## Venous Thromboembolism Prophylaxis Policy

<table>
<thead>
<tr>
<th>Policy number</th>
<th>CNP 765</th>
<th>Version</th>
<th>2a</th>
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<tbody>
<tr>
<td><strong>Author</strong></td>
<td>Caroline Davies – Practice Educator</td>
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<td>Caroline Terry – Practice Educator</td>
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<td><strong>Approved by</strong></td>
<td>Senior Clinicians Forum</td>
<td><strong>Date approved</strong></td>
<td>18/06/2010</td>
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<td>July 2010</td>
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<tr>
<td><strong>Target audience</strong></td>
<td>All clinical staff</td>
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### Related documents
This document must be read in conjunction with the following NHS Wiltshire policies:

- Guideline for the Prevention healed Pressure Ulcers for Patients who are prescribed anti-embolic stockings
- Medicine Management Policy
- Infection Control Policies
- Risk Management Policy & Procedure
- Royal Marsden Manual of Clinical Procedures
- Training Needs Analysis
- Thromboprophylaxis during pregnancy and after vaginal delivery.

### Equality & diversity
This policy has had an impact assessment against race, disability, gender, age, sexual orientation and religion and belief equality and diversity criteria in line with current legislation and the requirements of the Single Equality Scheme.

Wiltshire Community Health Service is the arm’s-length provider body of Wiltshire PCT and is wholly owned by and accountable to Wiltshire PCT.
## Consultation route

<table>
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<tr>
<th>Date of Issue</th>
<th>Version</th>
<th>Distribution</th>
<th>Amendments</th>
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<tr>
<td>20/03/09</td>
<td>1</td>
<td>Anne Kennedy Clinical Director</td>
<td>Formatting issues addressed, flow chart developed</td>
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<tr>
<td>14/05/09</td>
<td>1</td>
<td>Governance &amp; Risk Committee</td>
<td>Various comments received re flow and formatting. Approved.</td>
</tr>
<tr>
<td>23/06/09</td>
<td>1</td>
<td>Dr Steve Rowlands</td>
<td>Review of patients not at risk every 72 hours and those at risk reassess weekly</td>
</tr>
<tr>
<td>09/07/09</td>
<td>1</td>
<td>Governance &amp; Risk Committee</td>
<td>Applies to all adult patients, mention maternity have their own separate policy. Ratified.</td>
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<tr>
<td>11/02/10</td>
<td>1a</td>
<td>Anne Kennedy Director of Nursing</td>
<td>Additions to Appendix 1, Risk Assessment.</td>
</tr>
<tr>
<td>June 2010</td>
<td>2, Draft 1</td>
<td>Caroline Davies, Practice Educator</td>
<td>Addition of 2010 NICE guidance, risk assessment completion timescale in Section 3, other significant amendments throughout, including appendices. Addition of Appendix 4.</td>
</tr>
<tr>
<td>June 2010</td>
<td>2, Draft 2</td>
<td>Jane Ingham, MIU, MIU and OPD Manager</td>
<td>Addition of MIU information to Section 8 and Appendix 2b.</td>
</tr>
<tr>
<td>June 2010</td>
<td>2, Draft 3</td>
<td>Sam Boobier, Deputy Director of Nursing and AHPs</td>
<td>Approved</td>
</tr>
<tr>
<td>September 2010</td>
<td>2a</td>
<td>Julie Brown, Senior Matron</td>
<td>Update of Appendix 2b. Amendment of risk assessment requirement wording in Sections 4, 5 and flowchart.</td>
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1 INTRODUCTION

Wiltshire Community Health Services is committed to protecting patients from harm and must reflect the most up-to-date, evidence-based practice in ensuring best clinical outcomes for patients. This policy is based on the most up-to-date NHS guidance.

The All Party Parliamentary Group reported that in 2005, there were up to 25,000 preventable deaths due to hospital acquired venous thromboembolism (VTE) (House of Commons 2005). The report recommended that every hospital patient should have their own risk assessment for VTE that will improve patient safety and help save thousands of lives each year. This was supported by the NICE guidelines CG 92 Venous thromboembolism reducing the risk (2010).

