHg)
- Untreated inherited bleeding disorders (e.g. haemophilia or von Willebrand’s disease)
  - High risk of falls

6.3.7 In patients whom pharmacological thromboprophylaxis is contra-indicated, mechanical thromboprophylaxis should be offered.

6.3.8 Haematology must be contacted for treatment advice where the overall risks of bleeding and VTE are difficult to discern.

6.3.9 Seek medical advice from Haematology for patients who are at very high risk of VTE and for whom mechanical and pharmacological VTE prophylaxis are contraindicated.

6.3.10 If the risk of bleeding outweighs the risk of VTE, consider mechanical VTE prophylaxis.

6.3.11 If the risk of VTE outweighs the risk of bleeding, consider pharmacological VTE.

### 6.4 Step 4 Prescription of appropriate thromboprophylaxis

#### 6.4.1 Mechanical Prophylaxis

- If the risk of bleeding outweighs the risk of VTE, consider mechanical VTE prophylaxis. Anti-embolism stockings are indicated for the prevention of VTE in patients for who pharmacological VTE is contra-indicated

- Anti-embolism Stockings – Need to be prescribed on medication chart

- **Do not offer anti-embolism stockings to patients who have:**
  - Suspected or proven peripheral arterial disease, e.g. absent pedal pulses
  - Peripheral arterial bypass grafting
  - Peripheral neuropathy or other causes of sensory impairment
  - Any local conditions in which stockings may cause damage, for example
Fragile “tissue paper” skin, dermatitis, gangrene or recent skin graft

Known allergy to material or manufacture

Severe leg oedema or pulmonary oedema from congestive heart failure

Unusual leg size or shape

Major limb deformity preventing correct fit

- **Mechanical VTE prophylaxis is not routinely recommended in addition to pharmacological prophylaxis.**

If mechanical VTE prophylaxis is deemed appropriate based on patient choice and individual patient factors, please ensure:

- That patients who need anti-embolism stockings have their legs measured and that they are provided with the correct size of stocking

<table>
<thead>
<tr>
<th>For thigh-length stockings</th>
<th>For knee-length stockings</th>
<th>Select the correct stockings using the manufacturer’s measurement table</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Measure the circumference of both thighs at their widest point</td>
<td>1. Measure the circumference of both calves at their widest point</td>
<td></td>
</tr>
<tr>
<td>2. Measure the circumference of both calves at their widest point</td>
<td>2. Measure the distance from the popliteal fold to the heel</td>
<td></td>
</tr>
<tr>
<td>3. Measure the distance from the gluteal furrow (buttock fold) to the heel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Prescribe generically as “**Anti-embolism stockings**” on the drug chart

- Prescribe anti-embolism stockings at the appropriate length (i.e. below knee, thigh length) on the drug chart. The choice between thigh length or knee length should be based on clinical judgement and patient preference

- Anti-embolism stockings that provide graduated compression and produce a calf pressure of 14-15 mmHg are used

- That patients are shown how to use their anti-embolism stockings

- Mechanical VTE prophylaxis is continued until the patient’s level of mobility is no longer significantly reduced (which may be beyond the date of discharge)

- Patients are encouraged to wear their anti-embolism stockings day and night until they no longer have significantly reduced mobility

- Removal of anti-embolism stockings daily for hygiene purposes and to inspect skin condition. In patients with a significant reduction in mobility, poor skin integrity or any sensory loss, inspect the skin daily, particularly over the heels and bony prominences

The use of anti-embolism stockings is **stopped** if there is marking, blistering or discolouration of the skin, particularly over the heels and bony prominences, or if the person experiences pain or discomfort. Ensure an incident report is completed, inform the medical team and ensure a care plan is documented in Carenotes

---

**6.4.2 Pharmacological VTE Prophylaxis**
If the risk of VTE outweighs the risk of bleeding, consider pharmacological VTE:

<table>
<thead>
<tr>
<th>First Line</th>
<th>Second Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enoxaparin is the low molecular weight heparin (LMWH) of choice</td>
<td></td>
</tr>
<tr>
<td>Fondaparinux as advised by Haematology for patients with a past history of heparin induced thrombocytopenia (HIT)/ hypersensitivity to enoxaparin.</td>
<td></td>
</tr>
</tbody>
</table>

Thromboprophylaxis should be commenced as soon as possible after risk assessment has been completed on Carenotes if indicated.

