Maidstone and Tunbridge Wells NHS Trust

Ref: FOI/GS/ID 6480

**Please reply to:**
FOI Administrator
Trust Management
Maidstone Hospital
Hermitage Lane
Maidstone, Kent
ME16 9QQ
Email: mtw-tr.foiadmin@nhs.net
www.mtw.nhs.uk

12 January 2021

**Freedom of Information Act 2000**

I am writing in response to your request for information made under the Freedom of Information Act 2000 in relation to the policy for the prevention of blood clots for inpatients.

*You asked:*
*I am aware that the Trust has a policy for the prevention of blood clots for inpatients.*

*Could you please advise me on how to obtain a copy of the policy?*

Trust response:

Please find attached below a copy of the requested policy.

# Venous thromboembolism prevention policy and procedure

| | |
|---|---|
| **Requested/ Required by:** | Thrombosis Committee to comply with NICE Clinical Guidance 92 |
| **Author:** | VTE Lead Nurse |
| **Other contributors:** | Consultant Haematologist |
| **Owner:** | Medical Director |
| **Directorate:** | Corporate |
| **Specialty:** | Venous Thromboembolism (VTE) |
| **Supersedes:** | Venous Thromboembolism Prevention Policy and Procedure, Version 3.0 (June 2013)<br>Venous Thromboembolism Prevention Policy and Procedure, Version 3.1 (April 2014)<br>Venous Thromboembolism Prevention Policy and Procedure, Version 4.0 (May 2016)<br>Venous Thromboembolism Prevention Policy and Procedure, Version 4.1 (September 2016)<br>**The policies below are now incorporated into this policy and have been archived on Q-pulse.**<br>Anti-embolism stockings (AES), Policy and Procedure for the use of, Version 1.0 (February 2013)<br>Intermittent Pneumatic Compression Devices (IPCD), Policy and Procedure for the use of, Version 1.0 (June 2013) |
| **Approved by:** | Thrombosis Committee, 10th March 2016 |
| **Ratified by:** | Policy Ratification Committee, 12th May 2016 |
| **Review date:** | May 2019 [**Extension to June 2021** approved by the Chair of the Thrombosis Committee on 8th December 2020, following the arrangements for extension as set out in the 'Policy and procedure for the production, approval and ratification of Trust-wide policies and procedures ('Policy for policies') - RWF-OPPPCS-NC-CG25] |

This policy has been written for implementation during periods of standard functioning within the Trust. Outside of those periods (such as major incidents or national emergencies) other 'emergency' policies may be written to supersede or run alongside this policy.



**Document history**

| | |
|---|---|
| **Requirement for document:** | • To comply with national guidance on the prevention of venous thromboembolism in hospitalised patients. |
| **Cross references (external):** | 1. NICE. (2010). *Venous thromboembolism: reducing the risk of venous thromboembolism (deep vein thrombosis and pulmonary embolism) in patients admitted to hospital.* NICE Clinical Guidance 92 (2010)<br>2. NICE. (2012). *Venous thromboembolic diseases: the management of venous thromboembolic diseases and the role of thrombophilia testing.* NICE Clinical Guidance 144 (2012)<br>3. Department of Health. (2007). *Report of the independent expert working group on the prevention of venous thromboembolism in hospitalised patients.* London: Department of Health<br>4. Department of Health. (2008). *Risk Assessment for Venous Thromboembolism.* London: Department of Health<br>5. National Patient Safety Agency. (2009). *Patient Safety Alert. WHO Surgical Safety Checklist.*<br>6. The NHS Confederation (2009). *Briefing paper: Reducing Deaths from Blood Clots in Hospitals.* |
| **Associated documents (internal):** | • Acute Stroke Policy and Procedure (RWF-OPPPES-C-SM11)<br>• Blood clots (thrombosis), Preventing hospital acquired [LARGE PRINT LEAFLET] [RWF-OPLF-PES92]<br>• Blood clots (thrombosis), Preventing hospital acquired [STANDARD PRINT LEAFLET] [RWF-OPLF-PES89]<br>• Blood clots (thrombosis), Preventing hospital acquired; information for maternity patients [STANDARD PRINT LEAFLET] [RWF-OPLF-PES90]<br>• Blood clots (thrombosis), Preventing hospital acquired; information for maternity patients [LARGE PRINT LEAFLET] [RWF-OPLF-PES94]<br>• Consent to Examination or Treatment, Policy and Procedure for [RWF-OPPPES-C-SM5]<br>• Medical Devices Policy and Procedure [RWF-OPPPCS-NC-EST2]<br>• Pharmacy anti-coagulation guidance [available on the pharmacy pages of the staff intranet]<br>• Policy and Procedure for the Safe Management of Anticoagulant Therapy [RWF-OPPPCSS-C-CAN3] –<br>• Protocol for the use of Intermittent Pneumatic Compression Devices (IPCD) for patients with Haemorrhagic Stroke (or other contraindication to LMWH) (RWF-OPPM-ES6)<br>• Venous Thromboembolism (VTE) in Pregnancy and Puerperium: prophylaxis, diagnosis and management [RWF-OPPPW&C-C-O&G2]<br>• Venous Thromboembolism (VTE): diagnosis and management in adults policy and procedure [RWF- |

| | |
|---|---|
| | OPPPES-C-SM15] |

| Version control: | | |
|---|---|---|
| **Issue:** | **Description of changes:** | **Date:** |
| 1.0 | First iteration of the policy/procedure | July 2010 |
| 1.1 | Amendment to Appendix 4 Risk Assessment | July 2010 |
| 1.2 | Amendment to Appendix 4 Risk Assessment | January 2011 |
| 2.0 | Revision of the policy/procedure | October 2011 |
| 3.0 | Revision of the policy/procedure | June 2013 |
| 3.1 | Added section 7.9 and appendix 11 to policy/procedure; removed references to NHSLA standards, which have ceased to exist | April 2014 |
| 4.0 | Revision of the policy / procedure<br>Merge of this policy with Anti-embolism stockings P&P and Intermittent Pneumatic Compression Devices P&P | May 2016 |
| 4.1 | Amended appendix table to reflect printed stationary | September 2016 |
| 4.2 | **Extension to June 2021** approved by the Chair of the Thrombosis Committee on 8th December 2020 | December 2020 |

**Policy statement for**

# Venous thromboembolism prevention policy

The purpose of this policy is to ensure that all adult in-patients are appropriately and regularly assessed for risk of venous thromboembolism (VTE) and if appropriate receive VTE prophylaxis according to that risk throughout their stay at Maidstone and Tunbridge Wells NHS Trust (MTW).