This policy aims to ensure that all adult patients seen by Wiltshire Community Health Services staff are offered appropriate assessment, protection and advice relating to an increased risk of venous thromboembolism.

2 PURPOSE/SCOPE

The purpose of this policy is to ensure that the appropriate level of prophylaxis for the prevention of Thromboembolism is offered to all adult patients who are at risk of embolism taking into account the patient’s individual clinical situation.

To provide guidance for all clinical staff working in Wiltshire Community Health Services who have responsibility to give accurate advice to patients.

This policy applies across in-patients settings, neighbourhood teams, and minor injuries units, and excludes maternity services who have their own separate policy.
Thromboembolism Prophylaxis Flow Chart

Risk assessment completed, signed and dated within 12 hours of admission, ideally within 6 hours.

Is patient at risk?

YES

Medical Officer to decide upon treatment
ie. drug therapy
Anti-embolic stockings

Drug therapy
Yes

Anti-embolic stockings
Yes

Drugs prescribed/administered as per NICE Guidance

Re-assess patient after 24 hours and then weekly, document, sign and date patient’s notes

NO

In-patients re-assess every 72 hrs. Community re-assess as clinical condition changes document, sign and date patient’s notes

Assess patient for suitability
Anti-embolic stockings

If 1 or more symptoms from list (P.9)
Doppler test to be carried out

Less than 0.8 ABPI
DO NOT apply stockings
Inform medical Officer
Refer to TV Service

Above 0.8 ABPI
Measure limb
Apply prescribed Stockings
Supply patient Leaflet
4 KEY PRINCIPLES

- To deliver best practice with the intention of prevention of venous thromboembolism (VTE).
- All patients will have a risk assessment, completed, signed and dated within 12 hours of admission, ideally within 6 hours, on admission to case loads and wards to identify patients who are at potential risk of VTE.
- Application of this policy will reduce the adverse clinical impact to patients.
- Ensure provision of appropriate advice and support regarding the risk of VTE to patients and their relatives during their stay and prior to discharge.
- Ensure all incidences of VTE are recorded via the Trust risk management process and are subject to a root cause analysis investigation. Patient deaths as a result of embolism will be reported as Serious Untoward Incidents.

5 DUTIES

Registered Nursing/Allied Health Professional Staff

All registrants have a responsibility to ensure: NICE clinical guidance 92 (2010), NPSA (2007), DH (2005), Pratt et al (2007), NMC (2008) are followed in that:

- Patients have a holistic assessment on admission, which is documented, dated and signed.
- Patients have a specific risk assessment for Venous Thromboembolism (VTE) completed, signed and dated within 12 hours of admission, ideally within 6 hours.
- The responsible Medical Officer is informed of results of the VTE risk assessment.
- Safe administration of prescribed treatment as per Medicines Management Policy.
- Patients are assessed correctly for suitability for anti-embolic stockings and if suitable can be measured and have stockings applied, if arterial impairment is suspected a Doppler assessment must be completed and medical advice sought.
- Competency in Doppler assessment is maintained.
- In-patients and community patients commenced on prophylaxis must be reassessed after 24 hours.
- Patients on prophylaxis must have their VTE risk re-assessed weekly.
- For in-patients deemed not at risk of developing VTE risk must be reassessed every 72 hours.
- Community patients deemed not at risk of VTE must be reassessed as their clinical condition changes.
- Infection Prevention and Control procedures are followed.
- Any cases of VTE are reported immediately via the Trust’s risk management system using RM1 form.
- All deaths attributed to VTE to be reported as a Serious Untoward Incident.

Medical Staff

- To be aware of the Venous Thromboembolism risk assessment results.
- To prescribe appropriate pharmacological treatment and order anti-embolic stockings if required.
• To review patients on a regular basis as per policy and at the request of nursing/allied health professional staff.
• Report any cases of VTE immediately via Trust’s risk management system using RMI form.
• All deaths attributed to VTE to be reported as a Serious Untoward Incident.