Thromboprophylaxis should be continued until there is a change in the patient’s clinical condition and the patient is deemed to no longer be at increased risk of VTE according to reassessment using the VTE risk assessment tool on Carenotes.

Patients, who have been prescribed pharmacological thromboprophylaxis, **do not require anti-embolism stockings**

**Dosing:**

Enoxaparin Dosing:

<table>
<thead>
<tr>
<th>CrCl &gt; (more) than 30mls/min</th>
<th>CrCl &lt; (less) than 30mls/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>40mg Subcutaneously Once Daily</td>
<td>20mg Subcutaneously Once Daily</td>
</tr>
</tbody>
</table>

**Body Weight Dosing:**

<table>
<thead>
<tr>
<th>Weight kg</th>
<th>Enoxaparin Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 50kg/ Frail elderly</td>
<td>20mg Subcutaneously Once Daily</td>
</tr>
<tr>
<td>50kg to less than 100kg</td>
<td>40mg Subcutaneously Once Daily</td>
</tr>
<tr>
<td>100kg to less than 150kg</td>
<td>Consider 40mg Subcutaneously Once Daily (empirical dose)</td>
</tr>
<tr>
<td>150kg to less than 200kg</td>
<td>Consider 60mg Subcutaneously Once Daily (empirical dose)</td>
</tr>
<tr>
<td>More than 200kg</td>
<td>Discuss with Haematology SpR</td>
</tr>
</tbody>
</table>

Pregnancy: Refer to the perinatal service

**Monitoring:**

Before prescribing a LMWH the following should be checked:

Full Blood Count (FBC)

Urea and Electrolytes (U&E) and eGFR
Liver Function Test (LFT’s)

**On-going Monitoring:**

- Patients should be advised (with this advice documented in Carenotes) to report bleeding/bruising.
- LMWHs can cause hyperkalaemia. This risk is high particularly in patients such as those with diabetes mellitus, chronic renal failure, pre-existing metabolic acidosis, raised plasma potassium or taking potassium sparing medicines. The risk of hyperkalemia appears to increase with duration of therapy but is usually reversible.
- If severe renal impairment occurs during therapy (calculated CrCl less than 30ml/min) – contact Haematology for advice.

6.4.3 Heparin induced thrombocytopenia (HIT)


Routine HIT is not required for the majority of patients on low molecular weight heparin (LMWH) unless the risk for HIT is over 1% (see table 3+4).

Table 4

| Suspect HIT if there has been a fall in platelet count of more than 50% of the pre-heparin baseline, 5-14 days (median 5-10 days) after the initiation of any heparin type, or within the first 24 hours if there has been a prior exposure to heparin in the preceding 100 days. Other associated events could include suspected/proven venous/arterial thrombosis and skin lesions at heparin injection sites. |
| If suspected, **stop LWMH and urgently contact Haematology for advice** |

However, **ALL patients** due to receive any form of heparin must have a **baseline platelet count** (in addition to other baseline bloods such as FBC, U&Es, LFTs and coagulation).

For patients who have any type of heparin within the previous 100 days, an additional platelet check at 24 hours is required.
Recommendations for platelet monitoring

Recommendations for platelet monitoring (based on ACCP 2012° and BCSH 2012° recommendations)

Secondary care should use this table to identify those patients requiring HIT monitoring. If this is required on discharge, then the secondary care team should ensure that the GP is notified accordingly.

<table>
<thead>
<tr>
<th>Patient type</th>
<th>Platelet monitoring for HIT</th>
</tr>
</thead>
</table>
| LMWH only (prophylactic or therapeutic) and where: 1. the risk of HIT is more than 1% (see incidence table below) AND 2. pt does not fall into the other heparin categories below | • Baseline platelet count  
• Subsequent monitoring not required |
| LMWH and HIT incidence > 1% (see incidence table below) | • Baseline platelet count  
• Once between days 4-7 post starting LMWH  
• Once again between days 10-14 whilst on LMWH |
| UFH (unfractionated heparin) during the current in-patient episode and now on LMWH | • Baseline platelet count  
• Once between days 4-7 post starting UFH and  
• Once again between days 10-14 whilst on LMWH |
| ANY type of heparin within the previous 100 days | • Baseline platelet count  
• Check at 24 hours  
• Thereafter as per other categories as appropriate |
| UFH (unfractionated heparin) infusion | • Baseline platelet count  
• Check at 24 hours if UFH/LMWH has been administered within the previous 100 days  
• Every 2-3 days from days 4-14 or until UFH is stopped (whichever occurs first) |

