Leicestershire Partnership NHS Trust

Prevention of Venous Thromboembolism (VTE) Policy for In Patient Adult Patients

Policy outlining the assessment and treatment of patients at risk of venous thromboembolism in hospital.

Key Words:	VTE, DVT, PE, blood clot, TED stockings, heparin	
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Type of Policy	√	Clinical

1. Contents

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2. Version Control and Summary of Changes

Version Number	Date	Comments (description change and amendments)
1.0	August 2012	New policy
1.1	March 2013	Update – content harmonisation including community hospitals settings
1.2	June 2013	Update – Risk assessment reused
1.4	Jan 2017	Updated Version
1.5	Feb 2018	Updated ULearn training Change in audit compliance indicator to come in line with NICE guidance
1.5	August 2018	Update on Platelet monitoring requirements from 5-7 days to 5 days
2.0	February 2020	Full review
3.0	February 2024	Full review + Stroke guidance updated
3.1	May 2024	Addition of Enoxaparin and removal of Dalteparin as Low molecular weight heparin medication of choice.
3.1.1	June 2024	Addition of Enoxaparin renal dosing tables and Dalteparin as an alternative in certain circumstances. Minor changes only

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Please be advised that the Trust discourages the retention of hard copies of policies and can only guarantee that the policy on the Trust website is the most up-to-date version.

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Definitions that apply to this Policy

Venous Thromboembolism (VTE)	A condition where a blood clot forms in a vein, commonly the deep veins of the lower limbs. The thrombus can become dislodged and travel to other parts of the body, potentially fatal if the thrombus travels to the lung (pulmonary embolism).
Thrombus	A blood clot which forms within a blood vessel, partially or completely obstructing the flow of blood within that vessel
Embolism	A foreign body, such as a blood clot or an air bubble that travels through the bloodstream and becomes lodged in a blood vessel, partially or completely obstructing the flow of blood within the affected vessel
Deep vein thrombosis (DVT)	A blood clot in one of the deep veins of the body. Most commonly occurs within the deep veins in the leg.
Pulmonary embolism (PE)	When an embolism blocks the blood supply to the lungs. May occur when all, or part of a deep vein thrombosis breaks off and travels through the bloodstream to the lungs
Prophylaxis	Treatment given or action taken to prevent disease.
Clinically silent	There are no obvious clinical signs, e.g. pain, swelling
Anticoagulant	A medicine that prevents or reduces the coagulation of blood, prolonging the clotting time e.g., heparin or warfarin.
Low Molecular Weight Heparin (LMWH)	A class of anticoagulant medication used in the treatment and prevention of VTE. It inhibits coagulation, the process that leads to thrombosis. It is usually given by subcutaneous injection.
SCDs	Sequential Compression Devices
AES	Anti-Embolism Stockings

3. Equality Statement

Leicestershire Partnership NHS Trust (LPT) aims to design and implement policy documents that meet the diverse needs of our service, population, and workforce, ensuring that none are placed at a disadvantage over others. It takes into account the provisions of the Equality Act 2010 and advances equal opportunities for all. This document has been assessed to ensure that no one receives less favourable treatment on the protected characteristics of their age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex (gender) or sexual orientation.

In carrying out its functions, LPT must have due regard to the different needs of different protected equality groups in their area. This applies to all the activities for which LPT is responsible, including policy development, review, and implementation.

If you require this policy in another format please contact the Corporate Governance team.

4. Due Regard

This policy sets out Leicestershire Partnership Trust's (LPT) policy for ensuring the safe and appropriate use of VTE prophylaxis. Every effort has been made to ensure all equality groups (protected characteristics) are given equal access to service provision, especially in the context of disability. This is demonstrated through the provision of risk assessment and decision-making tools to guide staff in the identification of VTE risk and the appropriateness of VTE prophylaxis. In addition, there is emphasis to involve the patient in the decision-making process and a patient and carer information leaflet is available. This leaflet will be available in different languages, Easy Read, and Braille formats. Consideration is also given to those for whom the use of drugs of animal origin is of concern.

5. Background

Venous thromboembolism (VTE) is an umbrella term for deep vein thrombosis and pulmonary embolism. A deep vein thrombosis (DVT) occurs when a blood clot forms in a deep vein, usually in the lower leg, thigh, or pelvis. A pulmonary embolism (PE) occurs when a clot breaks loose and travels through the bloodstream to the lungs. VTE is a significant cause of mortality, long-term disability and long-lasting ill-health problems – many of which are avoidable. 1 in 20 people will have a VTE at some time in their life and the risk increases with age. It is estimated that as many as half of all cases of VTE are associated with hospitalisation for medical illness or surgery. Pregnancy is also a VTE risk factor.

Prevention of blood clots, VTE, is a key patient safety priority for hospitals. VTE includes both DVT and PE, and the risk of developing VTE is highest following major surgery or injury, or when a patient has heart failure, cancer, or a myocardial infarction. Medicines can help prevent blood clots from forming or can dissolve vein blockages. Without treatment, VTE can damage the body's tissues or organs and a PE can cause death.

In 2020/21, the rate of VTE-related deaths within 90 days post discharge from hospital increased considerably to 99 deaths per 100,000 hospital admissions. Between 2019/20 and 2020/21, the number of VTE-related deaths increased by 21% to 10,884, while the total number of adult hospital admissions decreased by 25% to just less than 11 million. A published study found an increased risk of DVT up to three months after Covid-19 infection, and pulmonary embolism up to six months.

From 1 April 2012 until 31 March 2022 NHS Resolution documented 687 closed claims relating to VTE injuries across the clinical negligence indemnity schemes covering Clinical Negligence Scheme for Trusts (CNST) and the general practice clinical negligence schemes (Clinical Negligence Scheme for General Practice [CNSGP]/Existing Liabilities Scheme for General Practice [ELSGP]). (Source NHS Resolution March 2023)

6. Summary & purpose of policy

The purpose of this policy is to help healthcare professionals identify people most at risk of VTE and describes interventions that can be used to reduce this risk. The recommendations also take into account the potential risks of prophylaxis. This policy does not cover initiation of treatment for diagnosed VTE/PE. Key steps to ensure this are to ensure that:

- All patients aged 16 and over admitted to inpatient areas within LPT are assessed for their risk of developing venous thromboembolism (VTE) **within 14 hours** of admission using the VTE risk assessment tool (appendix 6).
- **Steps 1** of the assessment tool can be completed by a registered nurse (RN),

Advanced Nurse Practitioner (ANP), Advanced Clinical Practitioner (ACP), or Medical Doctor.

- **Steps 2, 3, 4 and 5** of the assessment tool can only be completed by an ANP / non-medical prescriber (with relevant competencies) or medical practitioner.

Training for staff is once only, utilising the E-Learning platform ULearn, provided by the Learning and Development Department of Leicestershire Partnership Trust (Academy) online training module .

- The appropriate level of prophylaxis for the prevention of VTE is offered to all patients relevant to their risk and clinical condition.
- Staff are able to provide accurate advice to patients relating to VTE risk and prophylaxis.
- Staff recognise the need to re-assess for VTE risk when a patient's condition changes and take appropriate action, including communicating with the patient and family/ carers.

It should be recognised that any recommendations in this policy must be implemented with consideration to the individual patient's clinical condition. Clinical judgement will need to be used in establishing whether the risks of prophylaxis outweigh the benefits.

7. Introduction

Hospital-acquired venous thromboembolism (VTE), also known as hospital-acquired or hospital- associated thrombosis (HAT), covers all VTE that occurs in hospital and within 90 days after a hospital admission. As described above, it is a common and potentially preventable problem. VTE most frequently occurs in the deep veins of the legs or pelvis DVT. If it dislodges and travels to the lungs, it is called a PE, which in some cases can be fatal.

Patients admitted to hospital are more likely to have reduced mobility (admissions for both mental and physical health) making them at higher risk of VTE. Mobility can be reduced in psychiatric inpatients for several reasons such as physical restraint, catatonia, sedation and weight gain. In addition, they can have poor fluid intake. Elderly patients are at further increased risk due to age and the increased likelihood of possessing other associated risk factors such as multiple medical co-morbidities, dehydration, and malignancy. In addition, antipsychotic medications are widely prescribed on mental health inpatient units and there is evidence which suggests that antipsychotic use may be associated with an increased risk of VTE.

NICE clinical guideline (NG 89): 'Venous thromboembolism in over 16s: reducing the risk of hospital-acquired deep vein thrombosis or pulmonary embolism' makes recommendations on the assessment and reduction in the risk of VTE in those aged over 16 years admitted to hospital as inpatients. It provides guidance on specific patients' groups including those with acute psychiatric illness and recommends the use of anticoagulants where appropriate to reduce the risk The use of anticoagulant medicines for treatment or prevention of embolic events is known to carry risk of significant harm to patients treated by the NHS.
This policy is based on NICE NG 89 and applies to all service users aged over 16 years and have been admitted to a LPT in-patient unit. This policy has been updated/takes into account according to NICE NG 191 Covid-19 rapid guideline to acknowledge that:

- all patients with Covid-19 pneumonia have an increased risk of VTE.
- the risk of patients with COVID-19 pneumonia managed in community settings is similar to that of patients managed in acute hospital settings.

- Initial risk assessment for these patients should focus on identifying those whose bleeding risk contraindicates pharmacological VTE prophylaxis.

VTE prophylaxis has been shown to reduce the incidence of DVT. It includes mechanical methods (such as anti-embolism stockings and sequential compression devices (SCD), and pharmacological treatments (such as heparin and other anticoagulant drugs).
All hospital acquired Thrombosis (HAT) should be considered as potentially avoidable and investigated for learning.
The risk of developing VTE depends on the condition and/or procedure for which the patient is admitted, level of mobility, and on any pre-disposing risk factors (such as age, obesity and concomitant conditions).

Pharmacological and mechanical devices for thromboprophylaxis such as low molecular weight/unfractionated heparin (LMWH/UFH), direct oral anticoagulants (DOACs), anti-embolism stockings (AES) and SCD's are used prophylactically to reduce the risk of deep vein thrombosis and pulmonary embolus in 'at risk' non ambulatory patients. They help prevent deep vein thrombosis by anticoagulation, increasing blood flow and reducing venous stagnation.

This policy makes recommendations on and describes assessing and reducing the risk of VTE in patients in hospital and takes in to account the potential risks of the various options for prophylaxis and patient preferences.

8. PROCEDURE / IMPLEMENTATION

Assessment of VTE risk

The following assessment should be undertaken on all patients when initially admitted in all inpatient settings across the trust, repeated at 24 hours and if their clinical condition changes.

The tool must be completed on the electronic prescribing system (EPMA).

STEP ONE

Can be completed by a Registered Nurse, Advanced Nurse Practitioner (ANP), Advanced Clinical Practitioner (ACP), Non-Medical Prescriber (with relevant competencies) or Medical Doctor.
Action for initial assessment on admission of general patient groups

Tick all patient's as	**Action**
• Surgical	Assess
• Medical/ psychiatry patient expected to have ongoing reduced mobility relative to normal state	Assess
• Medical/ psychiatry patient NOT expected to have significantly reduced mobility relative to normal state	Assessment not required.

RISK ASSESSMENT FOR VENOUS THROMBOEMBOLISM (VTE)					
(STEP 1) 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.					
Mobility - all patients (tick one	**Tick**		**Tick**		**Tick**
Surgical patient	☐	Medical patient expected to have ongoing reduced mobility relative to normal state	☐	Medical patient NOT expected to have significantly reduced mobility relative to normal state	☐
				Risk assessment now complete	☐

Table 1

Have had or are expected to have significantly reduced mobility (bedbound, unable to walk unaided or spending a substantial amount of time 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 (***Error! Reference source not found.***)
The medical patient (including those patients with mental health illness) should have a holistic assessment of their function both before and after admission, there must be consideration into their mobility status. This applies to all patients within LPT. Their functional status must be noted.

STEP TWO
Thrombosis risk can be completed by an ANP/ ACP// non- medical prescriber (with relevant competencies) or medical practitioner (Doctor).

Review the patient and procedure- related risk factors and ***Tick*** any such risk for thrombosis risk, which should prompt consideration for thrombo-prophylaxis.

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 amount of time 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 (**Error! Reference source not found.**)

Initial Assessment: ○ At admission

Re-assessment: ○ Within 24 hours of admission ○ Within 72 hours of admission ◉ Due to a change in clinical situation

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

Thrombosis risk

Patient related	Tick	Admission related	Tick
Active cancer or cancer treatment	☐	Significantly reduced mobility for 3 days or more	☐
Age > 60	☐	Hip or knee replacement	☐
Dehydration	☐	Hip fracture	☐
Known thrombophilias	☐	Total anaesthetic + surgical time > 90 minutes	☐
Obesity (BMI >30 kg/m²)	☐	Surgery involving pelvis or lower limb with a total anaesthetic + surgical time > 60 minutes	☐
One or more significant medical comorbidities (eg heart disease;metabolic,endocrine or respiratory pathologies;acute infectious diseases; inflammatory conditions)	☐	Acute surgical admission with inflammatory or intra-abdominal condition	☐
Personal history or first-degree relative with a history of VTE	☐	Critical care admission	☐
Use of hormone replacement therapy	☐	Surgery with significant reduction in mobility	☐
Use of oestrogen-containing contraceptive therapy	☐	New Stroke	☐
Varicose veins with phlebitis	☐	Is the patient on an oral anticoagulant? Tick if YES, then no further action required	☐
Pregnancy or < 6 weeks post partum (see NICE guidance for specific risk factors)	☐	Patient being administered regular antipsychotic medication	☐

Table 2

Additional risk factors to consider within the assessment process:

- Antipsychotics
- Clozapine
- Poor oral intake

- Restraint
- Catatonia
- Neuromuscular syndrome (fever and rhabdomyolysis)

STEP THREE
All patients must have haemorrhagic risk completed by an ANP / non- medical prescriber (with relevant competencies) or medical practitioner. (***Error! Reference source not found.***).