6 RESEARCH EVIDENCE

There is much evidence to demonstrate that the use of appropriate thromboprophylaxis significantly reduces death as a result of VTE. Thromboprophylaxis is the prevention of clots forming in the veins which can be achieved in three ways: non-mechanical (pharmacological) thromboprophylaxis, mechanical thromboprophylaxis (anti-embolism stockings), or a combination of both.

NICE produced clinical guideline 92 in January 2010 which is a culmination of all previous research and now stipulates that all patients admitted to hospital will be risk assessed for their potential to develop a VTE. (It builds on the advice in National Institute for Health and Clinical Excellence (NICE) clinical guidance no. 46. ‘Venous thromboembolism: Reducing the risk of venous thromboembolism (deep vein thrombosis and pulmonary embolism) in inpatients undergoing surgery (2007).) NICE recommended that all patients should:

• Be assessed for their risk factors for venous thromboprophylaxis (VTE)
• Before surgery be given written and verbal information on the risks of VTE, effectiveness of prophylaxis
• Be given prophylaxis for VTE appropriate for their risk factors and the type of surgery involved
• On discharge be given written information about the signs and symptoms of VTE and the type of prophylaxis to be continued at home.
• Where possible empower patients to undertake their own VTE prophylaxis ie. administering their own heparin and managing their anti-embolism stockings using Royal Marsden guidelines as a teaching aid.

National Patient Safety Agency. Patient safety alert no. 18. ‘Actions that can make anticoagulant therapy safer.’ (2007) This guideline recommends that:

• All staff caring for patients on anticoagulant therapy have the necessary work competences. Any gaps in competence must be addressed through training to ensure all staff may undertake their duties safely.

• Ensure that patients prescribed anticoagulant therapy receive appropriate written and verbal information

(Department of Health (2007), ‘Report of the independent expert working group on the prevention of venous thromboembolism in hospitalised patients. This guideline recommends that:

• A documented mandatory VTE risk assessment of every hospitalised patient is completed on admission.

• All medical patients should be considered for thromboprophylaxis measures)
7 DEFINITIONS

Venous thromboembolism (VTE)

VTE is a condition in which a blood clot (thrombus) forms in a vein. It most commonly occurs in the deep veins of the legs; this is called deep vein thrombosis. The thrombus may dislodge from its site of origin to travel in the blood – a phenomenon called embolism.

VTE encompasses a range of clinical presentations. Venous thrombosis is often asymptomatic; less frequently it causes swelling and pain in the leg. Part or all of the thrombus can travel to the lung as a potentially fatal pulmonary embolism. Symptomatic venous thrombosis carries a considerable burden of morbidity, sometimes over a long term 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).

Venous thromboembolism risk assessment

Is a tool to identify patients at risk of developing a venous thrombo-embolism. The risk of developing VTE depends on the condition and /or procedure for which the patient is admitted and on any predisposing risk.

Thromboprophylaxis

Thromboprophylaxis is the prevention of clots forming in the veins by mechanical or non-mechanical means.

Anti-embolic stockings

Anti-embolic stockings are graduated compression stockings which have been shown to be effective in increasing the velocity of femoral vein blood flow.

Doppler Assessment

A doppler assessment is carried out using a sonic aid used to register the peripheral pulse while a blood pressure cuff is inflated over the artery until the pulse ceases. It is a test used to determine the presence or absence of arterial disease.

8 RISK ASSESSMENT (SEE FLOW CHART ON PAGE 5)

All patients admitted to inpatient settings and community caseloads should be assessed for their thrombosis and bleeding risk. Patients attending Minor Injury Units and fracture clinics requiring lower limb immobilisation should be assessed for thrombotic risk. The Risk Assessment Tool is attached in Appendix 1. In the first instance, the registrant must convey the outcome of the risk assessment to the responsible medical staff in order that they can consider whether thromboprophylaxis is necessary and also whether the bleeding risk is sufficient to preclude pharmacological intervention. After analysis of the risk assessment, the medical staff can then prescribe as necessary according to the NICE guidelines.