Patients admitted to the Trust should have the opportunity to make informed decisions about their care and treatment, in partnership with their health care professionals and the Trust will offer best practice advice on reducing the risk of VTE in patients admitted to hospital.

# Venous thromboembolism prevention procedure

**Contents**

**Page**



**Appendices**

List of **further appendices** – separate documents on Q-Pulse
22

## 1.0 Introduction

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

VTE encompasses a range of clinical presentations. Venous thrombosis is often asymptomatic; less frequently it causes pain and swelling in the leg. Part or all of the thrombus can come free and travel to the lung as a potentially fatal pulmonary embolism. The patient typically suffers chest pain, breathlessness and collapse. Deep vein thrombosis carries a considerable burden of morbidity, including long-term morbidity because of chronic venous insufficiency. This in turn can cause venous ulceration and development of a post-thrombotic limb (characterised by chronic pain, swelling and skin changes). Pulmonary embolism can leave a legacy of pulmonary hypertension.

VTE is an important cause of death in hospital patients, and treatment of non-fatal symptomatic VTE and related long-term morbidities is associated with considerable cost to the health service.

The purpose of this policy is to enable healthcare practitioners at MTW to identify patients at risk of developing VTE and select the appropriate therapy to reduce the associated mortality and morbidity risks associated with this disease.

The diagnosis and treatment of VTE (DVT and PE) is covered in the *MTW Policy and Procedure for the Diagnosis and Management of VTE* and the *MTW Policy and Procedure for the Safe Management of Anticoagulation Therapy*.

## 1.1 Scope

**The policy applies to:**

All those 18 years and older admitted to hospital as inpatients or formally admitted to a hospital for day-case procedures, including:

surgical and medical inpatients
orthopaedic and trauma inpatients
patients admitted to Intensive Care Units
cancer inpatients
people undergoing long-term rehabilitation in hospital
patients admitted to a hospital bed for day-case medical or surgical procedures.

Please note: Appendix 8 - this applies to patients 16 and over and is relevant to both outpatients and inpatients with lower limb casts.

**The policy does not apply to:**

- People younger than 18 years (but please use clinical judgement for teenage inpatients) (exception please see Appendix 8 for lower limb casts)
- People attending hospital as outpatients (exception - please see Appendix 8 for lower limb casts)
- People presenting to emergency departments without admission.
- Elderly or immobile people cared for at home, or in external residential accommodation, unless admitted to hospital.
- Women in pregnancy; a separate policy exists relating to women in pregnancy *(Venous Thromboembolism (VTE) in Pregnancy and Puerperium)*

Patients admitted to hospital with a diagnosis of, or suspected diagnosis of, deep vein thrombosis or pulmonary embolism should follow a treatment plan and not the prophylactic plan. Please refer to the Trust Policy and Procedure for the Diagnosis and Management of VTE and the Trust Policy and Procedure for the Safe Management of Anticoagulation Therapy and this policy.

## 2.0 Definitions

| | |
|---|---|
| **Venous Thromboembolism (VTE)** | Venous thrombosis is a condition in which a blood clot (thrombosis) forms in a deep vein. Blood flow along the affected vein can be limited by the clot, causing swelling and pain. Venous thrombosis most commonly occurs in the 'deep veins' in the leg or pelvis. This is known as a deep vein thrombosis (DVT). An embolism is created if a part or all of the thrombosis in the deep vein breaks off from the site where it is created and travels along the venous system. A leg DVT can travel to the lungs, known as pulmonary embolism (PE). DVT and PE are the most common manifestations of venous thrombosis. Both conditions can be asymptomatic. DVT and PE are known collectively as venous thromboembolism (VTE). |
| **Deep Vein Thrombosis (DVT)** | A thrombosis occurring in a deep vein, most commonly a deep vein of the leg or pelvis but can affect any deep vein. |
| **Pulmonary Embolism (PE)** | If the clot lodges in the lung a very serious condition, pulmonary embolism (PE) arises. |
| **Thromboprophylaxis** | Thromboprophylaxis is the treatment to prevent blood clots forming in veins – this may be chemical or mechanical. |
| **Chemical** | Pharmaceutical agents (oral or parenteral) used to decrease |

| | |
|---|---|
| **thromboprophylaxis** | the clotting ability of the blood. |
| **Mechanical thromboprophylaxis** | Devices including anti-embolism stockings (AES) and intermittent pneumatic compression devices (IPCD) can be used to increase venous blood flow and reduce stasis within the leg veins. |
| **Significantly reduced mobility** | 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. |
| **Major bleeding** | Refers to bleeding events that result in one or more of the following:<br>• death<br>• a decrease in haemoglobin concentration of 2g/dl or more<br>• transfusion of two or more units of blood<br>• bleeding into a retroperitoneal, intracranial or intraocular site<br>• a serious or life-threatening clinical event<br>• a surgical or medical intervention. |
| **Thrombosis** | The Thrombosis Committee was established under the committee auspices of the Medical Director to lead on the prevention, reduction and treatment of VTE. It ensures best practice for the prevention and management of VTE, based on national guidance and other examples of best practice. |

## 3.0 Duties (roles and responsibilities)

- **Chief Executive** has overall responsibility and accountability for the implementation of this policy.
- **Medical Director** has delegated responsibility for the implementation of this policy.
- **Clinical Directors** will be responsible for ensuring that the clinical staff within their area follow this policy. They will also review any audits undertaken to ensure highlighted actions are completed and implemented in a timely manner.
- **VTE Lead Nurse** will be responsible for providing the education and training to assist in the implementation of this policy, ensuring audits are undertaken to monitor the effectiveness of the policy and ensure the policy is revised when necessary.
- **Clinical staff** (Medical/Nursing/Midwifery) will be responsible for undertaking appropriate and timely risk assessments on patients (as detailed in this policy) and entering these onto Patient Centre, as well as ensuring that necessary prophylactic treatment is prescribed as necessary. This applies to all patients admitted whether emergency or planned.