Review the patient and procedure-related risk factors. ***Tick any*** bleeding risk, which should prompt consideration of whether the bleeding risks is sufficient to preclude pharmacological intervention.

Any tick should prompt clinical staff to consider if bleeding risk is sufficient to preclude pharmacological intervention.			
Bleeding risk			
Patient related	**Tick**	**Admission related**	**Tick**
Active bleeding	☐	Neurosurgery, spinal surgery or eye surgery	☐
Acquired bleeding disorders (such as acute liver failure)	☐	Other procedure with high bleeding risk	☐
Concurrent use of anticoagulants known to increase the risk of bleeding (such as warfarin with INR >2)	☑	Lumbar puncture/epidural/spinal anaesthesia expected within the next 12 hours	☐
Acute stroke	☐	Lumbar puncture/epidural/spinal anaesthesia within the previous 4 hours	☐
Thrombocytopaenia (platelets< 75x10□/l)	☐	Emergency Department patient not expected to be admitted - VTE assessment not indicated	☐
Uncontrolled systolic hypertension (230/120 mmHg or higher)	☐	Paediatric patient (<16 years) - VTE assessment not indicated	☐
Untreated inherited bleeding disorders (such as haemophilia and von Willebrand's disease)	☐	Antiembolism stockings are contraindicated in this patient	☐

Table 3

A person's individual risk of VTE risk will need to be balanced against their bleeding risk when deciding whether to offer pharmacological prophylaxis for VTE. If a decision is made not to offer prophylaxis, reasons must be recorded and discussed with the patient/ their carer's.

In patients whom pharmacological thromboprophylaxis is contraindicated, mechanical thromboprophylaxis should be offered.

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

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.

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

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

STEP FOUR
Assess and decide on the appropriateness of thrombo-prophylaxis.
Document appropriateness of thrombo-prophylaxis

STEP FIVE

Prescription of thrombo-prophylaxis. Prescribe thrombo-prophylactic measures in the electronic prescribing and medicines administration system (EPMA) patient record.

In conjunction with the referring clinician's medical management plan should be utilised in the assessment of patients admitted to LPT care.

The following appendices enclose flow diagrams based on NICE guidance (2018, updated 2019).

- Hip Fracture (Appendix 7)
- Elective Hip and Knee Replacement (Appendix 8)
- Lower Limb Immobilisation (Appendix 9)
- Stroke (Appendix 10)
- Palliative Care (Appendix 11)
- General Medical Patients (Appendix 12)
- Local UHL Sequential Compression Devices (Appendix 13)
- Mental Health Illness (Appendix 14)

NICE recommend medical patients who have reduced mobility relative to their normal state and have one or more of the risk factors identified in Appendix 6 should be considered for thromboprophylaxis.

There is little evidence for the extended use of thromboprophylaxis in medical patients and some LMWH are currently off label for this use.

Drug	**UK Marketing Authorisation includes prophylaxis of venous thromboembolism in medical patients?**	**What is the treatment duration specified within the Marketing Authorisation?**
Dalteparin Sodium	Yes (5,000 IU in 0.2ml))	Treatment is prescribed for up to 14 days.
Enoxaparin Sodium	Yes (40mg (4,000IU) is recommended dose).	Treatment is prescribed for at least 6 to 14 days, whatever the recovery status e.g. mobility. The benefit is not established for treatment longer than 14 days.

Prophylaxis should be discontinued as soon as the patient's mobility has returned to their normal state and their acute illness has resolved or the recommended duration of prophylaxis has been completed.

People receiving anticoagulant therapy.

LMWH should NOT be prescribed for VTE prophylaxis in patients who are already receiving full anticoagulant treatment (such as with warfarin, DOAC or heparin) – seek specialist advice. Consider VTE prophylaxis for people at increased risk of VTE **who are interrupting** anticoagulant therapy.

Patients who are already receiving VTE pharmacological prophylaxis on admission should be reassessed in conjunction with their existing VTE prophylaxis management plan. Pharmacological prophylaxis should be continued if VTE risk outweighs bleeding risk.

People using antiplatelet agents.

Consider VTE prophylaxis for people who are having antiplatelet agents for other conditions and whose risk of VTE outweighs their risk of bleeding. Take into account the risk of bleeding and of comorbidities such as arterial thrombosis.

Prophylaxis and treatment regimens other than for prophylaxis of VTE for adult inpatients are outside the scope of this policy. Seek specialist advice eg from anticoagulation clinic or local acute trust haematologist for prescribing and monitoring anticoagulation for other conditions.

Pharmacological prophylaxis in 16- to 18-year-olds

For pharmacological VTE prophylaxis in people aged 16 to 18 years, follow the recommendations on low-molecular-weight heparin (LMWH). At the time of writing, these drugs do not have a UK marketing authorisation for use in young people under 18 for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

Considerations in older adults

NICE NG 89 describes the balance of risk and benefit in the prophylaxis of VTE, however the following issues in older adults need consideration:

- Many patients are confused either from dementia or delirium and will be unable to give informed consent. This will usually mean that the Clinician must assume responsibility of making a best interest decision on behalf of the patient.
- Consider discussion with the next of kin or significant other involved in patient's welfare. The discussions are to be recorded in Trust's capacity and best interest forms.
- The skin in older patients is fragile and easily bruised. They are likely to suffer from local bruising and minor haemorrhages at injection site.
- Some patients are near end-of-life where their admission and treatment have goals of relieving symptoms and not necessarily prolonging life. For these people, injections are an additional unwelcome burden.
- Patients who are usually immobile have less chance of benefiting from prolonged prophylaxis. Seek specialist guidance if treatment is proposed.
- Prolonged prophylaxis in older patients increases the haemorrhage risk without (at present) evidence for further benefit and is currently off-licence.
- There may be accumulation of LMWH's in moderate to severe renal failure despite dose adjustment recommended in the SPC's, which will increase the risk of haemorrhage over time.

Patients undergoing Electro-Convulsive Therapy (ECT)

Obtain advice from the consultant anaesthetist conducting the ECT regarding the balance of risk and benefits in continuing with the prophylaxis.

Patient information

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 VTE patient information leaflet. (Appendix 18)

Provide written information on:

- the risk and possible consequences of VTE

- importance of VTE prophylaxis of possible side-effects
- the correct use of VTE prophylaxis (for example and humanism stockings)
- how patients can reduce their risk of VTE (such as keeping well hydrated and, if possible, exercising and becoming more mobile

Electronic Prescribing and Medicines Administration (EPMA)

An electronic prescribing and medicines administration system (EPMA) is in use within LPT. This system allows for the electronic prescribing of all anticoagulation agents. This system incorporates an electronic VTE risk assessment which facilitates the patient assessment process and enables auditing as per LPT requirements.

Routine VTE prophylaxis for patients in whom there is no identified bleeding risk, should be with a low molecular weight heparin (LMWH) e.g. Enoxaparin, the choice of which should fall within formulary guidelines and should be prescribed as an evening dose for continuity across differing trusts.

Should a patient express concern about the use of drugs of animal origin, the most appropriate alternative should be discussed with the pharmacy department.

The checking and administration of prophylactic LMWH should be undertaken in line with the Leicestershire Medicines Code. If a patient is admitted from elsewhere Medical and Nursing staff should check the timing of previous doses.

EPMA should reflect one of the following actions for all inpatients:

- Prescribe an Anti-Coagulant
- Prescribe Anti-Embolism Stockings (AES also known as TED)
- Prescribe a Sequential Compression Device (SCD), also known as Intermittent Pneumatic Compression
- Prescribe ‘VTE No Intervention Required’ – A note should be added to the prescription with the clinical rationale.

Pharmacological VTE Prophylaxis in adults

If the risk of VTE outweighs the risk of bleeding, consider pharmacological VTE: Thromboprophylaxis should be commenced as soon as possible after the risk assessment has been completed. The aim should be within 14 hours after admission and before 24 hours after admission.

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

Patients who have been prescribed pharmacological prophylaxis do not require anti-embolism stockings.

Dosing

Routine VTE prophylaxis for patients in whom there is no identified bleeding risk, should be with a low molecular weight heparin (LMWH), the choice of which should fall within formulary guidelines.
Checking and administration of prophylactic LMWH should be undertaken in line with the

medicines code.

NHS Leicestershire Partnership NHS Trust To be used in conjunction with the VTE risk assessment pathway	**Thromboprophylaxis ADMINISTRATION GUIDE** Enoxaparin (Inhixa®)
Some of the doses below are off label and differ from the SPC. As this is the recommendation from LLR-APC, prescribers will be protected by LPT vicarious liability	Enoxaparin dosage for adult, non-pregnant, non-orthopaedic (see specific guidelines) patients deemed to be at risk of thrombosis (medical/surgical)

	Renal Function	
Actual Bodyweight	**CrCl ≥30ml/min**	**CrCl <30ml/min**
<50kg	**20mg OD** 	**20mg OD** 
≥50-100kg	**40mg OD** 	**20mg OD** 
≥100-150kg	**40mg BD** 	**40mg OD** 
≥150kg	**60mg BD** 	**40mg OD** 

CrCl <15ml/min Monitor heparin assay on Day 4 (4h post dose) and every 4 days to ensure there is no accumulation.
Aim for peak levels <0.3iu/ml

Prescribe by brand name INHIXA® as different brands have different injection techniques.

Mechanical Thromboprophylaxis

If the risk of bleeding outweighs the risk of the VTE, consider mechanical VTE prophylaxis. Anti-embolism stockings (AES) are indicated for the prevention of VTE in patients for whom pharmacological VTE is contraindicated.

Anti-embolism stockings need to be prescribed on EPMA.

Mechanical thromboprophylaxis poses considerable, risk of harm to patients and staff must ensure that patients requiring Anti-embolism stockings (AES) have their legs measured following manufacturers guidance and the correct size fitted. The patient's skin integrity of both lower limbs must be checked regularly.

AES must not be applied if the following conditions are observed / diagnosed without specific documented evidence in the patients' medical record identifying the reason for deviation from this guidance. Always seek medical advice if diagnosis unclear.

Do not offer anti-embolism stockings to patients who have:

- Have confirmed stroke – please see **Appendix 13** - Algorithm including Stroke patients for VTE prophylaxis in this group of patients.
- Suspected or proven peripheral arterial disease.
- Peripheral arterial bypass grafting (recent vascular surgery)
- Peripheral neuropathy or other causes of sensory impairment - for example, diabetes
- Any local conditions in which anti-embolism stockings may cause damage – for example,
- Fragile 'tissue paper 'skin
- Dermatitis
- Cellulitis
- Gangrene
- Recent skin grafting
- Known allergy to material of manufacture.
- Severe leg oedema
- Major limb deformity
- Unusual leg size or shape preventing correct fit.

Use caution and clinical judgement when applying anti-embolism stockings over venous ulcers or wounds (National Institute of Health and Care Excellence, 2018)

AES are designed for non-ambulatory patients and should provide graduated compression and produce a calf pressure of 14-15 mmHg (this relates to a pressure of 14-18 mmHg at the ankle and is in line with British Standard (BS 661210:2018 Specification for graduated compression hosiery, anti-embolism hosiery and graduated support hosiery.)

- Ensure that people who need AES have their legs measured and the correct size of stocking is provided. AES should be fitted, and patients shown how to use them by staff trained in their use.
- If there is suspicion of arterial disease, advice / opinion should be sought before fitting anti- embolism stockings.
- If oedema or post-operative swelling develops, ensure that legs are re-measured, and the device re-fitted accordingly. A clinical assessment should be undertaken prior to

new stockings being fitted.

- Patients need to be encouraged to wear mechanical devices day and night from admission until they no longer have significantly reduced mobility compared to their normal state.
- These devices must be removed daily for hygiene purposes and to inspect the patients skin condition.
- When evaluating skin particular attention should be made to bony prominences and heels.
- Daily assessment of peripheral leg pulses should be undertaken to ensure good blood flow.
- The area behind the knee and thigh must be checked for signs of restriction, ensuring that there is no bunching of thigh length stockings. Daily assessment of peripheral leg pulses should be undertaken to ensure good blood flow.
- Discontinue the use of the device if there is marking, blistering or discolouration of skin particularly over heels and bony prominences, or if the patient has pain or discomfort.
- Ensure that patients wear AES correctly and offer assistance if they are not e.g. tops of stockings rolled down causing a potential tourniquet effect to the leg.

<table>
<tr><td colspan="3">If mechanical VTE prophylaxis is deemed appropriate based on patient choice and individual patient factors, please ensure:</td></tr>
<tr><td colspan="3">• Those patients who need anti-embolism stockings should have their legs measured and they are provided with the correct size of stocking.</td></tr>
<tr><td>For thigh-length stockings</td><td>For knee length stockings</td><td></td></tr>
<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 rowspan="3">The current stockings using the manufacturer’s measurement table</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></tr>
<tr><td>3. Measure the distance from the gluteal furrow (buttock fold) to the heel</td><td></td></tr>
</table>

- Prescribe generically as ‘TED’ Stocking on EPMA
- Prescribe anti-embolism stockings at the appropriate length (i.e., below knee, thigh length) on EPMA using the note to appear when charting. The choice between filing or knee length should be based on clinical judgement patient preference.
- Anti-embolism stockings that provide graduated compression and produce a calf pressure 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 condition. In patients with a significant reduction in mobility, poor skin integrity or any sensory loss, inspect the skin daily particularly over 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 form (eIRF) is completed and inform the medical team and ensure a care plan is updated.

