HOSPITAL POLICY - Prevention and Treatment of VTE in Patients Admitted to Hospital

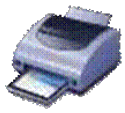
Please Note: This policy is currently under review and is still fit for purpose.

Venous Thromboembolism (VTE) –

Prevention and Treatment of VTE in

Patients Admitted to Hospital

This procedural document supersedes: PAT/T 44 v.4 – Venous Thromboembolism (VTE) – Prevention and Treatment of VTE in Patients Admitted to Hospital



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Amendment Form

Please record brief details of the changes made alongside the next version number. If the APD has been reviewed **without change**, this information will still need to be recorded although the version number will remain the same.

Version	Date issued	Brief Summary of Changes	Author
Version 5	19 August 2021	**Amendment** • Within subsection 4.1 Prevention – link to the Guidance for VTE Prophylaxis, has been replaced. • Appendix 6 – Guidance for VTE Prophylaxis, has been replaced with the guidelines as updated in March 2021.	Cindy Storer
Version 4	15 January 2020	**Significantly revised – please read in full.**	Ben Kumar Stuti Kaul Lee Wilson
Version 3	2 July 2014	• This is a new policy – please read in full. • VTE Investigation and Treatment IPOC amended in response to 2012 NICE guidance on VTE. • New Patient Information Leaflets produced – see Appendix 7 and 8 **NOTE: supersedes: PAT/T 44 v.2** - Prevention of Venous Thromboembolism (VTE) - Deep Vein Thrombosis and Pulmonary Embolism in Patients Admitted to Hospital **and combines PAT/T 46 v.2** - Guideline for the Management of Venous Thromboembolism.	Stuti Kaul Ben Kumar Tracy Evans-Phillips Lee Wilson

Contents

Page No.

1 INTRODUCTION

The House of Commons Health Committee reported in 2005 that an estimated 25,000 people in the UK die from preventable hospital-acquired venous thromboembolism (VTE) every year. This includes patients admitted to hospital for medical care and surgery. The inconsistent use of prophylactic measures for VTE in hospital patients has been widely reported.

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 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 risk of developing VTE depends on the condition and/or procedure for which the patient is admitted and on any predisposing risk factors (such as age, obesity and concomitant conditions).

This guideline makes recommendations on:

1. Assessing and reducing the risk of VTE in patients in hospital. The recommendations take into account the potential risks of the various options for prophylaxis and patient preferences.
2. Investigation and management of VTE

The guideline assumes that prescribers will use a drug's summary of product characteristics to inform decisions made with individual patients.

2 PURPOSE

2.1 Prevention

- Patients (and relatives and carers as appropriate) should have the opportunity to be involved in decisions.
- All inpatients and day-case patients >16 with must undergo a mandatory risk assessment for the prevention of VTE.
- The risk assessment must be completed by a doctor or nurse and filed in the medical notes.
- The risk assessment should be undertaken on admission to hospital or at pre-operative assessment (if undergoing elective surgery), and again if the patient's clinical condition changes.
- The clinical decision on how to manage the risk of venous thromboembolism will be based on an assessment of the risks of VTE against the risks of preventative treatment

for each individual patient and the decision will be informed by available published evidence. Following this the relevant pharmacological and/or mechanical prophylaxis should be prescribed.

- The Patient Information Leaflet (PIL) 'Preventing Blood Clots while you are in Hospital'

(Appendix 7) should be given to all inpatients and day case patients >16 years of age

- This guideline provides guidance for the prevention of VTE based on recommendations in NICE Guideline 89 it says "and" the Report of the Independent Expert Working Group on the prevention of VTE in hospitalised patients as described above.
- This guideline was developed in consultation with all clinical directorates and specialities to allow for speciality specific

recommendations. These can be found in the Appendices at the end of this policy.

2.2 Treatment

Patients (and relatives and carers as appropriate) should have the opportunity to be involved in decisions.

The clinical decision making regarding management of VTE should be made with consideration of the latest NICE guidance on DVT and PE.

If VTE is suspected, prescribers should follow the latest version of the Trust DVT & PE (VTE) IPOC. (Appendix 8)

The DVT & PE (VTE) IPOC contains the following sections

1. Clinical Assessment including DVT (in Non-Pregnant and Pregnant Patients) and PE (in Non-Pregnant and Pregnant Patients) – see also Maternity Service Guidance 20.
2. Post Diagnosis VTE checklists
3. Daltepain and DOAC Prescribing and Dosing tablets in DVT/PE

3 DUTIES AND RESPONSIBILITIES

- All relevant healthcare professionals should give patients verbal and written information on the following, as part of their discharge plan.

The signs and symptoms of DVT and PE

The correct use of prophylaxis at home

The implications of not using the prophylaxis correctly.

- All relevant healthcare professionals should follow the DVT and PE (VTE) IPOC (Appendix 8) when treating a patient with symptoms of VTE.
- Should clinical specialities subsequently wish to amend the specific guidance for the prevention of VTE in their speciality, application should be submitted to the VTE Group for consideration and if agreed, should be included as appendices to this guideline.