- **Theatre staff** should ensure that the nursing pre-operative checklist is performed ensuring that appropriate VTE risk assessments have been undertaken as necessary. If no appropriate risk assessment has been undertaken the surgical procedure should not proceed unless a life-threatening situation.
- **Pharmacists:** Pharmacists are responsible for checking chemical prophylaxis is appropriately prescribed and administered. Any discrepancies should be recorded in the patient's healthcare record and discussed with the prescriber and / or the patient's medical team.

## 4.0 Training / competency requirements

All medical, nursing and midwifery staff are made aware of the VTE risk assessment tool, thromboprophylaxis and patient information documents in conjunction with this policy at local induction.

Doctors, nurses and midwives will undertake VTE training either through e-learning or the mandatory update study day VTE session and this will be monitored as part of their annual appraisal.

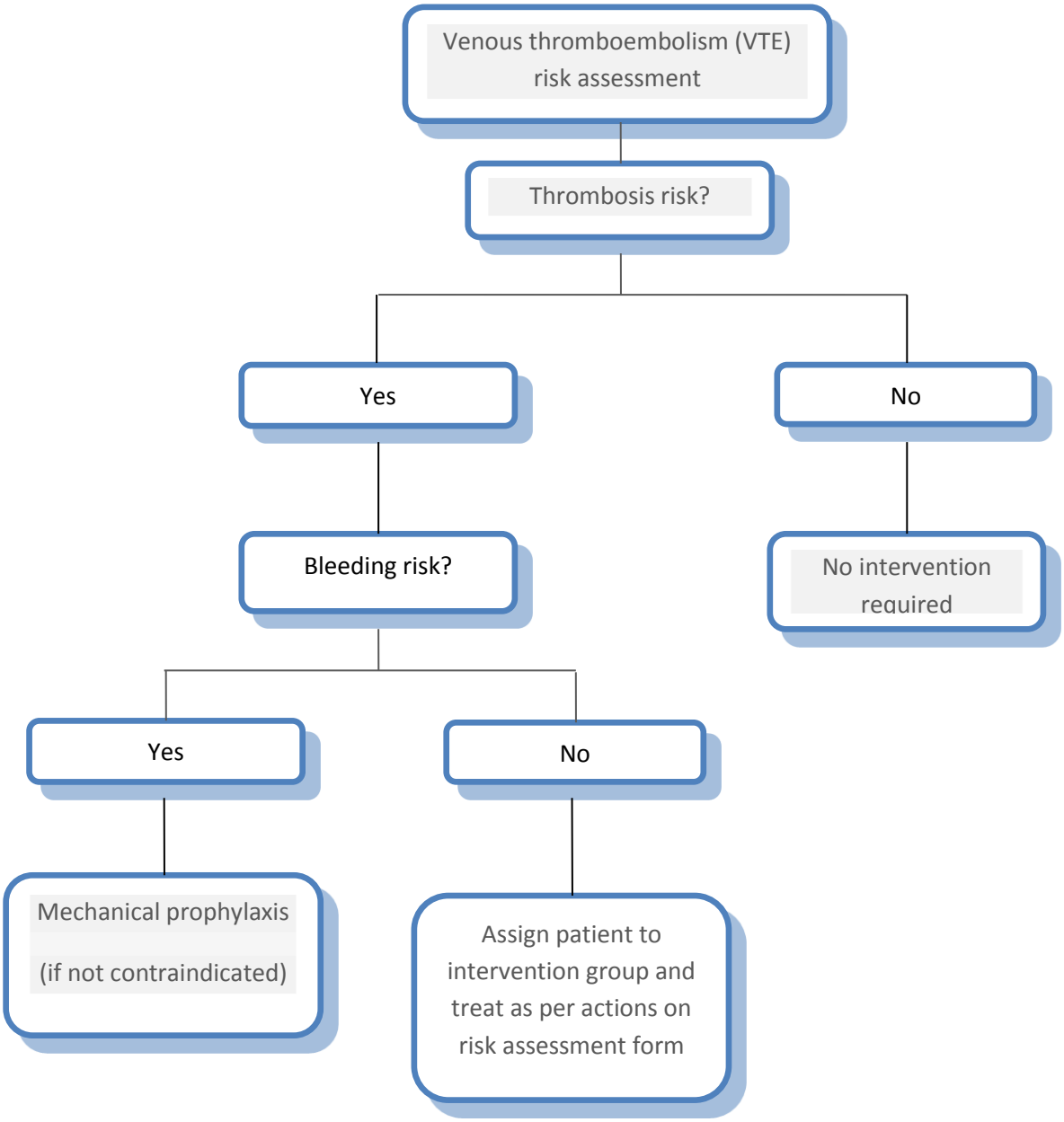
Pharmacists will undertake VTE training either through e-learning or the mandatory update study day VTE session and this will be monitored as part of their annual appraisal.

The above training will be monitored via the AT-Learning training database. The training should take place every two years (see **Appendix 6** for 'Training matrix').