On-Going Intervention and re-assessment

Patients must be regularly assessed during their inpatient stay for their current risk of VTE and requirement for prophylaxis.

This must be on admission, after 24 hours, and then within 72 hours following admission. Reassessment must take place during their inpatient stay for the current ongoing risk of VTE and requirement for prophylaxis as (or if) their condition changes.

Assessment and re-assessment:

- On admission
- Within 24 hours
- Within 72 hours of admission.
- As the clinical condition changes and then:
- MHSOP / AMH / LD / CAMHS* (over the age of 16) – weekly at Consultant Ward round (repeated every 7 days or when the patient’s mobility or clinical condition changes) - to aid this process LPT have daily reports of who require assessments and some services have weekly reports to aid assessment and compliance.

Prophylaxis should be discontinued as soon as the patient’s mobility has returned to their normal state and their acute illness has resolved or the recommended duration of prophylaxis has been completed.

Recommendations for platelet Monitoring / Monitoring

Patients initiated on LMWH should be monitored for Heparin induced Thrombocytopenia (HIT) 5 days post initiation. Additional monitoring of platelets should be undertaken if bleeding/bruising is noted and if on longer than 3 months (Appendix 15).

Prophylaxis Post Discharge / Discharge planning

If the medical management plan requires on-going pharmacological and / or mechanical prophylaxis post discharge this should be prescribed as part of the patients discharge medications including, clear instructions for administration by community nurses if required. This should be documented on the discharge letter informing the GP that the patient has been discharged with pharmacological and / or mechanical VTE prophylaxis to be used at home, along with indication and intended duration.

Patients discharged anti-embolism stockings must:

- Understand the benefits of wearing them.
- Understand the importance of wearing them correctly.
- Understand the need to remove them daily for hygiene purposes.
- Are able to remove and replace them or have someone available who will be able to do this for them.
- Know what to look forward there is a problem-for example, skin marking, blistering or discolouration, particularly over the heels and bony prominences.
- Know to contact their GP if there is a problem

Patients discharged on low molecular weight heparin ensure that:

- Patients understand the correct use duration of thrombo- prophylaxis.
- Patients are instructed to read the patient information leaflet supplied with a subcutaneous injection.
- If the patient is unable to self-administer the subcutaneous injection district or community nurses, or GP practice administration must be organised by the ward before discharge.
- Patients going home with subcutaneous injections are provided with a sharps bin, verbal information safe management and disposal is provided.
- Inform the patient that it is illegal to dispose syringes, needles, and sharp bins in the household waste. The patient must contact the local council to collect and dispose of used syringes, needles, and sharps bins.

The responsible doctor/nurse practitioner must ensure the following is included in the discharge TTO 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 the anti-embolism stockings
- pharmacological thromboprophylaxis: indication, dose, frequency, route and duration
- ensure the patient is prescribed uninterrupted anticoagulant therapy until the patient can be reviewed by the GP (usually 14 days)
- if a finite period thromboprophylaxis is required and is clinically appropriate to do so, then prescribe the entire quantity of LMWH be supplied.
- Note that it may not be safe to discharge some patients with two weeks or more supply of LMWH. In such cases, dialogue with the GP is required for early GP follow-up.
- the GP is informed in a timely manner.
- all relevant results are recorded

9. Purpose

The purpose of the policy is to ensure the NICE guidance and the NHS Resolution standards are met across the Trust, thus reducing the incidence of harm and hospital acquired VTE.

10. Duties within the organisation

The Trust Board has a legal responsibility for Trust policies and for ensuring that they are carried out effectively.

Trust Board sub-committees have the responsibility for adopting policies and protocols.

Directorate Directors and Heads of Service are responsible for ensuring that policy is embedded across their Directorates / Services.

Managers and Team Leaders will be responsible for:

- implementation of the policy within their clinical area
- overseeing audits and any required service improvements
- overseeing the outputs of the safety thermometer

11. Roles and Responsibility of staff

The VTE Risk Assessment Tool (Appendix 6) must be completed on the electronic prescribing system for **all patients** being admitted to hospital within 24 hours of admission.

The risk assessment comprises of 5 relevant steps.

Step 1 can be completed by a Registered Nurse, ANP, ACP, or medical practitioner.
Steps 2, 3, 4 and 5 can only be completed by an ANP, medical practitioner or non-medical prescriber (with relevant competencies).

Medical and ANP staff will be specifically responsible for :

- Prescribing required prophylaxis on the basis of the assessment
- Prescribe and monitor LMWH (or fondaparinux) for pharmacological prophylaxis of VTE as per British National Formulary - Check platelet count, LFTs and renal function prior to commencing LMWH (or fondaparinux).
- Document the weight of the patient on the drug chart.
- Checking of platelets 5 days after initiation of LMWH and action of results as required
- The reassessment of risk of VTE at 24 hours and when a patient's condition changes and at ward round.
- Regularly review the on-going need for LMWH or fondaparinux and stop the prescription when no longer considered to be at significant risk of VTE.
- The reassessment of the risk of VTE when the patient is discharged from hospital. The requirement for on-going prophylaxis must be recorded within the discharge documentation.
- Updating the patient's electronic patient record.

Nursing teams will be specifically responsible for :

- Assessing the patient's mobility on admission. This will include their usual baseline and current status.
- Ensuring all patients are kept well-hydrated.
- Encouraging all patients, where appropriate, to mobilise
- Informing medical staff of any change in the patient's condition which may impact on their risk of developing VTE and if they exhibit symptoms of VTE - for example calf pain, swelling, shortness of breath or chest pain.
- Explaining the importance of prevention and providing access to a patient information leaflet "Preventing blood clots when you are in hospital and at home – A patients guide". (Appendix 17)
- Liaising with community services for follow up at point of discharge and completing discharge documentation.
- Completing SCD paperwork where indicated for stroke patients.
- Updating the patient's electronic patient record.

Pharmacist

- Support the selection of appropriate pharmacological prophylaxis products for local use.
- Review inpatient therapy to check that risk assessment has been undertaken and that the appropriate prescription has been written correctly.
- Review all prescribing, monitoring and administration details recorded in the patient's drug chart.
- Contribute to the training of healthcare team with particular focus on pharmacological issues and questions that may arise about concurrent prescribing.
- Support clinical audit and routine review of compliance with VTE guidance.

Monitoring and adverse effects

All involved professions should ensure that any adverse events possibly related to the administration of any type of anticoagulant medication are recorded on Ulysses as per Trust Protocol.

Haemorrhage

The most serious side effect of anticoagulants is bleeding (over treatment). Any of the following may indicate this is happening, whereby a doctor/ ANP/ACP should be notified immediately:

- Prolonged nosebleed (longer than 10 minutes)
- Blood in vomit
- Blood in sputum
- Passing blood in urine or faeces
- Passing black faeces
- Severe or spontaneous bruising
- Unusual headaches
- For females: heavy or increased menstrual bleeding or any other vaginal bleeding.
- Intramuscular injection (IM) injections (eg. depot antipsychotics) may cause some local bleeding within the muscle. Theoretically patients receiving anticoagulation could be at risk of more obvious haemorrhage resulting in swelling, bruising, tenderness or even haematoma. Patients should be informed of this and

monitored (or advised to self-monitor). Preferably administer IM injections at an upper extremity so that bleeding can be easily seen, and compression applied if necessary. Low volume injections should be less of a risk than frequent and/or high-volume IM injections. IM injections must be avoided in patient with an INR or APTT raised above the therapeutic range (ie. INR above 3).

Heparin induced thrombocytopenia (HIT)

- This can develop after 5-10 days of heparin treatment.
- Symptoms include bruising, nosebleeds or bleeding gums and rashes (pinpoint red spots). HIT can also cause new blood clot formation eg DVT.
- Symptoms of DVT include pain or tenderness, sudden swelling, discoloration, visibly large veins, and skin that is warm to the touch.
- Dislodgement of clot from the deep leg veins and passage into the lungs (PE) may present as shortness of breath, a change in heart rate, sharp chest pain, dizziness, or feelings of anxiety and excessive sweating.
- Refer to haematology team at the Acute hospital Trust urgently if HIT is suspected.
- Stopping heparin preparations is usually sufficient to reverse symptoms. The condition however doesn't need regular monitoring as the incidence is very low (BCSH guidelines 2012).

Hyperkalaemia

Symptoms are non-specific and include weakness and fatigue. Occasionally, a patient presents with muscular paralysis or shortness of breath. They may also complain of palpitations or chest pain. The specialist team at the Acute hospital Trust must be contacted urgently if patients receiving injectable anticoagulants such as LMWH are 16 suspected of developing hyperkalaemia. Plasma-potassium concentration should be measured in patients at risk of hyperkalaemia before starting heparin and during treatment, particularly if the heparin is to be continued for longer than 7 days.

Drug Interactions

Prescribers should be aware of potential drug interactions for patients prescribed LMWH or fondaparinux. If there is likely to be a drug interaction the prescriber should closely monitor for signs and symptoms of bleeding. Possible clinically significant drug interactions with LMWH that can cause an increased risk of bleeding include.

- NSAIDs
- Antiplatelets eg aspirin, clopidogrel, ticagrelor, prasugrel, dipyridamole
- Serotonin re-uptake inhibitors (SSRIs)
- *Other anticoagulants such as warfarin, danaparoid, heparin
- *Antithrombotics eg DOACs * LMWH (or fondaparinux) should not be initiated in patients already receiving other anticoagulants or antithrombotics such as warfarin, heparin or DOACs

Possible other interactions with injectable anticoagulants include:

- ACE inhibitors (increased risk of hyperkalaemia)
- Angiotensin II Receptor Antagonists (increased risk of hyperkalaemia)

The above lists are not exhaustive. It is vital that when commencing any new medication for a patient who is on anticoagulation treatment, that any potential interactions are checked for. Appendix 1 of the BNF provides a comprehensive guide in this regard, contact pharmacy department for further advice.

12. Procedure if VTE is suspected.

Even when appropriate risk assessments have been undertaken and suitable prophylaxis prescribed and administered, some patients may go on to develop a VTE. If this is suspected, initiate monitoring of observations in accordance with the use of NEWS2 process and common symptoms of VTE development (see below)

Warning signs (common symptoms of VTE development)	
DVT	**PE**
DVT mainly affects the large veins in the lower leg and thigh, almost always on one side of the body at a time.	PE, or pulmonary embolism, can be fatal and occurs when the DVT breaks free from a vein wall and blocks some or all of the blood supply to the lungs, causing:
The clot can block blood flow and cause:	
Leg pain or tenderness of the thigh or calf	Unexplained shortness of breath
Leg swelling (oedema)	Rapid breathing
Skin that feels warm to the touch	Chest pain anywhere under the rib cage (may be worse with deep breathing)
	Fast heart rate
	Light headedness or passing out

People aged 18 and over with a deep vein thrombosis (DVT) Wells score of 2 points or more should have a proximal leg vein ultrasound scan within 4 hours of it being requested so that DVT can be ruled out to avoid unnecessary interim anticoagulation'.

As this is delayed outside of the Acute Hospital setting, immediate advice should be sought from the Responsible Clinician with referral to acute hospital facilities if appropriate.

Refer to Appendix 19 for the Two Level DVT Wells Score (table 1) and for the Two-Level PE Wells Score (table 2). These are clinical prediction rules for estimating the probability of DVT and PE.

Hospital acquired Thrombosis is to be considered as a potentially avoidable harm and needs to be reported as an incident and investigated to consider learning.

Leicestershire Partnership NHS Trust

Record patient's weight to prescribe correct dose of Enoxaparin.

Adjustments for patients with severe renal impairment

Treatment of Deep Vein Thrombosis & Pulmonary Embolism in Adults

ADMINISTRATION GUIDE

Enoxaparin (Inhixa®)

Some of the doses below are off label and differ from the SPC. As this is the recommendation from LLR-APC, prescribers will be protected by LPT vicarious liability

	Renal Function	
Actual Bodyweight	**CrCl ≥30ml/min**	**CrCl <30ml/min**
Up to 100kg	**1.5mg/kg OD or 1mg/kg BD[1]**	**1mg/kg OD[2]**
≥100kg	**1mg/kg BD**	**1mg/kg OD[2]**

[1]Dose of 1.5mg/kg OD is recommended in uncomplicated patients with low risk of VTE reoccurrence. Dose of 1mg/kg BD is recommended in patients with risk factors such as: obesity, cancer, recurrent VTE, proximal thrombosis, symptomatic pulmonary ebolism or any other circumstances that are deemed clinically appropriate. For patients discharged with
district/community nurse support, consider once-daily administration if clinically appropriate.

[2]Monitor heparin assay on Day 4 (4h post dose) and every 4 days thereafter.

CrCl <15 and/or impossible to monitor heparin levels: An alternative anticoagulant would be preferred: consider Dalteparin and discuss with Consultant in the first instance or seek Haematology advice.

Enoxaparin (Inhixa®) is supplied as prefilled syringes, please see below for Enoxaparin dose-banding guidance. Prescribe by brand name INHIXA® as different brands have different injection techniques.

