Worcestershire Acute Hospitals NHS Trust

Thromboprophylaxis in Pregnancy (VTE)

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Introduction

An Overview of the risk assessment and recommendations for thromboprophylaxis in the antenatal and postnatal periods.

This guideline is for use by the following staff groups:

All Maternity and Obstetric Staff undertaking risk assessment for thromboprophylaxis requirements in pregnancy and postpartum periods.

Lead Clinician(s)

Dr Amy Newnham	Obstetric Doctor
Prabath Suraweera	Consultant Obstetrician
Approved by *Maternity Governance Meeting* on:	17th November 2023
Approved by Medicines Safety Committee on: *Where medicines included in guideline*	NA
Review Date: This is the most current document and should be used until a revised version is in place	17th November 2026

Key amendments to this guideline

Date	Amendment	Approved by:
November 2023	Review in line with RCOG Guidelines and amendments to documentation to include badgernet	MGM

Introduction

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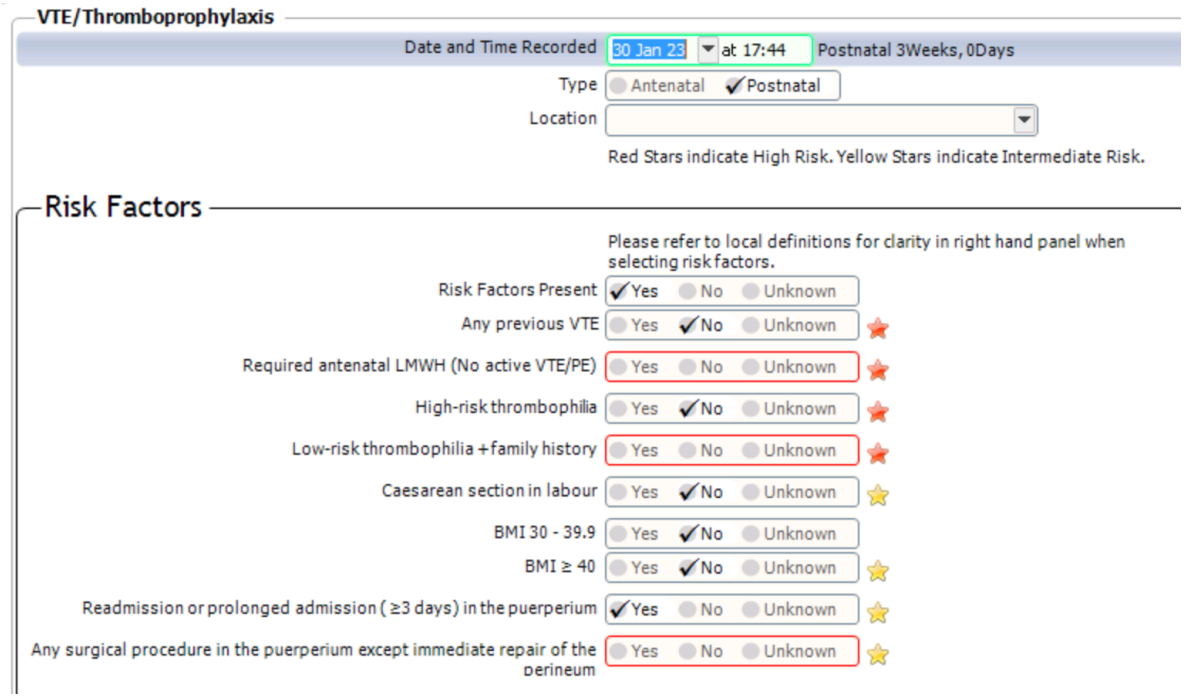
With effect from June 1st 2018, amended in 2023, we are adapting RCOG guideline (RCOG Green-top Guideline No. 37a) on Thromboprophylaxis during pregnancy and puerperium. Please see the link directed to RCOG guideline.

https://www.rcog.org.uk/media/qejfhcaj/gtg-37a.pdf

All women should undergo a documented assessment of risk factors for VTE in early pregnancy or pre-pregnancy. Risk assessment should be repeated again intrapartum and immediately postpartum. Please see the information below to guide the risk assessment process during booking, antenatal admission, and post-delivery. If further information is needed please refer to the RCOG guideline 37a accessible by the above link.

VTE Risk assessment at booking:

This should be completed on badger, and can be documented by clicking 'enter new note' and search 'VTE/Thromboprophylaxis Treatment'. Please make sure you click either antenatal or postnatal as the risk factors will differ.