Table: Incidence of HIT

Incidence of HIT according to patient population and type of heparin exposure (ACCP 2012°)

<table>
<thead>
<tr>
<th>Patient population (min. of 4days exposure)</th>
<th>Incidence of HIT</th>
<th>Patient population (min. of 4days exposure)</th>
<th>Incidence of HIT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-operative patients</td>
<td>Medical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heparin prophylactic dose</td>
<td>1-5%</td>
<td>Cancer</td>
<td>1%</td>
</tr>
<tr>
<td>Heparin therapeutic dose</td>
<td>1-5%</td>
<td>Heparin prophylactic of therapeutic dose</td>
<td>0.1-%1</td>
</tr>
<tr>
<td>Heparin flushes</td>
<td>0.1-1%</td>
<td>LMWH prophylactic or therapeutic dose</td>
<td>0.6%</td>
</tr>
<tr>
<td>LMWH prophylactic of therapeutic dose</td>
<td>0.1-1%</td>
<td>ITU patients</td>
<td>0.4%</td>
</tr>
<tr>
<td>Cardiac surgery patients</td>
<td>1-3%</td>
<td>Heparin flushes</td>
<td>&lt; 0.1%</td>
</tr>
<tr>
<td></td>
<td>Obstetric patients</td>
<td></td>
<td>&lt; 0.1%</td>
</tr>
</tbody>
</table>
6.4.4 Alternatives to Enoxaparin

All low molecular weight heparins are derived from porcine origin. Alternatives may be considered following discussion with Haematology.

Fondaparinux may be for the following patients on the advice of Haematology:

- Patients with history of heparin induced thrombocytopenia (HIT)
- Patients with a history of hypersensitivity to enoxaparin or other low molecular weight heparins
- Patients with dietary requirements for whom products derived from porcine origin are inappropriate i.e. halal or kosher

**Fondaparinux Dosing:**

<table>
<thead>
<tr>
<th>eGFR more than 50ml/min</th>
<th>eGFR 20-50ml/min</th>
<th>eGFR less than 20ml/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5mg Subcutaneously Once Daily</td>
<td>1.5 mg Subcutaneously Once Daily</td>
<td>Contraindicated</td>
</tr>
</tbody>
</table>

**Contraindications:**

- Active bleeding
- Bacterial endocarditis
- Severe renal impairment defined as eGFR less than 20ml/min
- Hypersensitivity to Fondaparinux

6.5 STEP 5 Risk re-assessment

- The risks of VTE and bleeding should be assessed within **24 hours** post admission using the VTE risk assessment tool on Carenotes
- Risks of VTE and bleeding should be re-assessed regularly throughout a patient’s admission and whenever their mental health and physical health changes
- If VTE risk remains, re-assessment should be performed **twice weekly minimum**
- Re-assessments must be documented in the patient’s Carenotes
- Prophylaxis may be stopped once the patient is deemed no longer at risk following the VTE re-assessment. However, prophylaxis may be continued if the risk continues
- Continue to re-assess twice weekly or when clinical condition changes

6.6 Step 6: Discharge planning

**Extended thromboprophylaxis:**

Some patients may remain at increased risk of VTE post discharge and should be considered for extended duration of thromboprophylaxis and GP follow up.
Discuss with Haematology regarding the care plan for extended thromboprophylaxis. The GP must be notified to ensure appropriate arrangements are in place before discharge.

As part of the discharge plan please offer patients/ family/ carers, verbal and written information as listed below:

- The signs and symptoms of deep vein thrombosis (DVT) and pulmonary embolism (PE)
- How patients can reduce their risk of VTE (such as keeping well hydrated and, if possible, exercising and becoming more mobile)
- The importance of seeking help if DVT, pulmonary embolism or other adverse events are suspected
- Correct use and recommended duration of VTE prophylaxis