Enoxaparin (Inhixa®) Dose-Banding Guidance

Enoxaparin sodium (Inhixa) 1.5mg/kg OD dosing		
Patient Weight (kg)	**1.5mg/kg OD**	**Suggested pre-filled syringe(s) to be used**
40 – 46.9	60mg OD	60mg
47 – 59.9	80mg OD	80mg
60 – 73.9	100mg OD	100mg
74 – 89.9	120mg OD	120mg
90 – 99.9	150mg OD	150mg

Enoxaparin sodium (Inhixa) 1mg/kg BD dosing for >100kg		
Weight > 100kg	**1mg/kg BD**	**Suggested pre-filled syringe(s) to be used**
100 – 109.9	100mg BD	100mg
110 – 134.9	120mg BD	120mg
135 – 150	150mg BD	150mg

Enoxaparin sodium (Inhixa) 1mg/kg BD In patients with RISK FACTORS		
Patient Weight (kg)	**1mg/kg BD**	**Suggested pre-filled syringe(s) to be used**
40 – 46.9	40mg BD	40mg
47 – 54.9	**50mg*BD**	**50mg* (NOTE: Use 60mg PFS and expel 0.1ml)**
55 – 69.9	60mg BD	60mg
70 – 89.9	80mg BD	80mg
90 – 100	100mg BD	100mg

Enoxaparin sodium (Inhixa) 1mg/kg OD in CrCl <30ml/min		
Patient Weight (kg)	**1mg/kg**	**Suggested pre-filled syringe(s) to be used**
40 – 46.9	40mg OD	40mg
47 – 54.9	**50mg* OD**	**50mg* (NOTE: Use 60mg PFS and expel 0.1ml)**
55 – 69.9	60mg OD	60mg
70 – 89.9	80mg OD	80mg
90 – 109.9	100mg OD	100mg
110 – 134.9	120mg OD	120mg
135 – 150	150mg OD	150mg

University Hospitals of Leicester (2023, p21)

13. Education and Training

VTE training is once only via e-Learning recorded on uLearn.

Staff must complete the pre-learning questionnaire, the modules, and the post- learning assessment. The assessment score should be 90% or above on completion of the course. If below this score the training will need to be repeated until 90% pass is achieved.

A completed certificate of achievement must be given to the line manager for inclusion in the personal files. A copy must be kept by the individual completing the course for their personal portfolio.

Compliance of training will be monitored by OLM with quarterly flash reports.

https://www.e-lfh.org.uk/programmes/venous-thromboembolism-public-access/

14. Monitoring Compliance and Effectiveness

Ref	Minimum Requirements	Evidence for Self-assessment	Process for Monitoring	Responsible Individual /Group	Frequency of monitoring
	95% of adult inpatients have a documented VTE risk assessment within 24 hours of admission to hospital	Section 2.1	Annual audit	CEG	Annually
	95% if found to be at risk of VTE, the patient received appropriate prophylaxis	Section 2.1	Annual audit	CEG	Annually

15. Links to Standards

This policy document links to 'Venous Thromboembolism' and to CQC Outcome 1: Respecting and involving people who use services, CQC Outcome 2: Consent to care and treatment, CQC Outcome 4: Care and welfare of people who use services and CQC outcome 21: Records.

TARGET/STANDARDS	KEY PERFORMANCE INDICATOR
CQC Fundamental Standards Need for Consent You (or anybody legally acting on your behalf) must give your consent before any care or treatment is given to you.	Consent to be included in the VTE audit tool

CQC Fundamental Standards Safety You must not be given unsafe care or treatment or be put at risk of harm that could be avoided. Providers must assess the risks to your health and safety during any care or treatment and make sure their staff have the qualifications, competence, skills and experience to keep you safe.	Included as part of the VTE audit tool

16. References/Bibliography

BSI GROUP *(2018) Compression hosiery, anti-embolism hosiery and graduate support hosiery. Specification*. [Online] Available from: https://knowledge.bsigroup.com/products/graduated-compression-hosiery-anti-embolism-hosiery-and-graduated-support-hosiery-specification?version=standard. (Withdrawn 2021)

ARACHCHILLAGE, D.J. et al. (2024) Diagnosis and management of heparin-induced thrombocytopenia: Third edition. *British Journal of Haematology,* 204 (2), pp. 459-475.

LINKINS, L. et al. (2012) Treatment and prevention of heparin-induced thrombocytopenia: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. *Chest,* 141 (2 Suppl), pp. e495S-e530S.

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE (2024) *COVID-19 rapid guideline: managing COVID-19 NG 191*. [Online] Available from: https://www.nice.org.uk/guidance/ng191 [Accessed 12-Feb-2024].

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE (2021) *Venous thromboembolism in adults Quality standard [QS201]* Available from: https://www.nice.org.uk/guidance/qs201 [Accessed 12-Feb-2024].

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE (2020) *Venous thromboembolic diseases: diagnosis, management and thrombophilia testing*. [Online] Available from: https://www.nice.org.uk/guidance/ng158/resources/venous-thromboembolic-diseases-diagnosis-management-and-thrombophilia-testing-pdf-66141847001797 [Accessed 12-Feb-2024].

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE (2018) *Venous thromboembolism in over 16s: reducing the risk of hospital-acquired deep vein thrombosis or pulmonary embolism*. [Online] Available from: https://www.nice.org.uk/guidance/ng89/resources/venous-thromboembolism-in-over-16s-reducing-the-risk-of-hospitalacquired-deep-vein-thrombosis-or-pulmonary-embolism-pdf-1837703092165 [Accessed 12-Feb-2024].

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE (2016) *Stroke in adults*. [Online] Available from: https://www.nice.org.uk/guidance/qs2/resources/stroke-in-adults-pdf-58292707525 [Accessed 12-Feb-2024].

NHS RESOLUTION (2023) *Venous Thromboembolism* Available from: https://resolution.nhs.uk/wp-content/uploads/2023/03/Did-you-know-VTE-final-amended.pdf [Accessed 12-Feb-2024].

NUFFIELD TRUST (2023) *Blood clots following hospital care*. [Online] Available from: https://www.nuffieldtrust.org.uk/resource/blood-clots-following-hospital-care#:~:text=The%20absolute%20number%20of%20VTE,of%20VTE%2Drelated%20deaths%20decreased [Accessed 12-Feb-2024].

UNIVERSITY HOSPITALS OF LEICESTER NHS TRUST (2023) *Guidelines for Pharmacological and Mechanical Thromboprophylaxis for Venous Thromboembolism*. U Available from: https://secure.library.leicestershospitals.nhs.uk/PAGL/Shared%20Documents/Thromboprophylaxis%20for%20Venous%20Thromboembolism%20UHL%20Guideline.pdf [Accessed 12-Feb-2024].

17. Appendices

Appendix 1 Training Requirements

Training Required	**YES**	~~NO~~
Training topic:	VTE	
Type of training: (see study leave policy)	□ Mandatory (must be on mandatory training register) ✓Role specific □ Personal development	
Division(s) to which the training is applicable:	✓ Adult Mental Health & Learning Disability Services ✓Community Health Services □ Enabling Services □ Families Young People Children □ Hosted Services	
Staff groups who require the training:	*Please specify…* All Registered Nursing Staff, Advanced Clinical Practitioners, Registered Medical Staff.	
Regularity of Update requirement:	Once only	
Who is responsible for delivery of this training?	Ulearn module	
Have resources been identified?	Ulearn module	
Has a training plan been agreed?	Ulearn module	
Where will completion of this training be recorded?	✓ ULearn ☐ Other (please specify)	
How is this training going to be monitored?	Compliance of training will be monitored by OLM with quarterly flash reports	

Appendix 2 The NHS Constitution

The NHS will provide a universal service for all based on clinical need, not ability to pay. The NHS will provide a comprehensive range of services.

Shape its services around the needs and preferences of individual patients, their families and their carers	✓
Respond to different needs of different sectors of the population	✓
Work continuously to improve quality services and to minimise errors	✓
Support and value its staff	✓
Work together with others to ensure a seamless service for patients	✓
Help keep people healthy and work to reduce health inequalities	✓
Respect the confidentiality of individual patients and provide open access to information about services, treatment, and performance	✓

Appendix 3 Stakeholders and Consultation

Key individuals involved in developing the revised document.

Name	Designation
Leon Ratcliffe	Head of Medical Services CHS
Lynn MacDiarmid	Consultant Nurse CHS
Prof Sudip Ghosh	Clinical Director for Specialist Services & Research
Dr David Eveson	Consultant Stroke Physician
Erin Ford	Advanced Nurse Practitioner

Circulated to the following individuals for comments:

Name	Designation
Joanne Charles	CHS Directorate Lead Pharmacist
Sarah Latham	Head of Nursing CHS
Louise Moran	Deputy Head of Nursing CHS
Tracey Yole	Deputy Head of Nursing CHS
Zayad Saumtally	Head of Nursing FYPC LDA
Rebecca Fowler	Deputy Head of Nursing FYPC LDA
Saskya Falope	Head of Nursing DMH
Simon Guild	Deputy Head of Nursing MHSOP
Dr Rebecca Hall	Consultant Psychiatrist and Medical Lead for Physical Health DMH
Dr Samantha Hamer	Consultant Psychiatrist DMH
Dr Neelofar Bargir	Consultant Psychiatrist CAMHs inpatient
Dr Matthew Noble	Consultant Psychiatrist MHSOP
Dr Shweta Gangavati	Consultant Psychiatrist LD
Jackie Moore	Senior Physical Health Nurse - AMH
Andrew Moonesinghe	Pharmacy Services Manager
Samy Vinaylingum	Advanced Nurse Practitioner
Ged Swinton	Senior Resuscitation Officer LPT
Sue Arnold	Lead Nurse, Patient Safety, LPT
Tracy Ward	Head of Patient Safety, LPT
Nicola Hurton	Quality Improvement Practitioner
Rachel Calton	Pharmacist
Michaela Ireland	Operational and Transformation Lead CHS
Dr Graham Johnson	Associate Medical Director CHS
Anjlee Sharma	Pharmacist

Appendix 4 Self Assessment sheet

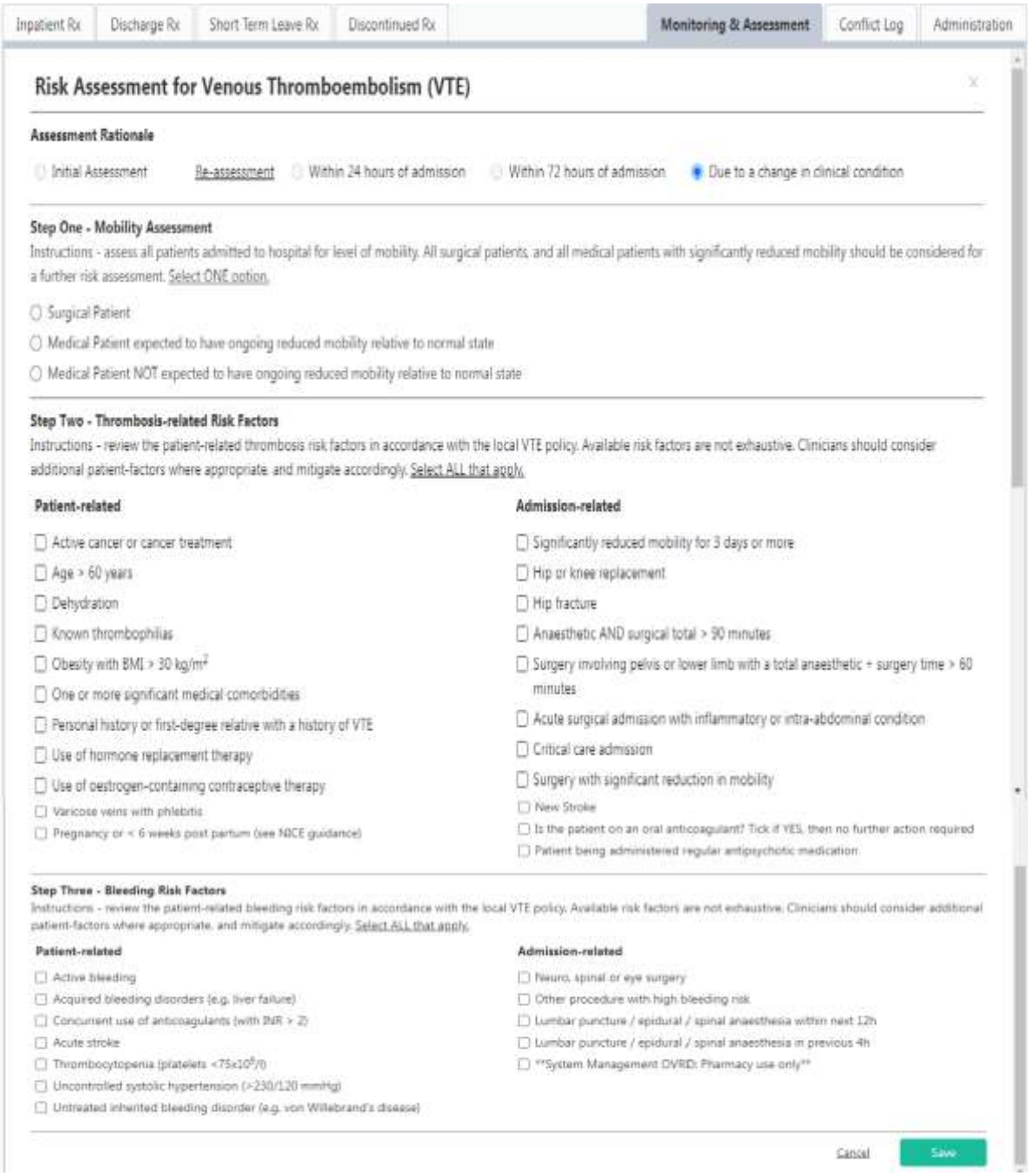
Self-Assessment Sheet: Venous Thromboembolism criteria as a minimum, the approved documentation must include a description of the:

Criteria: Organisations providing acute and community services and non-NHS providers must have an approved documented process for the prevention and management of venous thromboembolism	Self-Assessment Compliant	Comment/evidence See EPMA
Your documented process must include:		
a) how patients are assessed for their risk of developing venous thromboembolism (VTE), including timescales	Compliant	Risk assessment form to be completed within 24 hours of admission
b) prophylactic treatment regime for high-risk patients	Compliant	Guidance provided on risk assessment form and flow charts
c) procedure to be followed if VTE is suspected	Compliant	Patients may be treated locally or transferred to acute for diagnostics and further treatment subject to the outcome of the ANP / medical practitioners assessment
d) management of the patient once a positive diagnosis has been made	Compliant	Patients with confirmed VTE can be treated within community hospital following diagnostics.
e) how the organisation trains staff, in line with the training needs analysis	Compliant	Training link embedded in policy document.
f) how the organisation monitors compliance with all of the above.	Compliant	Safety Thermometer in CHS Division and bi-annual audit. Training recorded in personal files.

