Trust Guideline Summarising the General Principles of the Prevention of Venous Thromboembolism (VTE) in Adult Patients

A Clinical Guideline recommended

For Use in:	All clinical areas
By:	All medical and nursing staff
For:	All adult inpatients and day case patients undergoing day case surgery under General Anaesthetic.
Division responsible for document:	Medical Division
Key words:	Risk assessment, Venous thromboembolism (VTE), Thrombosis, Hospital Associated Thrombosis (HAT), Bleeding, Prophylaxis,
Name and job title of document authors:	Dr Hamish Lyall, Consultant Haematologist Mr David Loveday, Consultant Orthopaedic Surgeon
Name and job title of document lead author's Line Manager:	Dr Crawford Jamieson, Chief of Medical Division
Supported by:	Dr David Loveday, Chair of Thrombosis and Thromboprophylaxis Committee
Assessed and approved by the:	Thrombosis and Thromboprophylaxis Committee 27/05/2022 Clinical Guidelines Assessment Panel (CGAP) If approved by committee or Governance Lead Chair's Action; tick here ☑
Date of approval:	21/06/2022
Ratified by or reported as approved to (if applicable)**:**	Clinical Safety and Effectiveness Sub-Board
To be reviewed before:	21/06/2025
To be reviewed by:	Thrombosis and Thromboprophylaxis Committee
Reference and / or Trust Docs ID No:	ID 7539
Version No:	4
Compliance links: *(is there any NICE related to guidance)*	NICE QS3 & QS201: Venous thromboembolism in Adults NICE NG89: Venous thromboembolism in over 16s: reducing the risk of hospital-acquired deep vein thrombosis or pulmonary embolism
Does it deviate from recommendations of NICE? If so why?	No deviation

Trust Guideline Summarising the General Principles of the Prevention of Venous Thromboembolism (VTE) in Adult Patients

Version and Document Control:

Version Number	Date of Update	Change Description	Author
2	October 2014	Minor update to align with NICE quality standards.	Dr J Wimperis
3	February 2019	Updated to align with revised NICE quality standards	Dr H Lyall
4	May 2022	Updated to include NICE QS 201	Mr D Loveday

This is a Controlled Document

Printed copies of this document may not be up to date. Please check the hospital intranet for the latest version and destroy all previous versions.

This guideline should be read in association with the speciality specific Trust guidelines found on the Trust Intranet through Click for Clots site under the Index Tab: Guidelines and Advice http://intranet/ClickforClots/index.htm

Objective of Guideline:

To reduce the number of inpatients (medical and surgical) and day case patients having surgery under General Anaesthetic who develop VTE during their hospital stay and in the 90 days following discharge.

To provide trust wide guidance to facilitate compliance with NICE Quality Standard QS3 (2018) https://www.nice.org.uk/guidance/qs3

To provide trust guidance with the NICE Quality statement QS201 (2021) Venous Thromboembolism in adults. This quality standard covers reducing the risk of venous thromboembolism (VTE) in people aged 16 and over who are in hospital. It also covers diagnosing and treating VTE in all people aged 18 and over.
www.nice.org.uk/guidance/qs201

Rationale for Recommendations:

Patients are at increased risk of venous thromboembolism (VTE) following admission to hospital.

Definitions:

Hospital Associated Thrombosis:

Thrombosis (Deep Vein Thrombosis DVT or Pulmonary embolism PE) occurring during admission or during the 90 days following discharge are classified as Hospital Associated Thrombosis (HAT).

Trust Guideline Summarising the General Principles of the Prevention of Venous Thromboembolism (VTE) in Adult Patients

Immobility:

NICE defines 'significantly reduced mobility' 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.

Abbreviations:

DVT	Deep Vein Thrombosis
HAT	Hospital Associated Thrombosis
PE	Pulmonary Embolus
VTE	Venous Thromboembolism
TRA	Thromboembolism Risk Assessment

NICE Quality Statement 201

Statement 1:

People aged 16 and over who are in hospital and assessed as needing pharmacological venous thromboembolism (VTE) prophylaxis start it as soon as possible and within 14 hours of hospital admission.

On admission all people aged 16 and over who are admitted to hospital must have an assessment of VTE and bleeding risk using a recognised Trust clinical risk assessment tool. When indicated start pharmalogical VTE prophylaxis as soon as possible after TRA and within 14 hours of admission.