<table>
<thead>
<tr>
<th>Patients discharged on anti-embolism stockings must:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Understand the benefits of wearing them</td>
</tr>
<tr>
<td>• Understand the importance of wearing them correctly</td>
</tr>
<tr>
<td>• Understand the need to remove them daily for hygiene purposes</td>
</tr>
<tr>
<td>• Are able to remove and replace them, or have someone available who will be able to do this for them</td>
</tr>
<tr>
<td>• Know what to look for if there is a problem – for example, skin marking, blistering or discolouration, particularly over the heels and bony prominences</td>
</tr>
<tr>
<td>• Know to contact their GP if there is a problem</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For patients discharged on enoxaparin ensure that:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Patient understands the correct use and duration of thromboprophylaxis</td>
</tr>
<tr>
<td>• Patient is instructed to read the patient information leaflet supplied with the subcutaneous injection</td>
</tr>
<tr>
<td>• If the patient is unable to self-administer the subcutaneous injection, district nursing or GP practice administration must be organised by the ward before discharge</td>
</tr>
<tr>
<td>• Patients going home with subcutaneous injections are provided with a sharps bin, verbal information on safe management and disposal is provided</td>
</tr>
<tr>
<td>• Inform the patient that it is illegal to dispose of syringes, needles and sharps bins in their household waste. The patient must contact their local council to collect and dispose of used syringes, needles and sharps bins</td>
</tr>
</tbody>
</table>

Please see below for instructions:

**Islington residents:** Contact the clinical waste collection service for residents on 0207 527 2000 to book an appointment to collect clinical waste and sharps bin.

**Camden Residents:** Contact Veolia service on 020 3567 8105 to book an appointment to collect clinical waste and sharps bin.

- The GP has been notified in a timely manner
- Patient is instructed to inform the GP if they experience excessive bleeding or bruising, dizziness, headache or any other unwanted side effects
Responsible doctor must ensure the following is included in the discharge TTA and discharge summary:

- The GP **must** be notified to ensure appropriate arrangements are in place before discharge i.e. district nurses
- Mechanical thromboprophylaxis: Size of anti-embolism stockings
- Pharmacological thromboprophylaxis: Indication, dose, frequency, route and duration
- Ensure patient is prescribed uninterrupted anticoagulant therapy until the patient can be reviewed by the GP (usually 14 days)
- If a finite period of thromboprophylaxis is required and is clinically appropriate to do, then prescribe the entire quantity of LMWH to be supplied
- Note that it may not be safe to discharge some patients with 2 weeks or more supply of LMWH. In such cases, dialogue with GP is required for early GP follow-up
- That the GP is informed in a timely manner

7. Training

Training is covered under the medical devices policy and associated competencies for anti-embolism stockings.

8. Dissemination and implementation arrangements

This document will be circulated to all managers who will be required to cascade the information to members of their teams. It will be available to all staff via the Trust intranet. Managers will ensure that all staff are briefed on its contents and on what it means for them.

9. Monitoring and Audit

<table>
<thead>
<tr>
<th>Elements to be monitored</th>
<th>Lead</th>
<th>Method for monitoring compliance</th>
<th>Frequency</th>
<th>Reporting (Committee/Group responsible for overseeing implementation of actions)</th>
<th>Parent Committee(Board sub-committee that receives assurance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment Completed</td>
<td>Pharmacy Lead</td>
<td>Care Notes Audit</td>
<td>Annual</td>
<td>Physical Health and Nutritional Group</td>
<td>Clinical Risk &amp; Quality Committee</td>
</tr>
<tr>
<td>Appropriately prescribe thromboprophylaxis for those assessed as at risk</td>
<td>Pharmacy Lead</td>
<td>Care Notes Audit</td>
<td>Annual</td>
<td>Drugs and therapeutic Committee</td>
<td>Clinical Risk &amp; Quality Committee</td>
</tr>
</tbody>
</table>
10. Review of the Policy

A review date for the policy should be set out. The review date should normally be three years from the date of ratification. If the review date is earlier or later than three years, justification for this should be provided.