Appendix 5 Due Regard Screening Template

Section 1			
Name of activity/proposal	VTE Policy		
Date Screening commenced	1st January 2024 & 20th May 2024		
Directorate / Service carrying out the assessment	Community Health Services on behalf of LPT		
Name and role of person undertaking this Due Regard (Equality Analysis)	Lynn MacDiarmid		
Give an overview of the aims, objectives and purpose of the proposal:			
AIMS: **To have a policy for the assessment and prevention of venous thrombo-embolism**			
OBJECTIVES: **To have a policy for the assessment and prevention of venous thrombo-embolism**			
Section 2			
Protected Characteristic	**If the proposal/s have a positive or negative impact please give brief details**		
Age	No impact.		
Disability	No impact.		
Gender reassignment	No impact.		
Marriage & Civil Partnership	No impact.		
Pregnancy & Maternity	No impact.		
Race	No impact.		
Religion and Belief	No impact.		
Sex	No impact.		
Sexual Orientation	No impact.		
Other equality groups?	No impact.		
Section 3			
Does this activity propose major changes in terms of scale or significance for LPT? For example, is there a clear indication that, although the proposal is minor it is likely to have a major affect for people from an equality group/s? Please tick appropriate box below.			
		No	
High risk: Complete a full EIA starting click here to proceed to Part B		Low risk: Go to Section 4.	**x**
Section 4			
If this proposal is low risk please give evidence or justification for how you reached this decision:			
The assessment process and use of bed rails is to be applied to all adults who may use / use bed rails.			
Signed by reviewer/assessor	LMacDiarmid	**Date**	20.5.24
Sign off that this proposal is low risk and does not require a full Equality Analysis			
Head of Service Signed	Sarah Latham	**Date**	20.5.24

Appendix 6 VTE Risk Assessment



Inpatient Rx | Discharge Rx | Short Term Leave Rx | Discontinued Rx | Monitoring & Assessment | Conflict Log | Administration

Risk Assessment for Venous Thromboembolism (VTE)

Assessment Rationale

Initial Assessment | Re-assessment | Within 24 hours of admission | Within 72 hours of admission | Due to a change in clinical condition

Step One - Mobility Assessment

Instructions - assess all patients admitted to hospital for level of mobility. All surgical patients, and all medical patients with significantly reduced mobility should be considered for a further risk assessment. Select ONE option.

- Surgical Patient
- Medical Patient expected to have ongoing reduced mobility relative to normal state
- Medical Patient NOT expected to have ongoing reduced mobility relative to normal state

Step Two - Thrombosis-related Risk Factors

Instructions - review the patient-related thrombosis risk factors in accordance with the local VTE policy. Available risk factors are not exhaustive. Clinicians should consider additional patient-factors where appropriate, and mitigate accordingly. Select ALL that apply.

Patient-related

- Active cancer or cancer treatment
- Age > 60 years
- Dehydration
- Known thrombophilias
- Obesity with BMI > 30 kg/m²
- One or more significant medical comorbidities
- Personal history or first-degree relative with a history of VTE
- Use of hormone replacement therapy
- Use of oestrogen-containing contraceptive therapy
- Varicose veins with phlebitis
- Pregnancy or < 6 weeks post partum (see NICE guidance)

Admission-related

- Significantly reduced mobility for 3 days or more
- Hip or knee replacement
- Hip fracture
- Anaesthetic AND surgical total > 90 minutes
- Surgery involving pelvis or lower limb with a total anaesthetic + surgery time > 60 minutes
- Acute surgical admission with inflammatory or intra-abdominal condition
- Critical care admission
- Surgery with significant reduction in mobility
- New Stroke
- Is the patient on an oral anticoagulant? Tick if YES, then no further action required
- Patient being administered regular antipsychotic medication

Step Three - Bleeding Risk Factors

Instructions - review the patient-related bleeding risk factors in accordance with the local VTE policy. Available risk factors are not exhaustive. Clinicians should consider additional patient-factors where appropriate, and mitigate accordingly. Select ALL that apply.

Patient-related

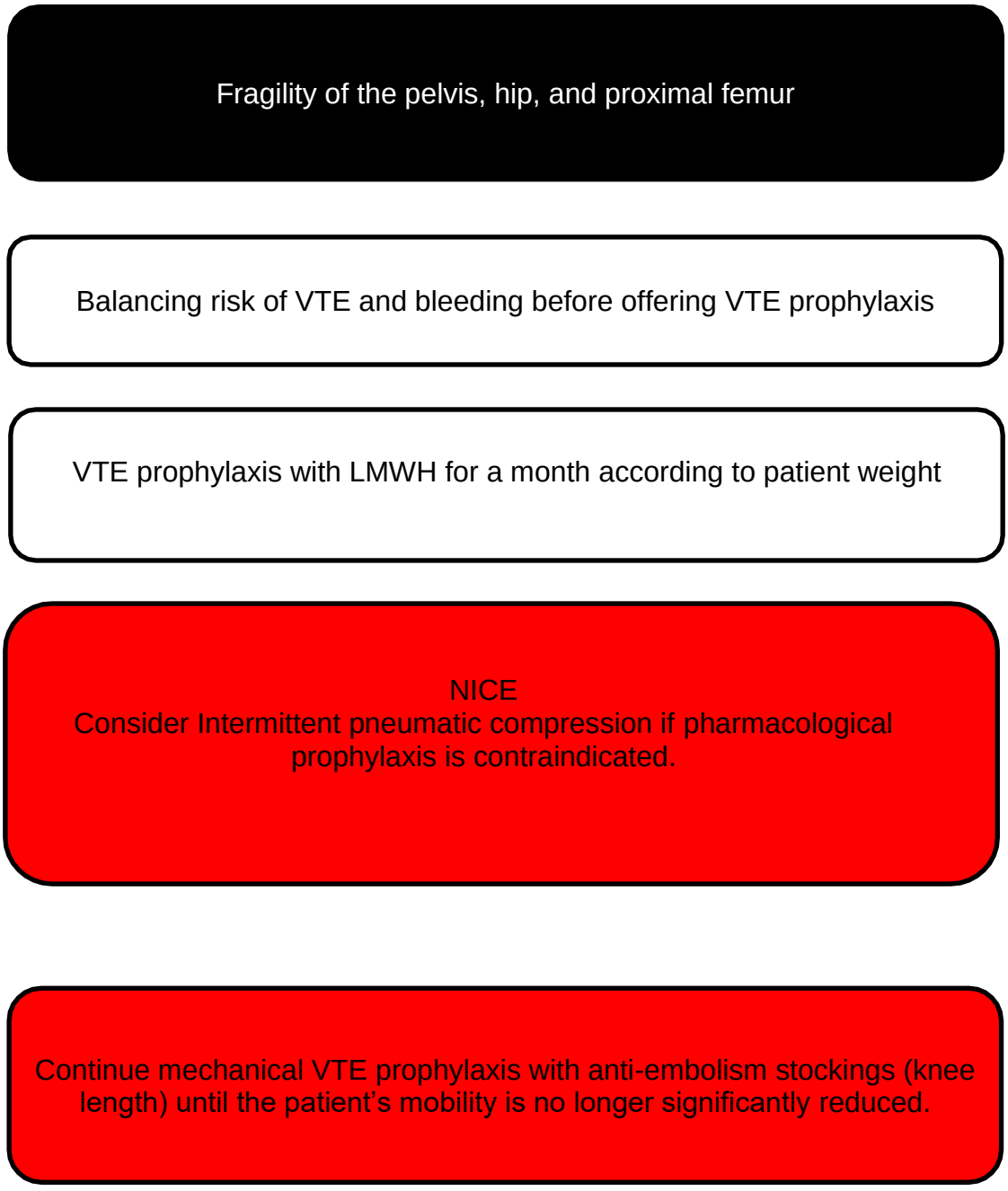
- Active bleeding
- Acquired bleeding disorders (e.g. liver failure)
- Concurrent use of anticoagulants (with INR > 2)
- Acute stroke
- Thrombocytopenia (platelets <75x10⁹/l)
- Uncontrolled systolic hypertension (>230/120 mmHg)
- Untreated inherited bleeding disorder (e.g. von Willebrand's disease)

Admission-related

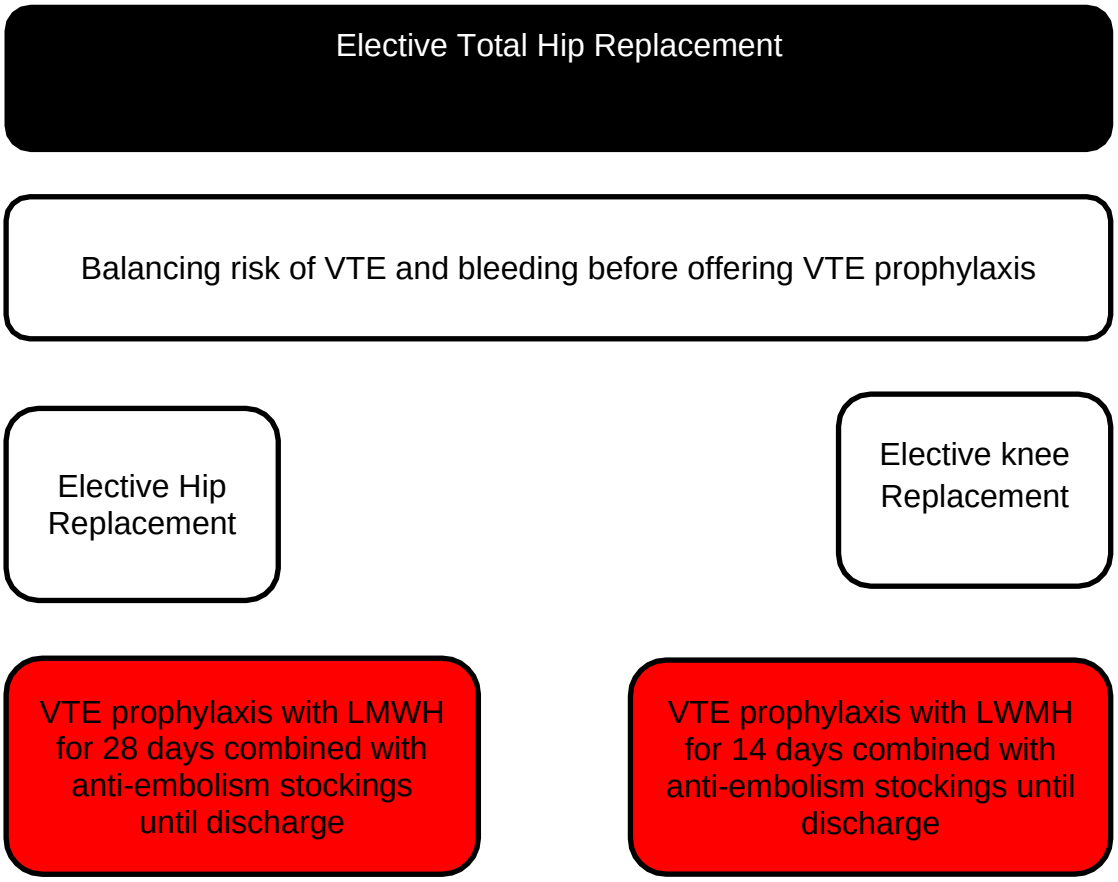
- Neuro, spinal or eye surgery
- Other procedure with high bleeding risk
- Lumbar puncture / epidural / spinal anaesthesia within next 12h
- Lumbar puncture / epidural / spinal anaesthesia in previous 4h
- **System Management OVRD: Pharmacy use only**