All clinical staff (Medical/Nursing/Midwifery) will be made aware of the AES care pathway, AES patient information and the AES manufacturer's guidelines.
They should receive training in AES and a declaration of their competency should be documented (see **Appendix 11)**.

All clinical staff (medical / nursing / midwifery) will be made aware of the IPCD care pathway and IPCD manufacturer's guidelines. They must receive training in IPCD and a declaration of their competency should be documented. See **Appendix 14 (IPCD competency)**.

## 5.0 Care pathway



## 6.0 Patient risk assessment

- All patients admitted to Maidstone and Tunbridge Wells Trust must be screened within two hours of admission for risk of VTE and considered for thromboprophylaxis using the screening tool. Please refer to the VTE Risk Assessment form: **Appendix 4**.
- All patients must be assessed for risk of bleeding before being offered chemical VTE prophylaxis. Patients with any of the risk factors for bleeding will not be offered chemical prophylaxis unless the risk of VTE outweighs the risk of bleeding. See **Appendix 4**.
- The patient's VTE risk will be recorded on the risk assessment form and if appropriate, thromboprophylaxis (chemical, mechanical or a combination of both) will be commenced. See **Appendix 5** for 'Thromboprophylaxis summary'.
- The risk of VTE and bleeding must be reassessed within 24 hours of admission and whenever the clinical situation changes and treatment adjusted accordingly, taking into account the need for extended thromboprophylaxis in certain cases.
- Treatment must take into account any contraindications to chemical or mechanical therapies. Contraindications must be recorded in the patient's healthcare record.

## 7.0 Thromboprophylaxis

- Treatment should continue until the patient is fully mobile. Extended thromboprophylaxis should be considered in high risk patients (please refer to extended thromboprophylaxis guidelines within VTE risk assessment: see **Appendices 4 -5**).
- All patients who have risk factors for VTE will be prescribed low molecular weight heparin (LMWH) from admission at 22.00 hours unless this is contraindicated.
- Patients who are at risk of VTE but who have an absolute contraindication to LMWH must be prescribed anti-embolism stockings unless contraindicated.
- Pre-operative LMWH should not be given to elective surgical patients unless this has been specifically requested and prescribed by the admitting consultant.
- Trauma list and non-elective surgical patients should where possible be delayed until at least 12 hours after the last dose of LMWH has been administered.
- All patients should be adequately hydrated.
- Patients should be mobilised as early as possible. Patients should be shown how to exercise their legs if they are on bed rest.
- Consider offering temporary inferior vena cava filters to patients who are at very high risk of VTE (such as patients with a previous VTE event or an active malignancy) and for whom mechanical and pharmacological VTE prophylaxis are contraindicated.
- Invasive procedures with a risk of bleeding (e.g. liver biopsy, endoscopy with biopsy) should where possible be delayed until at least 12 hours after the last dose of LMWH has been administered.

### 7.1 VTE prophylaxis in surgical patients

Surgical patients are at high risk if their combined surgical and anaesthetic time is 60 minutes or longer **or** they have any additional risk factor as identified on the MTW VTE risk assessment form. High risk surgical patients should be prescribed LMWH daily as per actions on MTW VTE risk assessment form (see **Appendix 4**) plus AES (unless contraindicated) and/or intermittent pneumatic compression device.

Patients undergoing major cancer surgery in the abdomen or pelvis should continue chemical and mechanical thromboprophylaxis for 28 days post-surgery. Surgical patients with a body mass index of 30 or greater should have extended chemical and mechanical thromboprophylaxis for 7 days post-surgery. Other high risk surgical patients (including day surgery patients) should continue thromboprophylaxis until their mobility is no longer significantly reduced, including after discharge if necessary.

Surgical patients are at low risk if their combined surgical and anaesthetic time is less than 60 minutes **and** they have no additional risk factor. Low risk surgical patients should mobilise early and AES should be considered (unless contraindicated).

If a spinal or epidural anaesthesia is used, additional care must be exercised when placing or removing the catheters. Placement should be delayed until at least 12 hours after the last LMWH dose to avoid bleeding complications at the catheter site. Presence of a spinal or epidural catheter is not a contraindication to LMWH use. At the discretion of the anaesthetist, LMWH may be started immediately after the catheter is removed, or immediately after a regional block.

For patients booked on the emergency theatre list, there needs to be a 12 hour gap between chemical thromboprophylaxis and spinal anaesthetic. Therefore consideration must be given to the timing of the pre-operative dose, i.e. this should be prescribed at 20.00 hours on the evening pre-surgery as a stat dose with the 22.00 dose cancelled. Thromboprophylaxis must not simply be omitted.

### 7.2 Thromboprophylaxis for orthopaedic patients

Unless contraindicated, patients admitted for elective hip or knee replacement should have mechanical VTE prophylaxis which should continue until the patient's mobility is no longer significantly reduced. The patient should be commenced on chemical thromboprophylaxis 6-10 hours post operatively. This should continue for 35 days for hip replacements and 14 days for knee replacements. Each patient should be reviewed on a case by case basis. Hip fracture patients should be prescribed LMWH daily as per actions on MTW VTE risk assessment form (see **Appendix 4**) plus AES (unless contraindicated) and/or intermittent pneumatic compression device. Thromboprophylaxis should be continued for 28 days. Please see **Appendix 5** for summary of extended thromboprophylaxis for specific orthopaedic surgery.

It is acceptable to reduce thromboprophylaxis to 2,500 units subcutaneous daily for trauma patients with a weight of 49kg or under.

For patients booked on the orthopaedic trauma list, there needs to be a 12 hour gap between chemical thromboprophylaxis and spinal anaesthetic. Therefore consideration must be given to the timing of the pre-operative dose, i.e. this should be prescribed at 20.00 hours on the evening pre surgery as a stat dose with the 22.00 dose cancelled. Thromboprophylaxis must not simply be omitted.