4 PROCEDURE

Pharmacological VTE prophylaxis

Dalteparin is the low molecular weight heparin (LMWH) recommended for use in Doncaster and Bassetlaw Teaching Hospitals NHS Foundation Trust for those indications for which it is licensed. Fondaparinux sodium should be used in individuals who are allergic to heparin.

4.1 Prevention

- All patients (age 16 and over) need to be risk assessed on admission to identify those who are at increased risk of VTE using either; the Generic VTE Risk Assessment (Appendix 1), VTE Risk Assessment in pregnancy (Appendix 2) or if the patient has a lower limb cast in fracture clinic, the POP VTE Risk Assessment (Appendix 3).
- For guidance on completing the Generic VTE Risk Assessment, see Appendix 4
- For dosage recommendations for prescribing dalteparin, https://www.dbth.nhs.uk/services/pharmacy/medicines-formulary/medicinesformulary-section-2-cardiovascular-system/
- Patients on Orthopaedic wards use the Generic VTE Risk Assessment, however further details on pharmacological thromboprophylaxis and extended prophylaxis can be found in Appendix 6 and on the following link: https://oesn11hpbml2xaq003wx02ibwpengine.netdna-ssl.com/wp-content/uploads/2021/06/Orthopaedic-DVT-GuidelinesMarch-2021x.pdf
- For Stroke patients in whom pharmacological VTE Prophylaxis or Anti-embolization stockings maybe contraindicated please refer to Appendix 5 – Management of VTE risk in Stroke patients Decision Tree.
- For further guidance on VTE prevention and prophylaxis, please follow NICE Guideline 89 – Venous Thromboembolism: in over 16's – Reducing the risk of hospital acquired deep vein thrombosis or pulmonary embolization.
- All patients admitted to hospital as an Inpatient or Daycase (including maternity and orthopaedic patients) must receive the Trust's information leaflet "Preventing Blood Clots While You Are In Hospital" (WPR 30726) on admission to hospital (Appendix 7)

4.2 Treatment

- All patients with symptoms of DVT or PE should be managed according to the DVT & PE (VTE)IPOC (WPR 24524), Appendix 8
- The algorithms in the Trust's IPOC present the most concise summarisation of the treatment guidance.

- All patients with confirmed VTE must receive a copy of either the “DVT Patient Information Leaflet” (Appendix 9) or the “PE Patient Information Leaflet” (Appendix 10) For further guidance on VTE treatment, please follow the link below:
- Venous thromboembolic diseases: the management of venous thromboembolic diseases and the role of thrombophilia testing
- Formulary guidance and protocols on reversal of anticoagulation (including heparin, warfarin and rivaroxaban) can be found via: https://www.dbth.nhs.uk/services/pharmacy/medicines-formulary/medicinesformulary-section-2-cardiovascular-system/

PATIENTS LACKING CAPACITY

Sometimes it will be necessary to provide care and treatment to patients who lack the capacity to make decisions related to the content of this policy. In these instances staff must treat the patient in accordance with the Mental Capacity Act 2005 (MCA 2005).

- A person lacking capacity should not be treated in a manner which can be seen as discriminatory.

- Any act done for, or any decision made on behalf of a patient who lacks capacity must be done, or made, in the persons Best Interest.

- Further information can be found in the MCA policy, and the Code of Practice, both available on the intranet.

There is no single definition of Best Interest. Best Interest is determined on an individual basis. All factors relevant to the decision must be taken into account, family and friends should be consulted, and the decision should be in the Best interest of the individual. Please see S5 of the MCA code of practice for further information.

5 TRAINING/SUPPORT

	Staff Function	Training Needs	How Delivered
1	Staff who have general (nonspecific) role in delivery of care to patients	General Awareness	Posters/ leaflets/ Trust publicity
2	Staff who deliver care to patients	General Awareness Fitting of Antiembolism Stockings (AES) On-going care of patient wearing Antiembolism Stockings (AES)	As above PLUS Local Induction

3	Registered Staff who deliver care to patients (Inc AHP's)	General Awareness VTE disease process Measuring and fitting of Antiembolism Stockings (AES) Contraindications to GCS On-going care of patient wearing Antiembolism Stockings (AES) Indications and fitting of Flowton Intermittent Pneumatic Compression (IPC) sleeves Contraindications to dalteparin Administration of dalteparin	As above PLUS Local Induction

4	Medical staff	General Awareness VTE disease process Long term effects of VTE Contraindications to Antiembolism Stockings (AES) Alternative methods of Mechanical compression. Contraindications to Dalteparin, DOACs, Warfarin and Aspirin Prescribing Dalteparin, DOACs, Warfarin and Aspirin On going care of patients on Dalteparin, DOACS, Warfarin and Aspirin	As above PLUS Local Induction.