See trust documents:

Trust Guideline for thromboprophylaxis in Adult Medical Patient ≥16 years of age (Trustdocs ID: 1211)

Trust Clinical Guideline for the Prevention of Venous Thromboembolism (VTE) for Adult Surgical Patients 16 years and over (**Trustdocs ID: 12096**)

Statement 2:

People aged 16 and over who are discharged with lower limb immobilisation are assessed to identify their risk of VTE.

All people aged 16 and over who are admitted to hospital or seen in the fracture clinic requiring limb immobilisation have a TRA. The national TRA screening tool used includes lower limb immobilisation as a risk factor for requiring thromboprophylaxis.

See trust documents:

Trust Guideline Summarising the General Principles of the Prevention of Venous Thromboembolism (VTE) in Adult Patients

Trust Clinical Guideline for the Prevention of Venous Thromboembolism (VTE) for Adult Surgical Patients 16 years and over (**Trustdocs ID: 12096**)

Adult outpatients placed in lower limb immobilisation (Trustdocs ID: 8302)

Statement 3:

People aged 18 and over with a deep vein thrombosis (DVT) Wells score of 2 points or more have a proximal leg vein ultrasound scan within 4 hours of it being requested.

This quality statement is regarding the diagnosis and treatment of DVT and not relevant to this document for the prevention of VTE.

See trust documents:

DVT Clinical Referral (Trustdocs ID: 1698)

Statement 4:

People aged 18 and over taking anticoagulation treatment after a VTE have a review at 3 months and then at least once a year if they continue to take it long term.

This quality statement is regarding the diagnosis and treatment of DVT and not relevant to this document for the prevention of VTE.

See trust documents:

DVT Clinical Referral (Trustdocs ID: 1698)

Statement 5:

People aged 18 and over having outpatient treatment for suspected or confirmed low-risk pulmonary embolism (PE) have an agreed plan for monitoring and follow-up.

This quality statement is regarding the diagnosis and treatment of PE and not relevant to this document for the prevention of VTE.

See trust documents:

Emergency department management pathway for pulmonary Embolism (Trustdocs ID: 12478)

NICE Quality Statements 3

Statement 1: VTE and bleeding risk assessment

Medical, surgical or trauma patients have their risk of VTE and bleeding assessed using a national tool as soon as possible after admission to hospital

On admission all patients must have an assessment of VTE and bleeding risk using a recognised Trust clinical risk assessment tool.

- Inpatients: The national risk assessment tool is integrated with the EPMA prescribing system. The system is configured so that a risk assessment must be completed before prescribing can be accessed.
- Day case surgery: A paper version of the TRA is completed on admission by surgical team.
- Critical Care: A tool for reviewing thromboprophylaxis prescribing is present in Metavision
- Obstetrics: Obstetric specific risk assessments are used during pregnancy and after delivery

Risk assessment will usually be undertaken by the junior doctor admitting the patient. Within surgical pre-admission clinics and obstetric practice this may be delegated to a nurse/midwife/pharmacist working within their Directorate guidelines. Speciality specific guidelines outline the responsibilities and process for individual specialties.

If the assessment for VTE and bleeding has been done at a pre-admission clinic, it should be reviewed for changes on admission.

Statement 2: Information about VTE prevention

Patients who are at increased risk of VTE are given information about VTE prevention on admission to hospital.

The Trust information leaflet can be found on the Trust internet site: Trustdocs ID: 1121.

Written information of VTE prevention has been incorporated into the preoperative information pack sent to all patients admitted for elective surgery procedures.

Statement 3: Anti-embolism stockings

Patients provided with anti-embolism stockings (AES) have them fitted and monitored in accordance with NICE guidance

See Appendix 1 for further details

All patients fitted with anti-embolism stockings should have a Trust AES Care plan Trustdocs ID: 7709

All patients fitted with anti-embolism stockings should be given an AES patient information found on the Trust intranet Trustdocs ID: 252

Statement 4: Reassessment

Medical, surgical and trauma patients have their risk of VTE reassessed at Consultant review or if their clinical condition changes

Patients should have the TRA and thromboprophylaxis decision reviewed on the Consultant 'post take' ward round. This can be done by documenting in the medical records or completing the '24 reassessment form' built into EPMA. There is no longer a requirement for routinely performing reassessment within 24 hours.