### 7.3 VTE prophylaxis in medical patients

Patients expected to have ongoing reduced mobility plus one or more risk factors and no contraindications identified should be prescribed LMWH daily as per actions on the MTW VTE risk assessment form.

Patients who have a bleeding risk or an absolute contraindication to LMWH must be prescribed AES instead unless contraindicated. If AES also contraindicated (e.g. acute stroke patients) then an intermittent compression device should be considered.

Please see **Appendix 7** for guidance on thromboprophylaxis for patients with a bleed or suspected bleed.

### 7.4 VTE prophylaxis in acute stroke patients

Patients admitted with an acute stroke should have a VTE risk assessment on admission. LMWH should be withheld until CT imaging has excluded a haemorrhage and the size of any infarct has been able to be assessed. Once haemorrhage has been excluded and the patient has been reviewed by the stroke/medical consultant to assess the size of the infarct, the VTE risk assessment should be repeated within 24 hours. Unless there are further contraindications, prophylactic LMWH should be prescribed within the first 72 hours of admission. Care should be taken if there are large territorial infarcts, if there is a risk of haemorrhagic transformation or if there is a high risk of intra or extra cranial haemorrhage (this decision will be made the Stroke Consultant).Patients who have received thrombolysis should not be prescribed LMWH until they have undergone a follow up CT brain imaging after 24 hours. A second VTE risk assessment should take place following the repeat CT head scan. It is expected that the majority of patients will be able to commence VTE chemical prophylaxis following this assessment but there will be some patients where this will not be appropriate due to possible post thrombolysis complications such as haemorrhagic conversion or due to the size or location of the established infarct. These patients should be reviewed by the responsible stroke consultant for a decision and future management in relation to VTE prevention including consideration of using IPCD after the initial 12 hours if not already commenced. This decision will be documented in the patient's record.

All patients with a bleeding risk e.g. haemorrhagic stroke or other contraindication to LMWH and who have reduced mobility **must** be assessed for the use of an intermittent pneumatic compression device (IPCD) using the IPCD proforma (see **Appendix 15).** All patients commenced on the IPCD's must have the care plan completed within the stroke integrated care pathway document. Any removal of the IPCDs for anything other than physical therapy or brief inspection and care of the legs for longer than 2 hours must be documented on the IPCD monitoring sheet within the stroke integrated care

pathway. If the IPCD have been left off for more than 2 hours the patient's legs must be checked carefully for any signs of DVT before reapplying IPCD. Please see Acute Stroke Policy and Procedure for stroke integrated care pathway.

If the use of an IPCD is indicated the IPCD will be prescribed on the patient's prescription chart by the doctor or appropriate non-medical prescriber. Do NOT offer AES for VTE prophylaxis to patients who are admitted for stroke.

### 7.5 VTE prophylaxis in cancer patients

Definition: active cancer should be considered to be:

1. A diagnosis of cancer (other than basal cell or squamous cell carcinoma of the skin) within the previous six-month period
2. Any treatment for cancer within the previous six-month period
3. Recurrent or metastatic cancer

7.5.1 Patients with active cancer should receive thromboprophylaxis throughout their hospital admission unless contraindicated.

7.5.2 Extended surgical thromboprophylaxis should be offered to those requiring surgery for the management of abdominal and pelvic cancer (NICE 2010).

7.5.3 Thromboprophylaxis is not routinely recommended to prevent catheter-related thrombosis.

Please refer to the Cancer Thrombosis Guideline within the Policy and Procedure for the Safe Management of Anticoagulant Therapy for further information.

### 7.6 VTE prophylaxis in end of life patients

Patients in palliative care, who have potentially acute reversible pathology, should be considered for LMWH. However, if the patient is in terminal care or on an end-of-life care pathway, pharmacological or mechanical VTE prophylaxis should not routinely be offered. In both cases, decisions about VTE prophylaxis should be reviewed daily, taking into account potential risks and benefits and views of the patient, family and/or carers and multidisciplinary team.

### 7.7 Patients already on anti-platelet or anticoagulant therapy

Consider offering additional mechanical or pharmacological VTE prophylaxis if the patient is at risk of VTE. Take into account the risk of bleeding and of co-morbidities such as arterial thrombosis.

**If the risk of VTE outweighs the risk of bleeding**, consider offering pharmacological VTE prophylaxis according to the reason for admission.
**If the risk of bleeding outweighs the risk of VTE**, offer mechanical VTE prophylaxis.

Do not offer additional pharmacological or mechanical VTE prophylaxis to patients who are taking vitamin K antagonists (warfarin) and who are within their therapeutic range, or direct oral anticoagulants (rivaroxaban, apixaban, dabigatran, edoxaban), providing anticoagulant therapy is continued.

Do not offer additional pharmacological or mechanical VTE prophylaxis to patients who are having full anticoagulant therapy (for example, Fondaparinux sodium, LMWH or UFH).

### 7.8 VTE prophylaxis in pregnancy and up to six weeks post-partum

**Please refer to separate policy for Obstetrics:** Maidstone and Tunbridge Wells NHS Trust. *Venous Thromboembolism (VTE) in Pregnancy and Puerperium*

### 7.9 Lower limb immobilisation and LMWH

Immobilisation is defined as rigid immobilisation in plaster or fibre-glass. This specifically excludes removable devices such as walking boots or cricket-pad splints as there is no evidence for VTE prophylaxis in these patients. There is no evidence for VTE prophylaxis in upper limb injuries.

The use of prophylactic LMWH is effective at reducing incidence of VTE in ambulatory patients with lower limb immobilisations. If commenced, prophylactic LMWH should be given for the duration of immobilisation. The use of LMWH is associated with low rates of heparin induced thrombocytopenia (HIT) and major bleeding when used for thromboprophylaxis in ambulatory patients with cast immobilisation.