For in-patient settings pharmacological prophylaxis should be written on the prescription chart.

For community patients pharmacological prophylaxis must be written on the permission to administer form.
Prophylaxis using anti-embolism stockings can be initiated by the initial assessor by ticking the box on the front of the risk assessment form once suitability has been determined and the patient measured and fitted appropriately.

It is recommended that where patients have been identified as at risk of developing a thrombosis and are prescribed prophylaxis that risk assessments be repeated after 24 hours and then on a weekly basis. Where patients have been identified as not at risk they should be reviewed every 72 hours when an in-patient, and as their clinical condition changes for community patients. The risk assessment form can be continued with one set of changes after that a new form should be used to prevent illegibility of the form. Risk assessment can be completed by band 4 staff and above.

Minor Injury Units and fracture clinics assess patients for their risk of developing thrombosis prior to applying a lower limb cast or immobilising a lower limb. If patients are not deemed to be at risk they are given a leaflet highlighting the signs and symptoms of VTE. If the patient is at risk they are offered an appointment at a fracture clinic at a district general hospital within 24 - 48 hours, given the VTE advice leaflet and advised not to take the contraceptive pill but use other forms of contraception.

9 PATIENT INFORMATION
Appendix 2 contains a Patient Information leaflet which should be given to all patients at risk of developing a VTE and the leaflet used by MIU and fracture clinics.

Patient information leaflets on warfarin therapy or anticoagulant therapy in general can be found at www.cks.nhs.uk/patient_information_leaflet/anticoagulant_medicines or www.cks.nhs.uk/patient_information_leaflet/anticoagulant_warfarin.

Patients who are able to administer their own heparin should be encouraged to do so and can be taught using the Royal Marsden manual’s section on administration of sub-cutaneous injections.

10 TRAINING
The provision and delivery of training will be managed through Workforce Development Unit. Please refer to the annual Statutory & Mandatory Training Needs Analysis (TNA) for information about the frequency and target audience for any training relating to this policy. Further information about the provision of any training relating to this policy is recorded in the relevant Learning Specification available from the Workforce Development department.

11 THE USE OF ANTI-EMBOLIC STOCKINGS
Anti-embolic stockings are to be used with surgical patients, major trauma patients, spinal injured patients and medical patients for whom pharmacological prophylaxis is contraindicated. Once patients have regained their normal level of mobility stockings can be removed, however if their normal level of mobility cannot be regained medical advice should be sought once the acute phase is resolved and their condition is stable.
Stroke patients should not be offered anti-embolism stockings (NICE, 2010).

Other patient groups for whom anti-embolic stockings are contra-indicated are listed in Appendix 3 which also details the process that should be used to determine patient suitability for anti-embolic stockings.

Anti-embolic stockings offer 17mmHg pressure to a limb; therefore assessment of the patient’s limbs is of paramount importance prior to application. Application of anti-embolic stockings to an ischaemic limb can cause significant damage including the development of heel pressure ulcers. The registrant must be aware of the following signs/symptoms which could indicate ischaemia:

- The limb is cold
- The limb is hairless
- The limb is dusky on dependence
- The limb blanches on elevation
- Pain at night when legs are elevated is common
- Foot pulses are absent or diminished – palpate the pulses at the dorsalis pedis artery (or the anterior tibial artery), the posterior tibial artery and the peroneal artery.
- Any wound to the lower limbs which appear deep or punched out.

If one or more of these signs are present, a Doppler test should be carried out, prior to application of anti-embolism stockings. If the Doppler reading is <0.8, medical advice should be sought prior to the application of anti-embolism stockings. Medical advice should also be sought if the patient has one of the following conditions:

- Severe oedema of legs
- Pulmonary oedema due to Congestive Cardiac Failure (CCF)
- Local leg conditions e.g. dermatitis, cellulites or skin grafts in last 3 months
- Severe peripheral neuropathy
- Greater thigh/leg circumference than recommended by the fitting instructions

Before carrying out Doppler assessment (Ankle Brachial Pressure Index), specialist training must be completed; which will be delivered by the Tissue Viability Service.