6. MONITORING COMPLIANCE WITH THE PROCEDURAL DOCUMENT

6 MONITORING COMPLIANCE

Criteria	Monitoring	Who	Frequency	How reviewed
All patients admitted to the Trust as Inpatients or Daycases will have a VTE Risk	Annual audit using pre-defined proforma (specific to VTE Risk Assessment used), auditing 20 sets of	Each specialty, lead by the Clinical Audit Lead within the division	Annual rolling programme	Report sent to division for recommendations and action plans. Action plans and recommendations reviewed by VTE Group

Assessment	casenotes of patients with a current stay			Compliance with annual programme monitored by Audit & Effectiveness Forum
All patients with hospital acquired VTE (within 3 months of admission) to have a Root Cause Analysis undertaken	Cases identified via Datix system, casenotes are located and reviewed to identify if the VTE was avoidable	Feedback letters sent to Primary Clinician to complete.	Reviewed on an individual case basis	Each outcome is shared with division, VTE Group and fed back to Trust via Medical Director.
Patients admitted with a VTE will have care according to the DVT & PE IPOC	Audit of compliance with the IPOC	Audit instigated by the VTE Group Lead	Annual	Report reviewed by VTE Group and results disseminated to Trust via Clinical Directors

7 GLOSSARY OF DEFINITIONS

-VE	**Negative**
+VE	**Positive**
AES	**Anti-Embolism Stockings**
AHS	**Allied Health Professional**

AM	**Morning**
ANP	**Advanced Nurse Practitioner**
BD	**Twice Daily**
BMI	**Body Max Index**
BP	**Blood Pressure**
BNF	**British National Formulary**
Ca2+	**Calcium**
CrCl	**Creatinine Clearance**
CTPA	**CT Pulmonary/Angiogram**
CT Scan	**Computed Tomography Scan**
CXR	**Chest X-Ray**
DOAC	**Direct Oral Anticoagulant**
DVT	**Deep vein Thrombosis**
ECG	**ElectroCardioGram**
ED	**Emergency Department**
SER	**Erythrocyte Sedimentation Rate**
EVE	**Evening**
FBC	**Full Blood Count**

GP	**General Practitioner**
INR	**International Normalised Radio**
IPOC	**Integrated Plan of Care**
IV	**Intravenous**
IVC	**Inferior Vena Cava**
IVDU	**Intra Venous Drug misuse**
LFT	**Liver Function Tests**
LMWH	**Low Molecular Weight Heparin**
MSG	**Maternity Service Guideline**
MDT	**Multi Disciplinary Team**
NHSLA	**National Health Service Litigation Authority**
NICE	**National Institute for Health and Care Excellence**
OD	**Once Daily**
PE	**Pulmonary Embolism**
PSA	**Prostate Specific Antigen**
PT	**Prothrombin Time**
Q Scan	**Perfusion Scan**
ST	**Speciality Training**

U&E	**Urea and Electrolytes**
UFH	**UnFractionated Heparin**
USS	**Ultrasound**
VTE	**Venous ThromboEmbolism**

8 EQUALITY IMPACT ASSESSMENT

The Trust aims to design and implement services, policies and measures that meet the diverse needs of our service, population and workforce, ensuring that none are disadvantaged over others. Our objectives and responsibilities relating to equality and diversity are outlined within our equality schemes. When considering the needs and assessing the impact of a procedural document any discriminatory factors must be identified.

An Equality Impact Assessment (EIA) has been conducted on this procedural document in line with the principles of the Equality Analysis Policy (CORP/EMP 27) and the Fair Treatment For All Policy (CORP/EMP 4).

The purpose of the EIA is to minimise and if possible remove any disproportionate impact on employees on the grounds of race, sex, disability, age, sexual orientation or religious belief. No detriment was identified. (See Appendix 11)

9 ASSOCIATED TRUST PROCEDURAL DOCUMENTS

PAT/PA 19 - Mental Capacity Act 2005 Policy and Guidance, including Deprivation of Liberty Safeguards (DoLS)

CORP/EMP 4 – Fair Treatment for All Policy

CORP/EMP 27 - Equality Impact Assessment Policy

10 DATA PROTECTION

Any personal data processing associated with this policy will be carried out under 'Current data protection legislation' as in the Data Protection Act 2018 and the General Data Protection Regulation (GDPR) 2016.

For further information on data processing carried out by the trust, please refer to our Privacy Notices and other information which you can find on the trust website: https://www.dbth.nhs.uk/about-us/our-publications/uk-data-protection-legislation-eugeneral-data-protection-regulation-gdpr/

11 REFERENCES

1. Prevention of Venous Thromboembolism in Hospitalised Patients (2007)

Chief Medical Officer's report from the Independent Expert Working Group

1. NICE Guideline 89: www.nice.org.uk/guidance/ng89
2. Guidelines on the use and monitoring of heparin (2006) British Journal of Haematology **133**, 19 – 34
3. NICE clinical guideline 144: https://www.nice.org.uk/guidance/CG144
4. Department of Constitutional Affairs

Mental Capacity Act (2005): Code of Practice, 2007 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachm ent_data/file/497253/Mental-capacity-act-code-of-practice.pdf