See **Appendix 8** for the *Lower limb immobilisation and LMWH pathway.*

## 8.0 Patient information and consent

Treatment and care should take into account patients' needs and preferences. People admitted to hospital should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. If patients do not have the capacity to make decisions, healthcare professionals should follow the Policy and Procedure for Consent to Examination or Treatment written with regard to the Department of Health's advice on consent and the Mental Capacity Act.

Good communication between healthcare professionals and patients is essential. It should be supported by evidence-based written information tailored to the patient's needs. Treatment and care, and the information patients are given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English.

All patients admitted to hospital will receive a patient information document, produced by the Trust, relating to the prevention of thromboembolism, i.e. one of the following:

- *Blood clots (thrombosis), Preventing hospital acquired* [STANDARD PRINT LEAFLET] [RWF-OPLF-PES89]
- *Blood clots (thrombosis), Preventing hospital acquired* [LARGE PRINT LEAFLET] [RWF-OPLF-PES92]
- *Blood clots (thrombosis), Preventing hospital acquired; information for maternity patients* [STANDARD PRINT LEAFLET] [RWF-OPLF-PES90]
- *Blood clots (thrombosis), Preventing hospital acquired; information for maternity patients [LARGE PRINT LEAFLET]* [RWF-OPLF-PES94]

This information will be used to obtain verbal consent from the patient allowing healthcare staff to assess and where necessary provide prophylactic treatment to the patient to reduce the risk of VTE.

Ward medical and nursing staff must be completely familiar with the patient information provided, enabling them to answer general questions that may arise while obtaining verbal consent.

## 9.0 Discharge

On discharge, all patients and/or their families / carers will be informed of the signs and symptoms of DVT and PE and the importance of seeking medical help if this is suspected.

If discharged with VTE prophylaxis (pharmacological and/or mechanical), patients and/or their families or carers will be given verbal and written information on the correct use and duration of VTE prophylaxis at home and who to contact if problems occur.

If VTE prophylaxis is either pharmacological or mechanical, the patient and/or their family should be shown how to use it. The patient's GP must be notified that the patient is being discharged with VTE prophylaxis.

Patients should be advised to wear their anti-embolism stockings until they regain their usual mobility or longer if advised. When patients are discharged with anti-embolism stockings, it should be ensured that they are able to remove and replace the stockings for daily hygiene needs or that they have someone who can do this for them. Patients should also be informed to check for skin marking, blistering or discolouration, particularly over heels and bony prominences.

## 10.0 Anti-embolism stockings (AES)

Anti-embolism stockings (AES) exert graduated circumferential pressure from distal (below knee) to proximal (above knee) regions of the leg. They work to help prevent the formation of thrombosis (blood clot) by promoting increased blood flow velocity in the leg veins by compression of the deep venous system, and by reducing venous dilatation.

One of the purposes of this Policy is to ensure that anti-embolism stockings are correctly supplied, applied and utilised, and that their use is not contraindicated.

Correctly applied, in the absence of contra-indications, anti-embolism stockings are a safe and non-invasive therapy for reducing the incidence of venous thromboembolism by the promotion of venous blood flow.

Anti-embolism stockings can be used as a therapy on their own or as an adjunct to low molecular weight heparin in patients who have been clinically assessed as having a risk of venous thromboembolism. AES can be used in conjunction with IPCD.

It is important to ensure safe application through assessment, measurement and application to ensure patients receive the correct management.

Patients should be informed of decisions about their care and treatment.

### 10.1 Indications for AES

Indication for use of AES - All patients admitted to hospital are eligible for anti-embolism stockings as part of their thromboprophylaxis based on an up to date VTE risk assessment.

Surgical patients: All surgical patients with a risk of VTE (unless anti-embolism stockings contraindicated).

Medical patients: Medical patients with a risk of VTE and for whom anticoagulation therapy (chemical thromboprophylaxis) is contraindicated (unless anti-embolism stockings are also contraindicated).

Obstetric patients: All obstetric patients with a risk of VTE (unless anti-embolism stockings are contraindicated).

**Patients admitted to hospital with a diagnosis of, or suspected diagnosis of, deep vein thrombosis or pulmonary embolism should follow the Policy and Procedure for Diagnosis and Management of VTE and not this prophylactic plan.**

### 10.2 Contraindications for AES

- Acute stroke patients
- Patients with suspected or confirmed peripheral arterial disease
- Patients who are receiving high dose vasopressor inotropes
- Patients with severe dermatitis
- Patients with very fragile 'tissue paper' skin
- Patients who have recently undergone skin grafting
- Patients with an allergy to the stocking fabric
- Patients with peripheral neuropathy
- Patients with cardiac failure
- Patients with massive leg oedema
- Patients who have an unusual leg size or shape or deformity preventing correct fit
- Venous ulcers or wounds

### 10.3 Caution for use of AES

Use caution in patients with sensory impairment e.g. patients undergoing mechanical ventilation, sedated patients or those with an epidural – check skin integrity twice daily.

Use caution in patients with diabetes mellitus and assess for sensory impairment.

### 10.4 Pre requisites for practitioners

Registered Nurse / Midwife / Doctor with appropriate training and experience.

Clinical Support Workers (CSW) with appropriate training and experience.

Student nurse / midwife under the supervision of a registered nurse / midwife.

Use in accordance with manufacturer's guidelines.
Please see **Appendix 9** for standard operating procedure (SOP) for the use of AES. Please see **Appendix 10** for care plan for a patient with AES.

## 11.0 Intermittent pneumatic compression devices (IPCD)

Intermittent pneumatic compression devices (IPCD) work by augmenting venous blood flow velocity, thus reducing venous stasis and by enhancing early fibrinolytic activity to reduce the risk of clot formation.

The garments, which can be either leg sleeves or foot cuffs, compress the limbs to enhance venous blood movement. After the compression and then release, the controller waits for a period of time before the next compression is initiated.