Patients having surgery have thrombosis risk and thromboprophylaxis reviewed preoperatively on the WHO checklist. Instructions may also be documented on the operation note.

If there is a **change in the medical state** of the patient which could affect the VTE or bleeding risk patients should be reassessed. This reassessment should be recorded on EPMA using the clinical change TRA.

Statement 5: VTE prophylaxis

Patients assessed to be at risk of VTE are offered VTE prophylaxis in accordance with NICE guidance

Specialty specific guidelines can be found on the Trust Intranet through Click for Clots intranet site under Guidelines http://intranet/ClickforClots/index.htm

General advice for reducing the risk of VTE

- Do not allow patients to become dehydrated unless there is a clinical reason.
- Encourage patients to mobilise as soon as possible.
- Do not regard aspirin or other antiplatelet agents as adequate prophylaxis for VTE unless specified in a specialty specific guideline.

Statement 6: Information for patients and carers

Patients/carers are offered verbal and written information on VTE prevention as part of the discharge process.

Ensure that patients who are discharged with pharmacological and/or mechanical VTE prophylaxis are able to use it correctly, or have arrangements made for someone to be available who will be able to help them.

Notify the patient's GP if the patient has been discharged with pharmacological and/or mechanical VTE prophylaxis to be used at home.

Information leaflets issued to patients on discharge can be documented on the nursing discharge documentation checklist

Quality statement 7: Extended VTE thromboprophylaxis

Patients are offered extended (post hospital) VTE prophylaxis in accordance with NICE guidance
As part of discharge process check if patient should be discharged with pharmacological thromboprophylaxis and that this is included in the EDL and TTOs.

See speciality specific guidelines for extended thromboprophylaxis - available through the Trust **Click for Clots** (C4C) intranet site under index tab: Guidelines and Advice
http://intranet/ClickforClots/index.htm

Supporting Information

Clinical audit standards:

Compliance against NICE quality standards is assessed through Hospital associated thrombosis (HAT) root cause analysis

Summary of development and consultation process undertaken before registration and dissemination:

The original guideline was written by Dr Jennie Wimperis on behalf of the Thrombosis and Thromboprophylaxis Committee who approved its initial content and have reviewed and approved this version.

Distribution list/ dissemination method:

Trust intranet.

References/ source documents:

www.nice.org.uk/guidance/NG89
Venous thromboembolism in over 16s: reducing the risk of hospital acquired deep vein thrombosis or pulmonary embolism. Published 2018.

NICE quality standards QS3 (2018)
Venous Thromboembolism in adults. Published 2018.

www.nice.org.uk/guidance/qs201
Venous Thromboembolism in adults. Published 2021.

Appendix 1: Summary of NICE guidance for Anti-Embolism stockings

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

- Suspected or proven peripheral arterial disease.
- Peripheral arterial bypass grafting.
- Peripheral neuropathy or other causes of sensory impairment.
- Any local conditions in which stockings may cause damage, for example fragile 'tissue paper' skin, dermatitis, gangrene or recent skin graft.
- Known allergy to material of manufacture.
- Cardiac failure.
- Severe leg oedema or pulmonary oedema from congestive heart failure.
- Unusual leg size or shape.
- Major limb deformity preventing correct fit.
- Use caution and clinical judgement when applying anti-embolism stockings over venous ulcers or wounds.

Ensure that patients who need anti-embolism stockings have their legs measured and that the correct size of stocking is provided. Anti-embolism stockings should be fitted and patients shown how to use them by staff trained in their use.

Ensure that patients who develop oedema or postoperative swelling have their legs re-measured and anti-embolism stockings refitted.

If arterial disease is suspected, seek expert opinion before fitting anti-embolism stockings.

Use anti-embolism stockings that provide graduated compression and produce a calf pressure of 14–15 mmHg.

Encourage patients to wear their anti-embolism stockings day and night until they no longer have significantly reduced mobility.

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

Discontinue the use of anti-embolism stockings if there is marking, blistering or discolouration of the skin, particularly over the heels and bony prominences, or if the patient experiences pain or discomfort. If suitable, offer a foot impulse or intermittent pneumatic compression device as an alternative.

Show patients how to use anti-embolism stockings correctly and ensure they understand that this will reduce their risk of developing VTE.

Monitor the use of anti-embolism stockings and offer assistance if they are not being worn correctly.