For procedure on carrying out measurement, application and care of the patient wearing anti-embolic stockings refer to Chapter 30 of Royal Marsden Manual, which can be found on NHS Wiltshire intranet site. http://www.rmmonline.co.uk/

NICE guidelines (2010) recommend thigh-length stockings, however if they are inappropriate for a particular patient, for reasons of compliance or fit, knee-length stockings may be used as a suitable alternative. It is recommended that stockings be removed daily to facilitate inspection of skin integrity and to enable washing and moisturising, however this may vary in a community setting. Anti-embolism stockings must not be left off for any longer than thirty minutes at a time.

There is evidence of efficacy for only one type of anti-embolism stocking. The stocking in question is TED manufactured by Covidien and distributed in the UK by Kendall. Thus to promote evidence based practice these are the stockings to be ordered currently, unless/ until evidence is available to the contrary.
The evidence is;


- and a meta-analyses of twenty RCTs by The National Collaborating Centre for Acute Care as commissioned by NICE for the 2007 NICE guidelines (NICE (2007) Clinical guideline 46 Venous-thromboembolism: Reducing the risk of venous- thromboembolism in In-patients undergoing surgery).

12 MONITORING

Review of RM1 forms to identify incidence of venous thrombosis and pulmonary embolism. A root cause analysis should be undertaken on all incidences of venous thrombosis and pulmonary embolisms.

Annual record keeping audit will assess completion of Risk Assessment.

13 REVIEW

This policy will be reviewed in one year and every three years thereafter. If new guidance is published the policy will be reviewed earlier.
14 BIBLIOGRAPHY


15 REFERENCES

1. Report of the independent expert working group on the prevention of venous thromboembolism in hospitalised patients (DH 2007)
7. DH (2008), Venous Thromboembolism (VTE) Risk Assessment
RISK ASSESSMENT FOR VENOUS THROMBOEMBOLISM (VTE)

Risk assess all patients on admission to hospital and community caseloads.

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

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

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

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

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

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

Patients commencing prophylaxis need to be re-assessed within 24 hours and then weekly. If patient found not to be at risk of VTE patient to be re-assessed every 72 hours for in-patients and as clinical condition changes for community patients.

Guidance on thromboprophylaxis is available at:


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

This document has been authorised by the Department of Health
Gateway reference no: 10278
Wiltshire Community Health Services

Patient Name: .......................................................... DoB: .................................. NHS No: ..........................

Appendix 1

RISK ASSESSMENT FOR VENOUS THROMBOEMBOLISM (VTE)

<table>
<thead>
<tr>
<th>Mobility – all patients (tick one box)</th>
<th>Tick</th>
<th>Medical patient expected to have ongoing reduced mobility relative to normal state</th>
<th>Tick</th>
<th>Medical patient NOT expected to have significantly reduced mobility relative to normal state</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical patient</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assess for thrombosis and bleeding risk below

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

<table>
<thead>
<tr>
<th>Bleeding risk</th>
<th>Tick</th>
<th>Admission related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active bleeding</td>
<td></td>
<td>Neurosurgery/ spinal surgery or eye surgery</td>
</tr>
<tr>
<td>Acquired bleeding disorders (such as acute liver failure)</td>
<td></td>
<td>Other procedure with high bleeding risk</td>
</tr>
<tr>
<td>Concurrent use of anticoagulants known to increase the risk of bleeding (such as warfarin with INR &gt;2)</td>
<td></td>
<td>Lumbar puncture/epidural/spinal anaesthesia expected within the next 12 hours</td>
</tr>
<tr>
<td>Acute stroke</td>
<td></td>
<td>Lumbar puncture/epidural/spinal anaesthesia within the previous 4 hours</td>
</tr>
<tr>
<td>Thrombocytopenia (platelets&lt; 75x10^9/l)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncontrolled systolic hypertension (230/120 mmHg or higher)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Untreated inherited bleeding disorders (such as haemophilia and von Willebrand's disease)</td>
<td></td>
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</tbody>
</table>

Patient is to be fitted with anti-embolic stockings. (for suitability for anti-embolic stockings refer to aide memoire on the back of this form).