Correctly applied, in the absence of contra-indications, intermittent pneumatic compression devices are a safe and non-invasive therapy for reducing the incidence of venous thromboembolism by the promotion of venous blood flow.

Intermittent pneumatic compression devices are useful as a therapy on their own in VTE prevention for both medical and surgical patients where there is an identified risk of VTE together with a risk of bleeding. They can be also used as an adjunct to low molecular weight heparin in patients who have been clinically assessed as having a risk of venous thromboembolism. IPCD can be used in conjunction with AES.

It is important to ensure safe application through assessment, measurement and application to ensure patients receive the correct management.

Patients should be informed of decisions about their care and treatment and their consent obtained prior to use wherever possible. This should be documented in the healthcare record

### 11.1 Indications for use of IPCD

Indication for use of IPCD - All patients admitted to hospital are indicated for (and eligible for) intermittent pneumatic compression devices as part of their thromboprophylaxis based on an up to date VTE risk assessment.

#### 11.1.1 Surgical patients

IPCD are used widely within the operating department for surgical patients with a risk of VTE who will be on the operating table for 30 minutes or more (unless IPCD contraindicated), either alone or in conjunction with chemical thromboprophylaxis and/or another form of mechanical thromboprophylaxis, for example anti-embolism stockings.

IPCD are also used in the immediate post-operative period (unless IPCD contraindicated), particularly in orthopaedic hip and knee joint replacements, gynaecology surgery and obstetric caesarean section surgery, either alone or in conjunction with chemical thromboprophylaxis and/or another form of mechanical thromboprophylaxis, for example anti-embolism stockings.

#### 11.1.2 General medical patients

IPCD are indicated for medical patients with a risk of VTE, where both anticoagulation and anti-embolism stockings are contraindicated (unless IPCD are also contraindicated).

#### 11.1.3 Acute stroke medical patients

Please refer to earlier section on acute stroke patients (7.4).

**Patients admitted to hospital with a diagnosis of, or suspected diagnosis of, deep vein thrombosis or pulmonary embolism should follow the Policy and Procedure for the Diagnosis and Management of**

**VTE. IPCD should not be applied until resolution of the clot has been confirmed with diagnostic testing. The time frame for this is individual to each patient.**

### 11.2 Contraindications for use of IPCD

- Patients with an acute or suspected DVT or PE (see above)
- Patients with suspected or confirmed peripheral arterial disease
- Patients with severe dermatitis
- Patients with a leg wound
- Patients with very fragile 'tissue paper' skin
- Patients who have recently undergone skin grafting
- Patients with an allergy to the fabric of the sleeve
- Patients with peripheral neuropathy
- Patients with massive oedema of the legs or pulmonary oedema from congestive heart failure
- Patients who have an unusual leg size or shape or deformity preventing correct fit

This is not an exhaustive list.

### 11.3 Cautions for the use of IPCD

Use caution in patients with sensory impairment e.g. patients undergoing mechanical ventilation, sedated patients or those with an epidural – check skin integrity twice daily.

Use caution in patients with diabetes mellitus and assess for sensory impairment.

Use caution in patients who are receiving high dose vasopressor inotropes.

### 11.4 Pre-requisites for practitioners

- Registered nurse / midwife / doctor with appropriate training and experienced

  Clinical Support Workers (CSW) with appropriate training and experience.
- Student nurse / midwife under the supervision of a registered nurse / midwife.
- Use in accordance with manufacturer's guidelines
- See **Appendix 14 (IPCD competency)**.

Please see **Appendix 12** for standard operating procedure (SOP) for the use of IPCD. Please see **Appendix 13** for care plan for a patient with IPCD.

### 12.0 Monitoring and audit

- Completion of VTE risk assessments will be entered onto the Patient Administration System and data is extracted and available daily. Retrospective periods can also be viewed. Data is submitted via Unify as required by the Department of Health.
- Audits of VTE risk assessment and thromboprophylaxis will be undertaken and data submitted to local commissioners if requested. Frequency of audits will be determined by the Thrombosis Committee. Auditors will vary, audits may be delegated to directorates to complete or completed centrally by the VTE Lead Nurse.

- Other formal audits of VTE risk assessment and thromboprophylaxis may be undertaken with support from the audit department.
- Random spot check audits will be carried out ad hoc to ensure that VTE risk assessment, prescription of chemical thromboprophylaxis and data capture processes are being followed. The results of which will be shared appropriately.
- Information from formal audits and the data capture will be reported at ward level and to the Directorates, Thrombosis committee and trust executives.
- The VTE Prevention policy and procedure document will be reviewed every three years.

All hospital acquired VTE incidents should be reported either verbally to the VTE Lead Nurse or by using the e-reporting system. Investigation and root cause analysis (RCA) will be undertaken on all hospital acquired VTE incidents. Actions arising from VTE RCA and / or VTE serious incident investigations will be added to the VTE trust wide action plan. **12.1**

**APPENDIX ONE**

**Process requirements**

**1.0 Implementation and awareness**

- Once ratified the document lead or author will submit this policy/procedural document to the Clinical Governance Assistant who will activate it on the Trust approved document management database on the intranet, under 'Trust policies, procedures and leaflets'.
- A monthly publications table is produced by the Clinical Governance Assistant which is published on the Trust intranet under "Policies"; notification of the posting is included on the intranet "News Feed" and in the Chief Executive's newsletter.
- On reading of the news feed notification all managers should ensure that their staff members are aware of the new publications.
- The policy will be disseminated to all clinical staff and ward areas.
- The policy/procedure will be launched via cascade through directorate nurse managers.

**2.0 Review**

This policy/procedure will be reviewed once every three years, as a minimum; however, if changes in legislation or Trust practice require, amendments will be made following Trust consultation and approval procedures.

**3.0 Archiving**

The Trust approved document management database on the intranet retains all superseded files in an archive directory (obsolete register) in order to maintain document history.