Cancel | Save

Appendix 7 Trauma Orthopaedic risk



Appendix 8 Elective Orthopedics



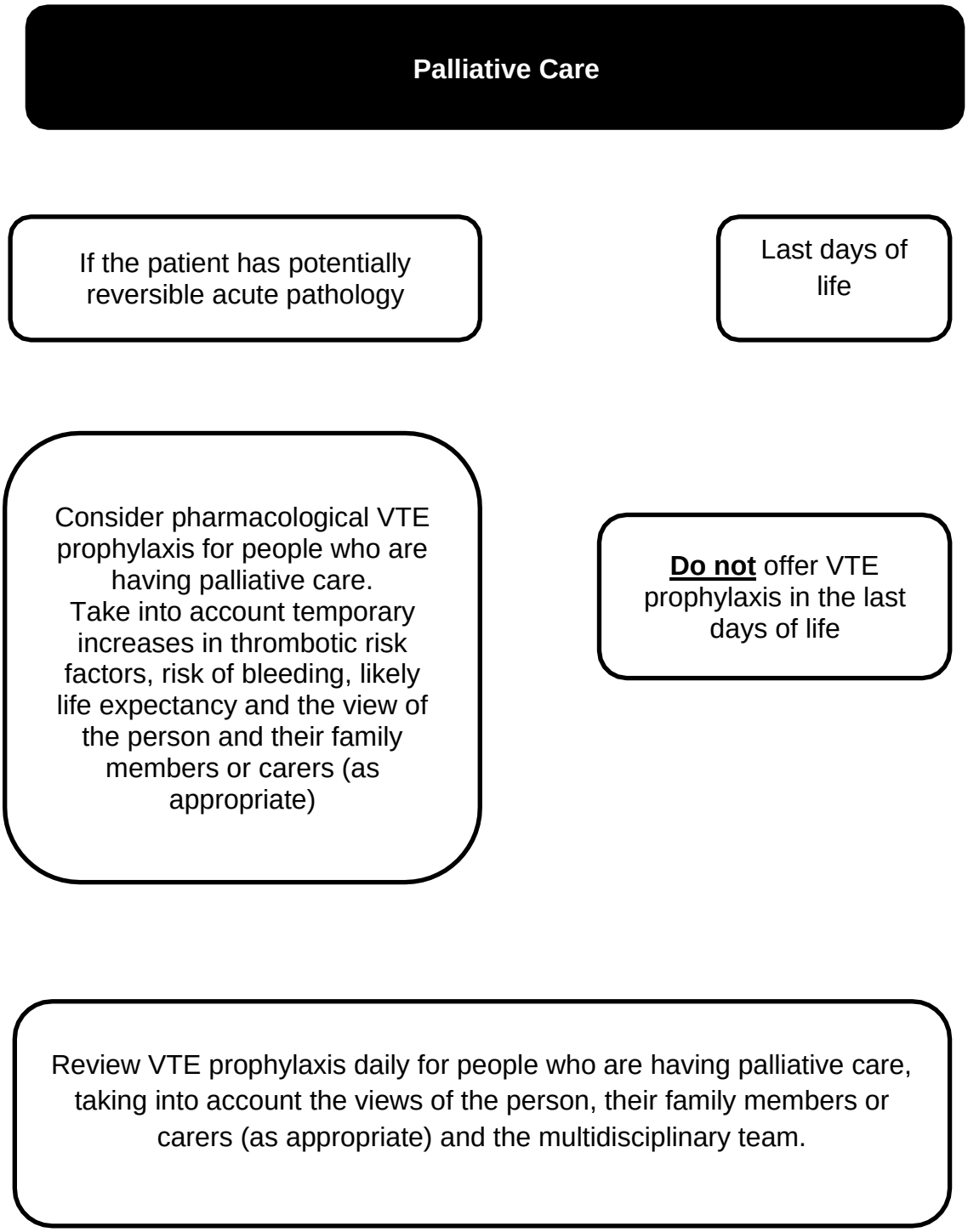
Appendix 9 Lower Limb Immobilisation

Lower limb immobilisation
Any clinical decision taken to manage the affected limb in a way that would prevent normal weight – bearing status or use of that limb, or both

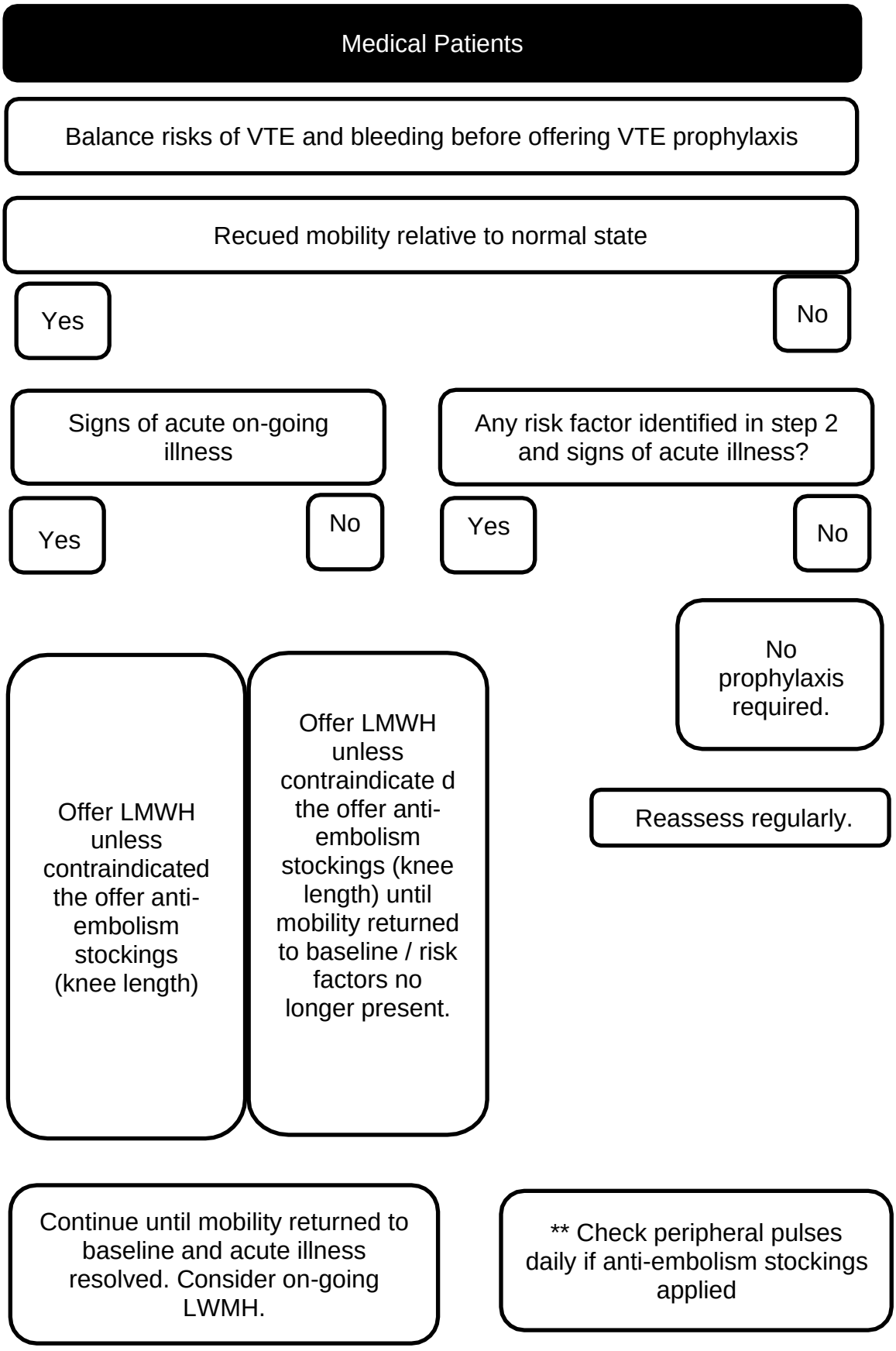
Balance the risk of VTE and bleeding before offering VTE prophylaxis.

Continue pharmacological VTE prophylaxis with LMWH for people with lower limb immobilisation.
Consider stopping prophylaxis if lower limb immobilisation continues beyond 42 days.

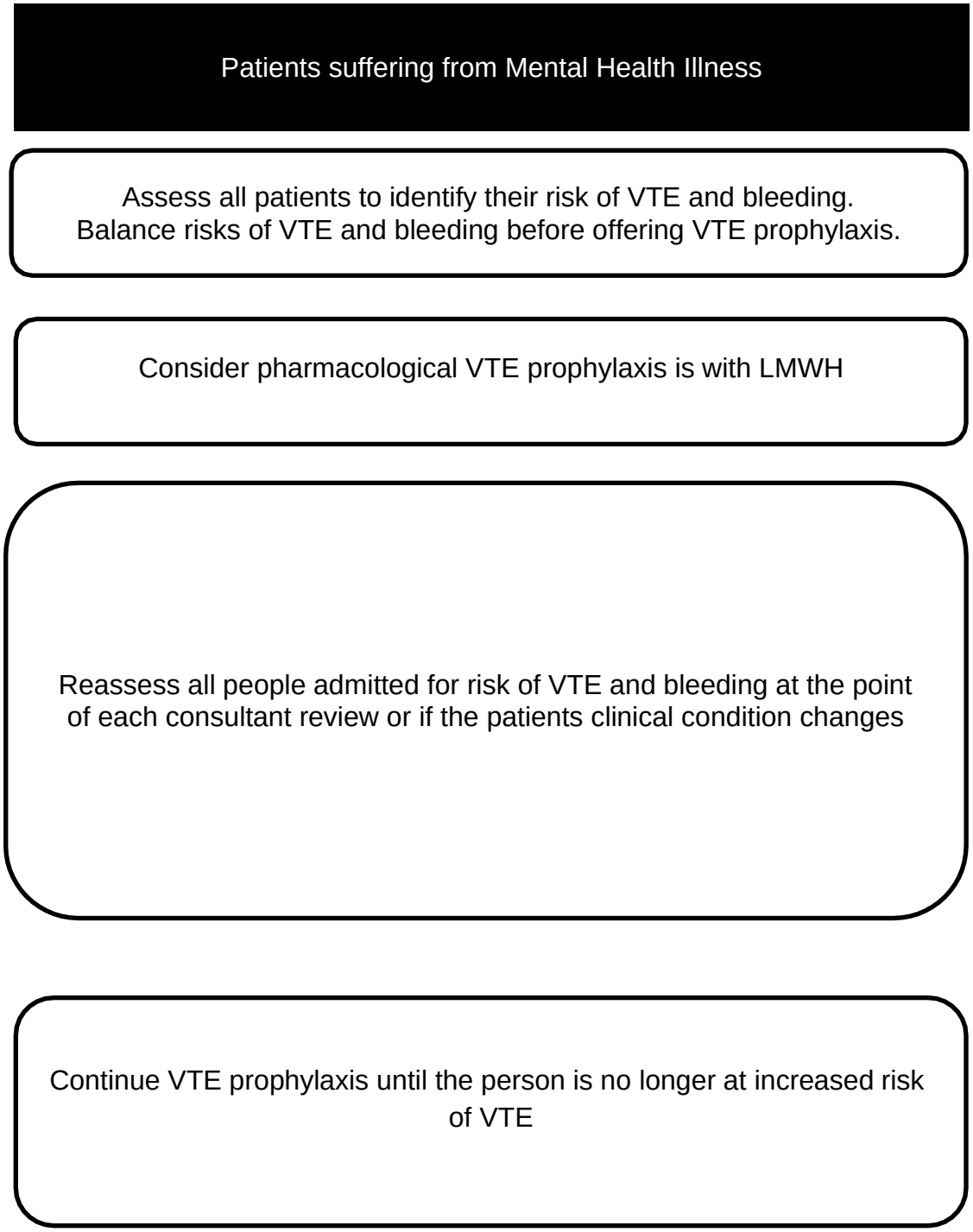
Appendix 10 Palliative Care



Appendix 11 Medical Patients



Appendix 12 Patients with Mental Health Illness



VTE risk factors associated with antipsychotic drugs.[1]

Cases of VTE have been reported with antipsychotic drugs. Patients treated with antipsychotics often present with acquired risk factors for VTE. All possible risk factors for VTE should be identified before and during treatment with antipsychotics and preventative measures are recommended by the manufacturers. Reports from other mental health trusts and an audit within HPFT, have also suggested that VTE prophylaxis be considered for all adult psychiatric inpatients (BMJ Online, 2010. S. Greet and N. Buntwal. Audit, practice Audit and Clinical Effectiveness Team, HPFT: Venous Thromboembolism risk – should we be considering risk assessment? Dr Jemma Reid, March 2013). NICE guidance from June 2010 also highlights the risk of VTE in inpatients and emphasises the mortality and financial burden of VTE in the UK.

- The incidence of VTE in psychiatric inpatient units is thought to be 2.2%. The main factors associated with VTE were age, bed rest, and diagnosis of dementia. The incidence of VTE in patients aged 75 or over with a diagnosis of dementia reached 8.2% at day 10 and 12.5% at day 90 (Delluc et al. Incidence of venous thromboembolism in psychiatric units. Thrombosis research 130 (2012) e283-e288).

- In a study by Parker et al (Parker et al. Antipsychotic drugs and risk of VTE: A nested case control study. BMJ 2010; 341:c4245 doi: 10.1136/bmj.c4245) individuals prescribed antipsychotic drugs in the previous 24 months had a 32% greater risk of VTE than people not on antipsychotics, despite adjustment for potential risk factors (odds ratio 1.32, 95%CI 1.23 to 1.42.