Signature: .......................................................... Date: .......................... Time: ..........................

Print name: .......................................................... Designation: ..........................
Risk Assessment for Venous Thrombo-prophylaxis

Patient Name: ........................................... DoB: ...................... NHS No: ....................

Re-Assessment Date .................................... Signature .................................

Re-Assessment Date .................................... Signature .................................

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Patients not suitable for anti-embolic stockings include: stroke patients, patients with peripheral neuropathy, local leg conditions eg. dermatitis, cellulitis, skin grafts, arterial bypass grafts, severe oedema of legs, pulmonary oedema due to CCF, end of life care patients and patient with a major limb deformity.

Patients with one or more of the following signs and symptoms in their lower limbs: a cold limb, hairless limb, dusky on dependence, blanches on elevation, painful at night, and with wounds to the lower leg which appear punched out could have some ischaemia and should have a Doppler assessment.
# ARE YOU AT RISK OF DVT? – DEEP VEIN THROMBOSIS

## 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.

## How serious is DVT?
If the blood clot in the leg breaks off and travels to the lungs, it will cause pulmonary embolism (PE). PE may result in breathing difficulties and may be fatal. DVT may also cause life long disability with painful, swelling legs, varicose veins and ulcers.

## How common is it?
- More people die from VTE than the combined figures of those who die from AIDS, breast cancer, AIDS and in road traffic accidents
- Almost 500,000 people in the European Union are estimated to die from VTE annually, of which only 7% are diagnosed with the condition before their death.
- VTE is one of the commonest avoidable causes of hospital deaths
- One in three surgical patients may develop DVT if no preventative measures are given

## Am I at risk of DVT?
There are several factors that may increase the chances of developing DVT including:
- Age – the older you are the higher the risk
- Acute medical illness including heart failure, chronic respiratory diseases, major infections or cancer
- Major surgery including hip or knee replacements
- Immobility when you are unwell
- Pregnancy
- Taking the combined contraceptive pill (the Pill) or HRT
- Previous history of DVT or PE, or with a strong family history of either
- Obesity
Patient Information Leaflet
(continued)

How do I know if I have VTE (DVT and PE)?

Many people with VTE have no obvious symptoms at all. However, the most common symptoms include:
- Pain, tenderness and swelling of the leg, usually in the calf
- Mild fever, with hotness in the area of the thrombosis
- Redness of the leg
- Distended veins
- Shortness of breath
- Chest pain when you breathe

What can I do to prevent DVT developing?

- Eat a balanced diet
- Keep a healthy weight
- Keep hydrated – drink plenty of water
- Stay mobile with plenty of leg exercise
- If confined to bed with an illness do food exercises

If my General Practitioner (GP) suspects that I am at risk, what treatment may be recommended?

If your GP considers you are at risk of DVT, preventative treatment may be given in the form of anti-embolism stockings and/or blood thinning drugs. If anti-embolism stockings are prescribed, it may be necessary for you to undergo a doppler test in order to establish adequate blood circulation.

Based on the work of Thrombosis Research Institute London UK 2008
www.tri-london.ac.uk
What is a Deep Vein Thrombosis (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.

How Common is it?
- More people die from VTE than the combined figures of those who die from AIDS, breast cancer, and in road traffic accidents.
- Almost 500,000 people in the European Union are estimated to die from VTE annually, of which only 7% are diagnosed with the condition before death.
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- One in three surgical patients may develop DVT if no preventative measures are given.

How serious is DVT?
If the blood clot in the leg breaks off and travels to the lungs, it will cause pulmonary embolism (PE). PE may result in breathing difficulties and may be fatal. DVT may also cause life long disability with painful, swelling legs, varicose veins and ulcers.