**APPENDIX TWO**

**CONSULTATION ON: Revision of the** Venous Thromboembolism Prevention Policy and Procedure combining with the Anti-embolism Stocking policy and procedure and the Intermittent Pneumatic Compression Device policy and procedure

**Consultation process** – Use this form to ensure your consultation has been adequate for the purpose.

**Please return comments to:** VTE Lead Nurse

**By date:** 9th March 2016

| Job title: | Date sent | Date reply received | Modification suggested? Y/N | Modification made? Y/N |
|---|---|---|---|---|
| Chief Nurse | | | | |
| Deputy Director of Nursing (Deputy Chief Nurse) | | | | |
| ADNS | | | | |
| Matrons | | | | |
| Ward / Theatre Managers | | | | |
| Head of Quality and Governance | | | | |
| Senior Nurses Practice Development | | | | |
| Thrombosis Committee | 01/03/16 | Discussed at meeting | N | |
| Medical Director | | | | |
| Standards Committee (no longer exists) | | | | |
| Patient Safety and Risk Manager | | | | |
| The role of those staff being consulted upon as above is to ensure that they have shared the policy for comments with all staff within their sphere of responsibility who would be able to contribute to the development of the policy. | | | | |

The Thrombosis Committee has representation from all directorates except paediatrics. The revision and merger of these three policies was managed under the Thrombosis Committee. Separate sections were discussed with the relevant departments e.g. surgical section discussed at a surgical clinical governance meeting, stroke section discussed with all stroke consultants. The AES and IPCD sections were discussed with the relevant company representatives.

## APPENDIX THREE

**Equality Impact Assessment**

In line with race, disability and gender equalities legislation, public bodies like MTW are required to assess and consult on how their policies and practices affect different groups, and to monitor any possible negative impact on equality. The completion of the following Equality Impact Assessment grid is therefore mandatory and should be undertaken as part of the policy development and approval process.

| | |
|---|---|
| **Title of Policy or Practice** | Venous Thromboembolism Prevention Policy and Procedure |
| **What are the aims of the policy or practice?** | To ensure that all inpatients are appropriately and regularly assessed for risk of venous thromboembolism (VTE) and treated according to that risk throughout their stay at MTW. Patients admitted to the Trust should have the opportunity to make informed decisions about their care and treatment, in partnership with their health care professionals and the Trust will offer best practice advice on reducing the risk of VTE in patients admitted to hospital. |
| **Identify the data and research used to assist the analysis and assessment** | NICE Guidance, VTE Exemplar Centres |
| **Analyse and assess the likely impact on equality or potential discrimination with each of the following groups.** | **Is there an adverse impact or potential discrimination (yes/no).<br>If yes give details.** |
| Males or Females | N |
| People of different ages | Policy does not apply to those under the age of 18 - based on NICE guidance |
| People of different ethnic groups | N |
| People of different religious beliefs | N |
| People who do not speak English as a first language | N interpreting services available; leaflets to be made available in different languages |
| People who have a physical disability | N |
| People who have a mental disability | N |
| Women who are pregnant or on maternity leave | N |
| Single parent families | N |
| People with different sexual orientations | N |
| People with different work patterns (part time, full time, job share, short term contractors, employed, unemployed) | N |
| People in deprived areas and people from different socio-economic groups | N |
| Asylum seekers and refugees | N |
| Prisoners and people confined to closed institutions, community offenders | N |
| Carers | N |
| **If you identified potential discrimination is it minimal and justifiable and therefore does not require a stage 2 assessment?** | N |
| **When will you monitor & review the EIA?** | Alongside this policy/procedure when it is reviewed. |
| **Where do you plan to publish the results of your Equality Impact Assessment?** | As Appendix 3 of this policy/procedure on the Trust document management database (on Intranet, under 'Trust policies, procedures and leaflets'). |

## FURTHER APPENDICES

The following appendices are published as related links to the main policy /procedure on the Trust approved document management database on the intranet (Trust policies, procedures and leaflets):

| No. | Title | Unique ID |
|---|---|---|
| 4 | VTE risk assessment form<br>*This document is a proof of printed stationary which should only be accesses in hard copy from clinical areas.* | RWF-OWP-APP220 |
| 5 | Thromboprophylaxis summary | RWF-NUR-NUR-GUI-1 |
| 6 | Training matrix | RWF-OWP-APP226 |
| 7 | Guideline for thromboprophylaxis and patients with a bleed or suspected bleed | RWF-OPG-ES7 |
| 8 | Lower limb immobilisation and LMWH pathway | RWF-OPPM-ES8 |
| 9 | Standard operating procedure for the use of AES | RWF-NUR-NUR-GUI-2 |
| 10 | Care plan for a patient with AES | RWF-OPF-ES-C-SM2 |
| 11 | AES competency | RWF-OPF-ES-C-SM1 |
| 12 | Standard operating procedure for the use of IPCD | RWF-NUR-NUR-GUI-3 |
| 13 | Care plan for a patient with IPCD | RWF-OPF-ES-C-SM4 |
| 14 | IPCD competency | RWF-OPF-ES-C-SM3 |
| 15 | Protocol for the use of IPCD for patients with haemorrhagic stroke | RWF-OPPM-ES6 |
| 16 | IPCD sizing chart for leg sleeves | RWF-OPG-ES5 |
| 17 | IPCD with leg sleeves ‘Quick Guide’ | RWF-OPPM-ES4 |
| 18 | IPCD with leg sleeves ‘User Manual’ | RWF-OPPM-ES3 |
| 19 | IPCD sizing chart for foot cuffs | RWF-OPG-ES4 |
| 20 | IPCD with foot cuffs ‘User Manual’ | RWF-OPPM-ES5 |
| 21 | IPCD trouble shooting guide | RWF-OPG-ES6 |
| 22 | Patient leaflet: Kendall / SCD Express - Sequential Compression System (Covidien) | RWF-OPLF-PES115 |