11. References


LMWH within NCL, version 1 - approved by NCL JFC 23.1.14

NHS choice website, www.nhs.uk, Last accessed August 2018

12. Appendices

12.1 Appendix 1 Thromboprophylaxis Flow Chart
12.2 Appendix 2 Inpatient Physical Healthcare Standard – Physical Health Policy
12.3 Appendix 3 VTE Risk Assessment Tool (CareNotes)
12.4 Appendix 4 Thromboprophylaxis Patient Leaflet

13. Acknowledgements

University College London Hospital (UCLH) VTE Thromboprophylaxis for adult inpatients 09/02/2016

Whittington hospital, Thromboprophylaxis: adult MEDICAL inpatients: Guideline for reducing the risk of venous thromboembolism in non-pregnant adult medical inpatients, version
APPENDIX 1: THROMBOPROPHYLAXIS FLOW CHART

BOX 1: VTE Risk factors

- Active cancer or cancer treatment
- Age >60 years
- Dehydration (clinically)
- One or more significant medical co-morbidities (e.g. heart disease, metabolic, endocrine or respiratory pathologies, acute infectious disease, inflammatory conditions, renal impairment)
- Personal history or first degree relative with a history of VTE
- Known thrombophilia
- Obesity (BMI >30kg/m^2)
- Use of HRT
- Varicose veins with phlebitis
- Pregnancy

Psychiatric risk factors to be aware of:
- Typical antipsychotics
- Clozapine
- Poor oral intake
- Restraint
- Catatonia
- Neuromuscular syndrome (fever and rhabdomyolysis)

Box 2: Thromboprophylaxis options

If the risk of bleeding outweighs the risk of VTE, consider MECHANICAL VTE prophylaxis (section 5.5.1)

If the risk of VTE outweighs the risk of bleeding, consider PHARMACOLOGICAL VTE (section 5.5.2)

Assess VTE within 24 hours of admission using the VTE assessment tool

Is the patient at increased risk of VTE?

1. Is the patient's mobility significantly reduced for 3 or more days?
2. Is the patient expected to have on-going reduced mobility compared to their normal state and one or more VTE risk factors? (Box 1)

Yes

Is pharmacological thromboprophylaxis contra-indicated? (See section 5.4)

Yes

Is Mechanical VTE prophylaxis appropriate (see section 5.5.2)

Yes

Prescribe anti-embolism stockings

No

Contact haematology

No

Enoxaparin:

Renal dose: 20mg SC OD if CrCl is less than 30ml/min

Less than 46kg/ Frail elderly: 2500 units SC OD

46-149kg: 5000 units SC OD

150-200kg: 7500 units SC OD

More than 200kg: Discuss with Haematology SpR

After 24 hours

Whenever clinical condition changes

At least twice a week
### Inpatient Physical Healthcare Standard – Physical Health Policy

#### VTE Assessment

<table>
<thead>
<tr>
<th>What needs to be completed</th>
<th>ADMISSION</th>
<th>REVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Medical examination</td>
<td>Admitting doctor</td>
<td>Within 24 hours</td>
</tr>
<tr>
<td>Routine bloods*</td>
<td>Admitting doctor/ phlebotomy trained staff</td>
<td>Within 24 hours</td>
</tr>
<tr>
<td>ECG*</td>
<td>Carried out by nursing team or appropriately trained staff, reviewed by medical team</td>
<td>Within 72 hours</td>
</tr>
<tr>
<td>Physical Health Screening – on-going assessment (includes CVD risk)*</td>
<td>All staff appropriately trained staff</td>
<td>The CVD risk element within 72 hours</td>
</tr>
<tr>
<td>Management of long term conditions</td>
<td>Medical Team supported by Nursing Team/ Allied Healthcare professionals</td>
<td>On admission – Within 72 hours</td>
</tr>
<tr>
<td>NEWS2</td>
<td>Nursing staff reviewed by the medical team</td>
<td>Preferably within 4-6hrs Must be within 24hours</td>
</tr>
<tr>
<td>MUST</td>
<td>Nursing staff/Appropriately trained staff</td>
<td>Within 72 hours</td>
</tr>
<tr>
<td>VTE Assessment</td>
<td>Admitting doctor</td>
<td>Within 24 hours</td>
</tr>
<tr>
<td>Falls Assessment</td>
<td>Admitting doctor</td>
<td>Within 24 hours</td>
</tr>
<tr>
<td>Urine Drug Screen/ Alcometer</td>
<td>Nursing staff</td>
<td>If indicated</td>
</tr>
<tr>
<td>Dipstick Urinalysis</td>
<td>Nursing staff</td>
<td>Within 72 hours</td>
</tr>
</tbody>
</table>

*For patients who are receiving antipsychotic medication for the first time or whose medication or dose is being changed, please refer to the Medicines Management Policy*


Venous Thromboembolism (VTE) thromboprophylaxis guidelines for inpatients: PHA70: July 2019