Am I at risk of DVT?
There are several factors that may increase the chances of developing DVT, including:
- Age – the older you are the higher the risk
- Acute medical illness including heart failure, chronic respiratory diseases, major infections or cancer.
- Major surgery including hip or knee replacements, immobility when you are unwell.
- Pregnancy.
- Taking the combined contraceptive pill (the pill) or HRT.
- Previous history of DVT or PE, or with a strong family history of DVT or PE.
- Obesity.

How do I know if I have VTE (DVT and PE)?
Many people with VTE have no obvious symptoms at all. However, the most common symptoms include:
- Pain, tenderness and swelling of the leg, usually the calf.
- Mild fever, with hotness in the area of the thrombosis.
- Redness of the leg.
- Distended veins.
- Shortness of breath.
- Chest pain when you breath.

If my General Practitioner (GP) suspects that I am at risk, what treatment may be recommended?
If your GP considers that you are at risk of DVT, preventative treatment may be given in the form of anti-embolism stockings and/or blood thinning drugs.

If anti-embolism stockings are prescribed it may be necessary for you to undergo a Doppler test in order to establish if there is adequate blood circulation.
What can I do to prevent DVT developing?

- Eat a balanced diet
- Keep a healthy weight
- Keep hydrated - drink plenty of water
- Stay mobile with plenty of leg exercise
- If confined to bed with an illness do foot exercises.

PALS (The Patient Advice and Liaison Service) focuses on improving services for NHS patients.

If you have questions, concerns, suggestions or compliments about any NHS service you receive then speak to a member of staff. If you feel that they cannot help you or you still have concerns, then contact PALS:

- Freephone 0800 389 7671
- E-mail PALS@wiltshire-pct.nhs.uk
- Or write to:
PALS
Wiltshire Primary Care Trust
Southgate House
Devizes
Wiltshire
SN10 5EQ

Based on the work of Thrombosis Research Institute
London UK 2008
www.tri-london.ac.uk

Date Issued: September 2010.
Review Date: September 2011.
### PROCESS TO DETERMINE PATIENT SUITABILITY FOR ANTI-EMBOLIC STOCKINGS

<table>
<thead>
<tr>
<th><strong>STEP ONE</strong></th>
<th>Stroke patients should not have anti-embolism stockings as VTE prophylaxis.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If anti-embolic stockings are initiated by a General Practitioner or the initial assessor, assess patient for:</td>
</tr>
<tr>
<td></td>
<td>Severe oedema of legs</td>
</tr>
<tr>
<td></td>
<td>Pulmonary oedema due to Congestive Cardiac Failure (CCF)</td>
</tr>
<tr>
<td></td>
<td>Severe peripheral neuropathy</td>
</tr>
<tr>
<td></td>
<td>Known diagnosis of Ischaemic legs</td>
</tr>
<tr>
<td></td>
<td>Local leg conditions eg. Dermatitis, cellulites or skin grafts in last three months</td>
</tr>
<tr>
<td></td>
<td>If one or more of the signs listed above are present, refer back to General Practitioner as patient may be unsuitable for anti-embolic stockings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>STEP TWO</strong></th>
<th>A Doppler test should be carried out if the lower limbs have been identified as:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cold</td>
</tr>
<tr>
<td></td>
<td>Hairless</td>
</tr>
<tr>
<td></td>
<td>Dusky</td>
</tr>
<tr>
<td></td>
<td>Blanching on elevation</td>
</tr>
<tr>
<td></td>
<td>Painful at night when legs are elevated</td>
</tr>
<tr>
<td></td>
<td>Foot pulses being absent or diminished</td>
</tr>
<tr>
<td></td>
<td>Wounds appearing to be deep or punched out</td>
</tr>
<tr>
<td></td>
<td>If the registrant has determined that the patient is suitable for the application of anti-embolic stockings and the doppler result is &gt; 0.8, measurement, application and care of the patient should be implemented as per Royal Marsden Manual guidelines. <a href="http://www.rmnonline.co.uk">www.rmnonline.co.uk</a></td>
</tr>
<tr>
<td></td>
<td>If patient’s thigh/leg circumference is too great for the available sized anti-embolic stockings, the medical officer needs to be informed to consider prescribing made-to-measure stockings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>STEP THREE</strong></th>
<th>If Ankle Brachial Pressure Index (ABPI) is &lt; 0.8. Inform General Practitioner of results and refer to the Tissue Viability service.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If Ankle Brachial Pressure Index (ABPI) is &gt; 1.4, refer to Tissue Viability specialists for advice.</td>
</tr>
</tbody>
</table>
Appendix 4

Points to include in a Care Plan for Patient at risk of VTE

- Problem: Potentially at risk of developing a venous-thromboembolism due to hospitalisation.