- They also found patients who had started a new drug in the previous three months had about twice the risk (1.97, 95% CI 1.66 to 2.33)

- The risk was greater for individuals prescribed atypical rather than conventional drugs (adjusted odd ratio 1.73, 95%CI 137 to 2.17, for atypical drugs; 1.28, 95%CI 1.18 to 1.38, for conventional drugs)

- Risk of a VTE tended to be greater for patients prescribed low rather high potency drugs (1.99, 95%CI 1.52 to 2.62), for low potency; 1.28, 95%CI 1.18 to 1.38, for high potency)

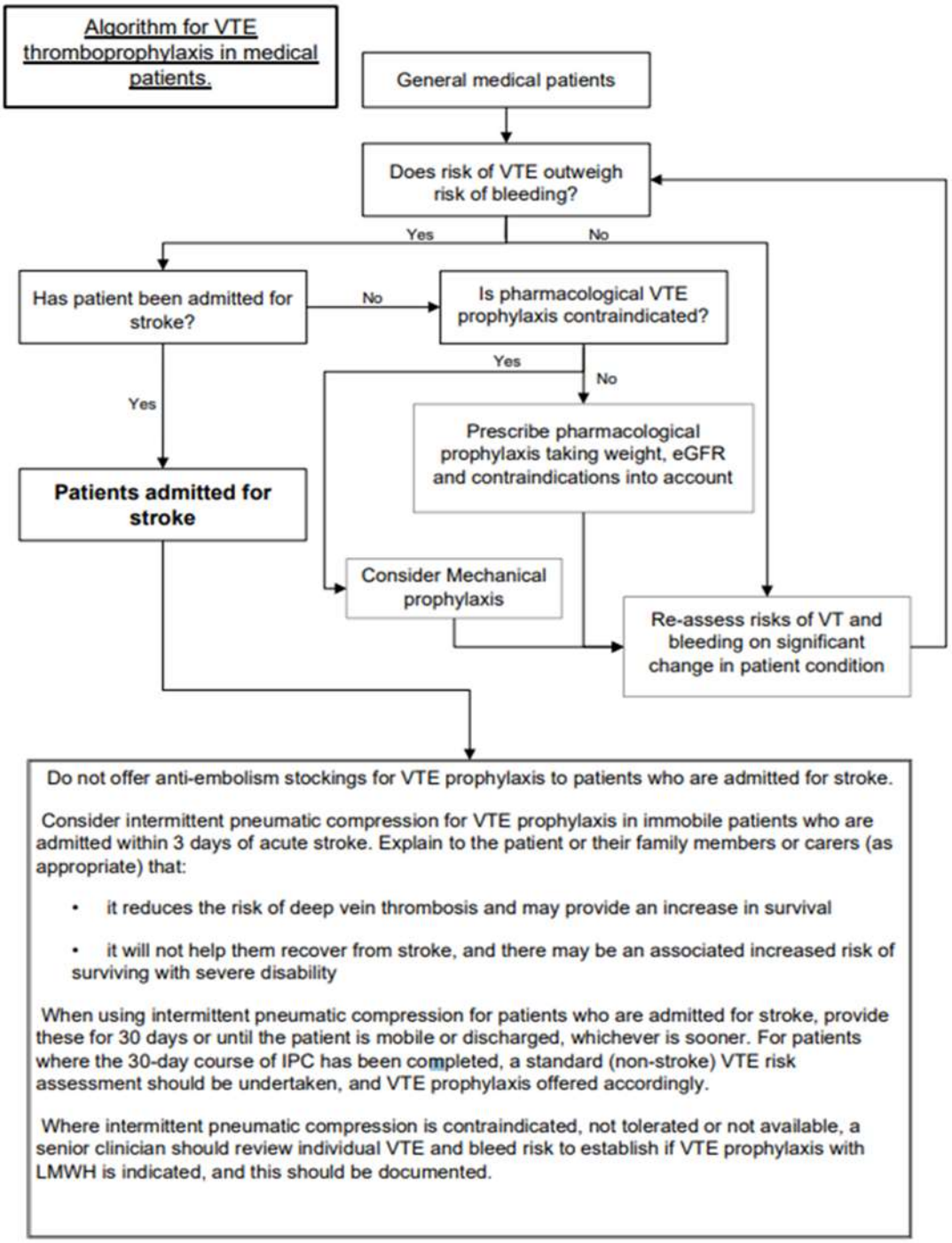
- The estimated number of extra cases of VTE per 10 000 patients treated over one year was 4 (3 to 5) in patients of all ages and 10 (7 to 13) for patients aged 65 and over. The extra 4 per 10,000 in 1 year applies to all patients on antipsychotics (both inpatients and outpatients).

See also MHRA public health assessment report: The risk of venous thromboembolism associated with antipsychotics, June 2009

[1] **Source Hertfordshire Partnership University NHS Foundation Trust Venous Thromboembolism (VTE) Prophylaxis Policy (2021)**

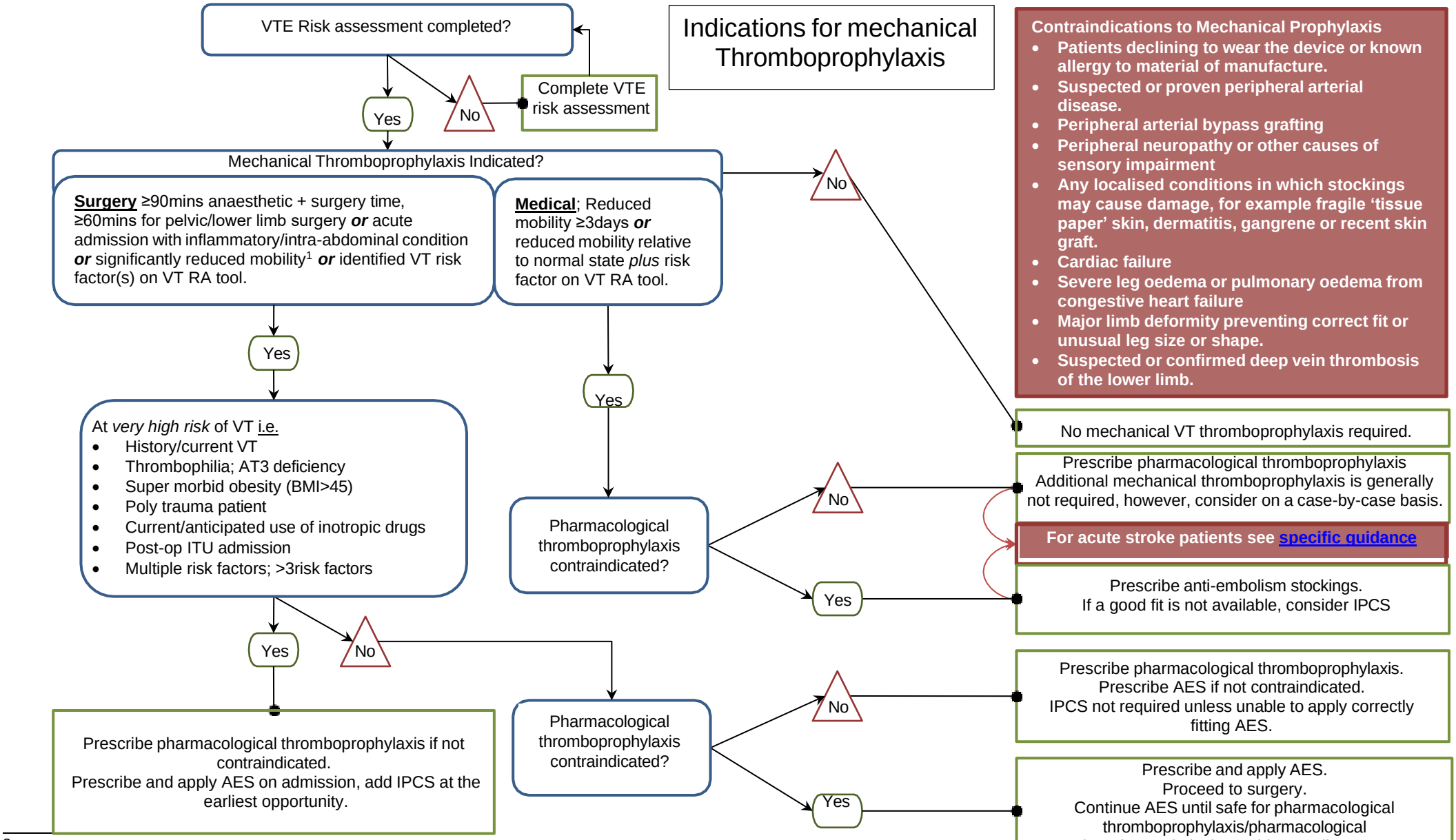
Appendix 13 Algorithm including Stroke patients.

Algorithm for VTE thromboprophylaxis in medical patients; *note the Stroke pathway*.



University Hospitals of Leicester NHS Trust (2023, p18)

Appendix 14 Indications for mechanical thromboprophylaxis[2] [3]



[2] **Key points from NICE guidelines …**

- **Any mechanical prophylaxis must be continued until the patient is mobile or no longer considered at increased risk of VTE**
- **significantly reduced mobility is used to denote patients who are bedbound, unable to walk unaided or likely to spend a substantial proportion of the day in bed or in a chair. NICE NG89.**

[3] **University Hospitals of Leicester NHS Trust (2023: p23)**

Appendix 15 Platelet Monitoring / Monitoring

Recommendations for platelet monitoring (based on ACCP 2012 and BSCH 2023 recommendations)	
Secondary care should use this table to identify those patients requiring HIT (**Heparin Induced Thrombocytopenia**) monitoring. This is required on discharge, the secondary care team should ensure that the GP is notified accordingly	
Patient type	Platelet monitoring for HIT
LWMH only (prophylactic or therapeutic) and where : 1. the risk of HIT is more than 1% (see incidence table below) **AND** 2. patient does not fall into the other heparin categories	• Baseline platelet count • Subsequent monitoring not required. • HIT monitoring is not required for all medical, obstetric and surgical patients (including orthopaedic). • **Exception:** cardiothoracic surgery (with incidence of HIT is 1-3%) and cancer patients undergoing surgery (where the risk of HIT is unclear but likely to be at least 1%)
LWMH and HIT incidence > 1% (see incidence table below)	• Baseline platelet count • Once between days 4-7 post starting LWMH • 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 • 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

Incidence of HIT

Incidence of HIT according to patient population and type of heparin exposure (ACCP 2012)			
Patient population (min of 4 days exposure)	Incidence of HIT	Patient population (min of 4 days exposure)	Incidence of HIT
Post-operative patients		**Medical**	
Heparin prophylactic dose	1 -5%	Cancer	1%
Heparin therapeutic dose	1 - 5%	Heparin prophylactic or therapeutic dose	0.1 – 1%
Heparin flushes	0.1 – 1%	LMWH prophylactic or therapeutic dose	0.6%
LMWH prophylactic or therapeutic dose	0.1 – 1%	ITU Patients	0.4%
Cardiac surgery patients	1 – 3%	Heparin flushes	<0.1%
		Obstetric patients	<0.1%

Appendix 16 Patient Information on discharge letters

Preventing blood clots when you are in hospital and at home A patient's guide.

This leaflet explains how the risk of developing Deep Vein Thrombosis (DVT) and pulmonary embolism (PE) can be reduced.

What is DVT?
DVT is a common medical condition that occurs when a thrombus (blood clot) forms in a deep vein, usually in the leg or pelvis, leading to either partially or completely blocked circulation. A DVT may cause no symptoms at all, or cause swelling or discolouration of the leg and pain. A DVT, in some cases, can cause a serious problem known as pulmonary embolus (PE) in the lungs.

What is a PE?
If the clot or DVT in the leg breaks off and travels to the lungs, it will cause PE. PE may result in breathing difficulties and may be fatal.

Signs of PE are:
- Shortness of breath
- Chest pain
- Coughing (with blood streaked mucus)
- Collapse

DVT and PE are known under the collective terms of venous thromboembolism (VTE).

Why can a blood clot form?
There are 2 factors that may trigger a clot to form:
- Changes or damage to the blood vessels – If there is pressure on a vein a clot can form. This may be due to being immobile, surgery or long-distance travel.
- Problems with the blood – This may be inherited (you are born with the condition), caused by some drugs or conditions such as pregnancy.

If you are dehydrated the blood can become more 'sticky' which can increase the risk of the blood forming a clot.

Who is mostly at risk?
There are several factors that increase the chance of developing a VTE. These include:
- Having had a previous DVT or PE
- Major surgery, particularly orthopaedic operations such as a joint replacement
- Major trauma or injury to the lower limb
- Aged over the age of 60 years, family history of DVT or PE
- Advanced cancer and chemotherapy treatment for cancer
- Faulty blood clotting i.e. thrombophilia
- Recent medical illness (such as heart attack or lung disease, kidney failure or disease, recent heart attack, inflammatory conditions such as inflammatory bowel disease)
- Smoking
- Being obese (very overweight)
- Pregnancy and recent delivery
- Paralysis or immobility of the legs including staying in bed for a long time
- Some types of HRT or contraceptive pill
- If you are immobile or less likely to move due to your current physical or mental health

- Certain types of medications that are important for your wellbeing may also have an effect on the ‘stickiness of your blood which could make you more prone to clots’.

The risk of a blood clot forming after an operation range from 10% - 40% depending on the type of operation. Orthopaedic surgery carries the highest risk.

Is travelling a risk?
Because being immobile increases the risk of developing blood clots, if you travel for more than 3 hours at one time in the month before or after your surgery your risk of forming a blood clot will be higher.

If you have had major joint replacement surgery the risk is present for up to 3 months, particularly if you have had a long-haul flight for over 4 hours.

How is VTE prevented in hospital?
Not all VTE can be prevented but the risk of developing a clot can be significantly reduced.

Your risk will be assessed when you are admitted to hospital and reassessed at different intervals during your hospital stay.

If you are considered to be at risk of VTE a blood thinning medication may be prescribed. For some people this is an injection. This is called a subcutaneous injection and it uses a short needle to inject the drug under the skin of your abdomen. This type of medication is absorbed more slowly.

The injection is given once a day.
Alternatively, you may be given blood thinning tablets.

If you are unable to have the injections (because of a medical condition, or the type of surgery you are having) you may be asked to wear compression stockings or use some other form of prevention.
Compression stockings (also known as ‘TED’s’ or thrombo-embolic deterrent stockings) help maintain circulation and reduce the risk of blood clots forming in the veins of your legs.
They are available in several sizes and lengths. Your nurse will measure your legs and recommend the correct stockings for you.

What can I do to help myself?
Whilst the doctors can do something to reduce your risk, there are some very important and simple things that you can help to reduce your risk:

- Make sure that you get up and about as soon as possible.
- Exercise your legs whilst in bed.
- Make sure you drink plenty – water is particularly good for you.
- Stop smoking.
- Consider stopping contraceptive or hormone replacement therapy and talk to your doctor.
- Lose weight.

What happens when I go home?
You may need to wear compression stockings after you go home. Your nurse will show you how to put the stockings on and provide advice about washing and taking care of your stockings. Your nurse will tell you how long you need to wear the stockings for.

You may need to continue blood thinning treatment at home. Your nurse will teach you how to inject the blood thinning medication. You should use a different area of your abdomen, approximately 1 inch apart, for each injection.
The injection may cause bruising around the injection site, which is normal. If you notice any other bruising or bleeding, from your surgical site or elsewhere please contact the hospital immediately.
You will be given a supply of medication and a sharps bin for safe disposal of used syringes. Please return the sharps bin to your GP surgery for safe disposal.

If you develop any signs or symptoms of a clot when you are at home seek medical advice immediately.

Appendix 17 Wells Score for DVT and PE

Table 1 Two-level DVT Wells score[a]

Clinical feature	*Points*
Active cancer (treatment ongoing, within 6 months, or palliative)	1
Paralysis, paresis or recent plaster immobilisation of the lower extremities	1
Recently bedridden for 3 days or more or major surgery within 12 weeks requiring general or regional anaesthesia	1
Localised tenderness along the distribution of the deep venous system	1
Entire leg swollen	1
Calf swelling at least 3 cm larger than asymptomatic side	1
Pitting oedema confined to the symptomatic leg	1
Collateral superficial veins (non-varicose)	1
Previously documented DVT	1
An alternative diagnosis is at least as likely as DVT	−2
Clinical probability simplified score	
DVT likely	**2 points or more**
DVT unlikely	**1 point or less**

[a] Adapted with permission from Wells PS et al. (2003) Evaluation of D-dimer in the diagnosis of suspected deep-vein thrombosis.

Pulmonary embolism (PE)

Table 2 Two-level PE Wells score[a]

Clinical feature	*Points*
Clinical signs and symptoms of DVT (minimum of leg swelling and pain with palpation of the deep veins)	3
An alternative diagnosis is less likely than PE	3
Heart rate > 100 beats per minute	1.5
Immobilisation for more than 3 days or surgery in the previous 4 weeks	1.5
Previous DVT/PE	1.5
Haemoptysis	1
Malignancy (on treatment, treated in the last 6 months, or palliative)	1
Clinical probability simplified score	
PE likely	**More than 4 points**
PE unlikely	**4 points or less**

[a] Adapted with permission from Wells PS et al. (2000) Derivation of a simple clinical model to categorize patients' probability of pulmonary embolism: increasing the model's utility with the SimpliRED D-dimer. Thrombosis and Haemostasis 83: 416–20

Appendix 18 VTE flow chart for use in the Directorate for Mental Health, Families, Young People and Children, and Learning Disabilities.

RISK ASSESSMENT FOR VENOUS THROMBOEMBOLISM (VTE)

Leicestershire Partnership NHS Trust

Patient Details
Patient :
Hospital No. National No. Date of Birth:

Re-assessment within 24 hour

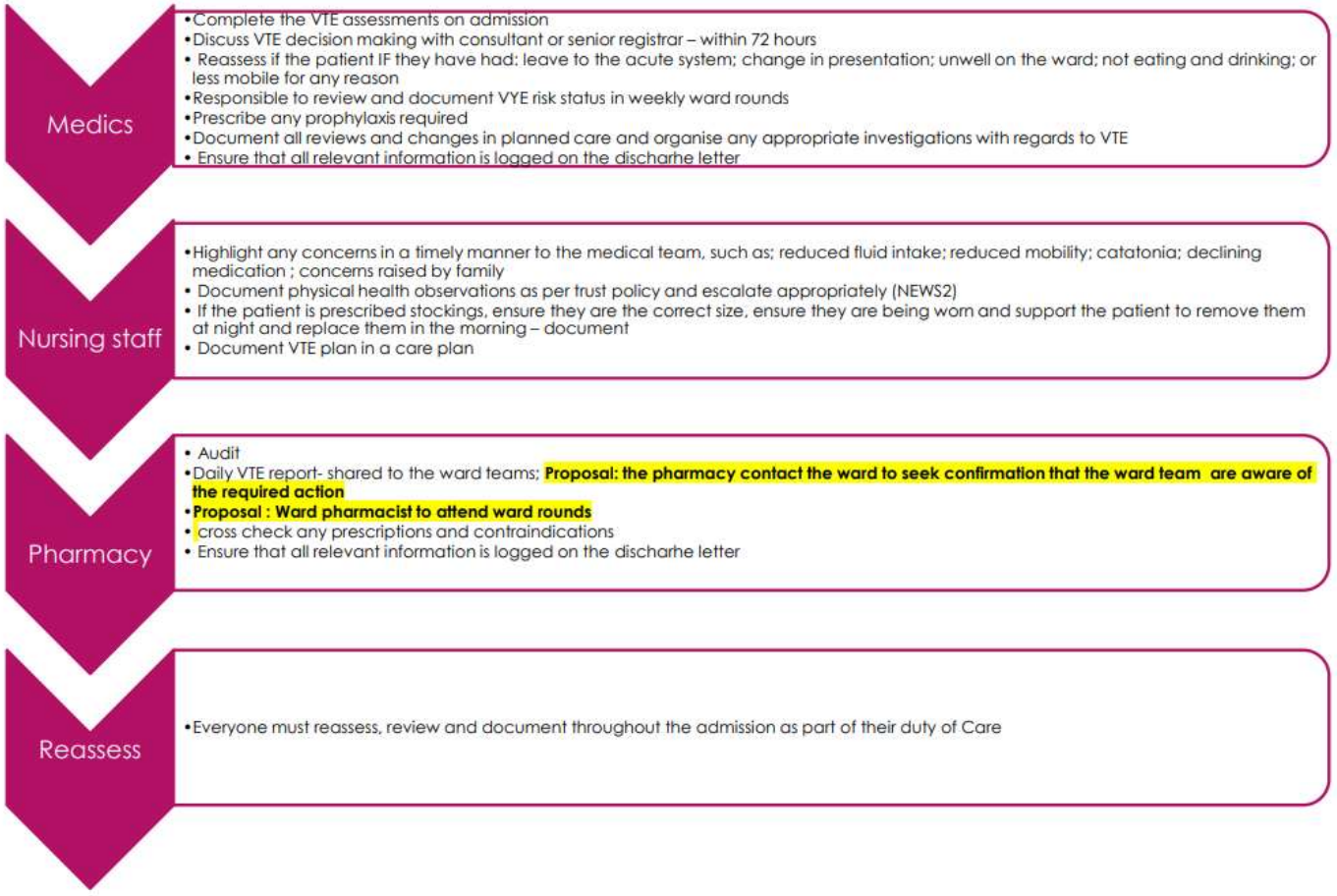
Mobility - all patients (tick one box)	**Tick**		**Tick**		**Tick**
Surgical patient	☐	Medical/ Mental Health patient expected to have ongoing reduced mobility relative to normal state	☐	Medical/ Mental Health patient NOT expected to have significantly reduced mobility relative to normal state	☐
Assess for thrombosis and bleeding risk below				**Risk assessment now complete**	☐

Thrombosis risk

Patient related	**Tick**	**Admission related**	**Tick**
Active cancer or cancer treatment	☐	Significantly reduced mobility for 3 days or more	☐
Age > 60	☐	Hip or knee replacement	☐
Dehydration	☐	Hip fracture	☐
Known thrombophilia's	☐	Total anaesthetic + surgical time > 90 minutes	☐
Obesity (BMI >30 kg/m²)	☐	Surgery involving pelvis or lower limb with a total anaesthetic + surgical time > 60 minutes	☐
One or more significant medical comorbidities (e.g. heart disease, metabolic, endocrine or respiratory pathologies, acute infectious diseases, inflammatory conditions)	☐	Acute surgical admission with inflammatory or intra-abdominal condition	☐
Personal history or first-degree relative with a history of VTE	☐	Critical care admission	☐
Use of hormone replacement therapy	☐	Surgery with significant reduction in mobility	☐
Use of oestrogen-containing contraceptive therapy	☐	New Stroke	☐
Varicose veins with phlebitis	☐	Is the patient on an oral anticoagulant? Tick if YES, then no further action required	☐
Pregnancy or < 6 weeks post-partum (see NICE guidance for specific risk factors)	☐	Patient being administered regular antipsychotic medication	☐

Bleeding risk

Patient related	**Tick**	**Admission related**	**Tick**
Active bleeding	☐	Neurosurgery, spinal surgery, or eye surgery	☐
Acquired bleeding disorders (such as acute liver failure)	☐	Other procedure with high bleeding risk	☐
Concurrent use of anticoagulants known to increase the risk of bleeding (such as warfarin with INR >2)	☐	Lumbar puncture/epidural/spinal anaesthesia expected within the next 12 hours	☐
Acute stroke	☐	Lumbar puncture/epidural/spinal anaesthesia within the previous 4 hours	☐
Thrombocytopenia (platelets< 75x10⁹/l)	☐	**System Management OVRD: Pharmacy use only**	☐
Uncontrolled systolic hypertension (230/120 mmHg or higher)	☐		☐
Untreated inherited bleeding disorders (such as haemophilia and von Willebrand's disease)	☐		☐


Medics
•Complete the VTE assessments on admission
•Discuss VTE decision making with consultant or senior registrar – within 72 hours
• Reassess if the patient IF they have had: leave to the acute system; change in presentation; unwell on the ward; not eating and drinking; or less mobile for any reason
•Responsible to review and document VYE risk status in weekly ward rounds
•Prescribe any prophylaxis required
•Document all reviews and changes in planned care and organise any appropriate investigations with regards to VTE
• Ensure that all relevant information is logged on the discharhe letter
Nursing staff
•Highlight any concerns in a timely manner to the medical team, such as; reduced fluid intake; reduced mobility; catatonia; declining medication ; concerns raised by family
• Document physical health observations as per trust policy and escalate appropriately (NEWS2)
• If the patient is prescribed stockings, ensure they are the correct size, ensure they are being worn and support the patient to remove them at night and replace them in the morning – document
• Document VTE plan in a care plan
Pharmacy
• Audit
•Daily VTE report- shared to the ward teams; Proposal: the pharmacy contact the ward to seek confirmation that the ward team are aware of the required action
•Proposal : Ward pharmacist to attend ward rounds
• cross check any prescriptions and contraindications
• Ensure that all relevant information is logged on the discharhe letter
Reassess
•Everyone must reassess, review and document throughout the admission as part of their duty of Care


Admission VTE risk
•Use Trust agreed assessment tool within 24 hours of admission – found on WellSky
•Completed by admitting Doctor / ANP
•Consider additional risk factors specific to mental health:-
• Catatonia or any reduced mobility
•Antipsychotics
•Hydration status
•Increasing weight
Consider risks of bleeding
• Do these factors outweigh VTE risks?
• Use validated HASBLED tool to support decision making
Senior Review
• Completed at next Consultant review, ideally within 72 hours
• Documentation of discussion in ward round notes
Reassess
•Any transfer back from acute setting, e.g UHL
•If any change in clinical presentation, e.g decreased mobility or fluid intake
•Intercurrent physical illness, e.g chest infection

Other considerations

- If prescribing prophylaxis need:
  - Up to date weight
  - Up to date renal function (dosage is eGFR dependent)
  - A documented review at each consultant ward round with agreement whether to continue or not.
  - If prophylaxis considered appropriate but risk to patient / staff is high then consider anti-embolic stockings.
    - Ensure the stockings are measured correctly as per policy/guidance
  - 6 weekly FBC and coagulation studies to ensure the patient is not developing Heparin-Induced Thrombocytopenia (HIT)
- Offer discharge information to patients and carers re: recognition of DVT/VTE post discharge (risk remains for 6 weeks post a general hospital admission)

Appendix 19 Data Privacy Impact assessment

DATA PRIVACY IMPACT ASSESSMENT SCREENING

Data Privacy impact assessment (DPIAs) are a tool which can help organisations identify the most effective way to comply with their data protection obligations and meet Individual's expectations of privacy. **The following screening questions will help the Trust determine if there are any privacy issues associated with the implementation of the Policy. Answering 'yes' to any of these questions is an indication that a DPIA may be a useful exercise. An explanation for the answers will assist with the determination as to whether a full DPIA is required which will require senior management support, at this stage the Head of Data Privacy must be involved.**			
Name of Document:	**VTE Policy**		
Completed by:	**Lynn MacDiarmid**		
Job title	**Consultant Nurse**		**Date 20th February 2024**
Screening Questions		**Yes / No**	**Explanatory Note**
1. Will the process described in the document involve the collection of new information about individuals? This is information in excess of what is required to carry out the process described within the document.		**No**	
2. Will the process described in the document compel individuals to provide information about them? This is information in excess of what is required to carry out the process described within the document.		**No**	
3. Will information about individuals be disclosed to organisations or people who have not previously had routine access to the information as part of the process described in this document?		**No**	
4. Are you using information about individuals for a purpose it is not currently used for, or in a way it is not currently used?		**No**	
5. Does the process outlined in this document involve the use of new technology which might be perceived as being privacy intrusive? For example, the use of biometrics.		**No**	
6. Will the process outlined in this document result in decisions being made or action taken against individuals in ways which can have a significant impact on them?		**No**	
7. As part of the process outlined in this document, is the information about individuals of a kind particularly likely to raise privacy concerns or expectations? For examples, health records, criminal records or other information that people would consider to be particularly private.		**No**	
8. Will the process require you to contact individuals in ways which they may find intrusive?		**No**	
If the answer to any of these questions is 'Yes' please contact the Data Privacy Team via Lpt-dataprivacy@leicspart.secure.nhs.uk **In this case, ratification of a procedural document will not take place until review by the Head of Data Privacy.**			
Data Privacy approval name:			
Date of approval			