- Aims and objectives: Risk of developing a venous-thromboembolism will be minimised whilst in hospital/on caseload.

- Assess risk using VTE risk assessment tool.
- Provide verbal and written information regarding risk of VTE and thromboprophylaxis.
- Follow local guidance on frequency of re-assessment i.e. weekly or every 72 hours depending on outcome of risk assessment.
- Ensure medical staff have prescribed prophylaxis where appropriate.
- Administer medication as prescribed.
- If anti-embolism stockings are indicated ensure care is carried out as per the Royal Marsden guidelines.
- Measurements for stockings e.g. calf circumference, thigh circumference.
- Where possible empower patients to undertake their own VTE prophylaxis i.e. administering their own heparin and managing their anti-embolism stockings using Royal Marsden guidelines as a teaching aid.

- Patient’s responsibility to report if anti-embolism stockings become too tight or too loose.
- For diagnosed VTE complete relevant documentation (as per policy).
### Equality & Diversity Impact Assessment

<table>
<thead>
<tr>
<th>Title of Document</th>
<th>Thromboembolism Prophylaxis Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the policy new or existing?</td>
<td>Existing</td>
</tr>
<tr>
<td>Date policy was created</td>
<td>April 2009, reviewed June 2010.</td>
</tr>
<tr>
<td>Does this policy contain the Trust’s statement on Equality?</td>
<td>Yes ✓ No □</td>
</tr>
<tr>
<td>Date policy is due to be reviewed</td>
<td>December 2012</td>
</tr>
<tr>
<td>Who was/will be consulted over this policy?</td>
<td>Nursing &amp; Midwifery Forum, AHP Forum, Clinical Effectiveness Forum, Medicines Management Group, Governance &amp; Risk Committee</td>
</tr>
<tr>
<td>What is the main purpose of this policy</td>
<td>Identify patients at risk of and to reduce incidence of deep venous thrombosis and pulmonary embolism</td>
</tr>
<tr>
<td>Is this policy contractual?</td>
<td>Yes</td>
</tr>
<tr>
<td>Who is this policy aimed at or who will be affected by it?</td>
<td>All clinical staff working within Wiltshire Community Health Services</td>
</tr>
<tr>
<td>What are the likely implications for the Trust of this policy?</td>
<td>The Trust is required by National Standards to have this policy in place, improved safety of our patients</td>
</tr>
<tr>
<td>What, if any, are the resource implications of this policy?</td>
<td>Possible increased costs associated with prescription of anti coagulants and TED stockings</td>
</tr>
<tr>
<td>What is the legislation, ethic or other guiding principle behind this policy?</td>
<td>NICE Guidance 2010</td>
</tr>
<tr>
<td>Is this policy likely to have an adverse effect on any specific group taking into account: sex, gender, ethnicity, colour, national origin, and disability, physical or mental health?</td>
<td>All patients will be treated equally. Does not apply to children. Elderly, immobile patients are more likely to suffer from DVT and PE</td>
</tr>
<tr>
<td>Could this policy discriminate directly or indirectly against any staff group with reference to Sex, Race Disability Discrimination acts or the Regulations on Religion or Belief and Sexual Orientation? If so how?</td>
<td>No</td>
</tr>
<tr>
<td>If this policy could be discriminatory in any way, what actions will be taken to remedy this?</td>
<td>Policy would be reviewed and amended</td>
</tr>
<tr>
<td>Where will this policy be stored and how will it be accessed?</td>
<td>Available via intranet to staff and via the Internet for patients/public</td>
</tr>
</tbody>
</table>