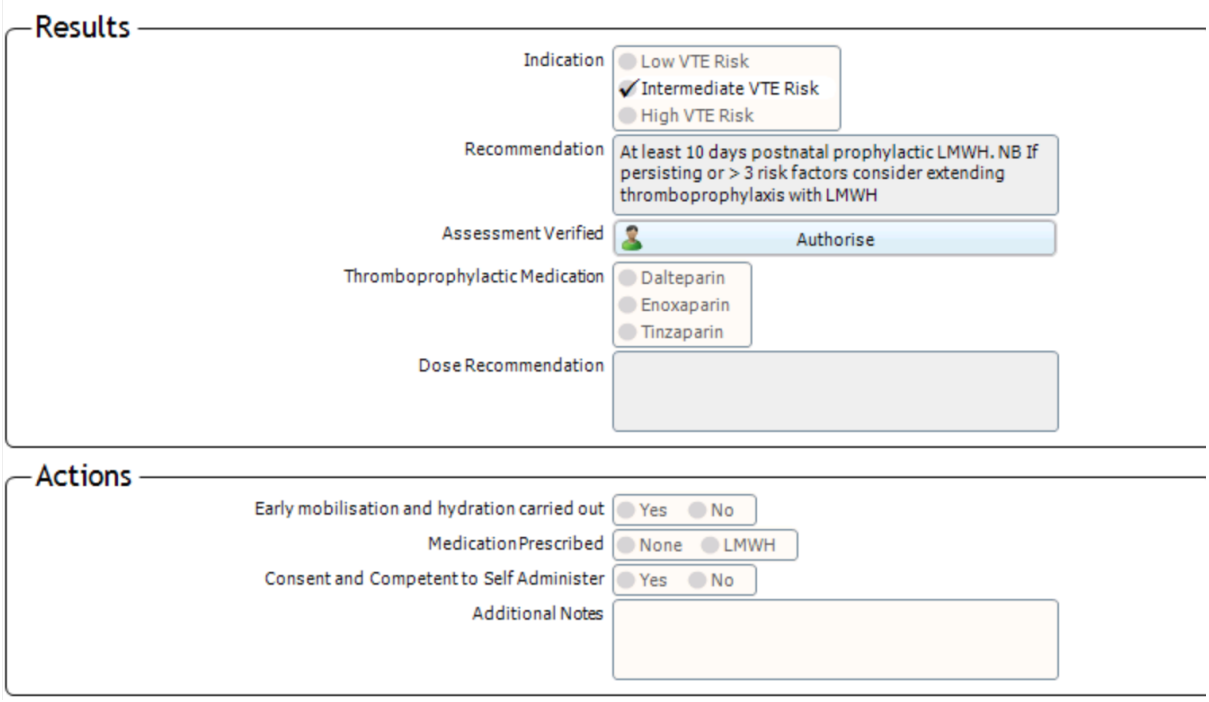


VTE Medical Co Morbidities

The list of co-morbidites is not prescriptive, and other issues may be contributory

Heart Failure	Yes	✓No	Unknown
Active Systemic Lupus Erythematosus (SLE)	Yes	✓No	Unknown
Cancer	Yes	✓No	Unknown
Inflammatory Bowel Disease (IBD)	Yes	✓No	Unknown
Inflammatory Polyarthropathy	Yes	✓No	Unknown
Nephrotic Syndrome	Yes	No	Unknown
Sickle cell disease	Yes	✓No	Unknown
Current Intravenous Drug User	✓Yes	No	Unknown
Type 1 DM with nephropathy	Yes	✓No	Unknown

Age > 35 years	Yes	✓No	Unknown
Parity ≥ 3	✓Yes	No	Unknown
Smoker	✓Yes	No	Unknown
Elective caesarean section	Yes	✓No	Unknown
Family history of VTE	Yes	✓No	Unknown
Gross varicose veins	Yes	✓No	Unknown
Current pre-eclampsia	Yes	✓No	Unknown
Current systemic infection	Yes	No	Unknown
Immobility, e.g. paraplegia, PGP	Yes	✓No	Unknown
Long-distancetravel	Yes	No	Unknown
Low-risk thrombophilia	Yes	✓No	Unknown
Multiple pregnancy	Yes	✓No	Unknown
Preterm birth in this pregnancy (<37+0weeks)	✓Yes	No	Unknown
Stillbirth in this pregnancy	Yes	✓No	Unknown
Mid-cavity rotational oroperative birth	Yes	No	Unknown
Prolonged labour (> 24hrs)	Yes	No	Unknown
PPH > 1 litre or Blood Transfusion	Yes	✓No	Unknown
COVID-19	Yes	No	Unknown



Risk Factors	Management Plan
3 current risk factors (other than previous VTE or thrombophilia)	Prophylactic LMWH from 28 weeks till 6 weeks postnatally
4 or more current risk factors (other than previous VTE or thrombophilia)	LMWH throughout the antenatal period until 6 weeks postnatally

Guidance for previous VTE or known thrombophilia:

Previous VTE	Management plan
• Antithrombin deficiency • Protein C/S deficiency • Factor V Leiden • Prothrombin gene mutation • Antiphospholipid antibodies • Persistent lupus coagulant and/or persistent moderate to high titre of anticardiolipin antibodies and/or B_2-glycoprotein 1 antibodies	Higher dose LMWH (either 50%, 75% or full treatment dose antenatally and for 6 weeks postpartum or until returned to oral anticoagulant therapy after delivery). Please discuss with haematologist.
• Recurrent VTE	Some patients with recurrent VTE require higher doses of LMWH. Discuss these cases with a consultant haematologist.
• Unprovoked/Idiopathic VTE • VTE related to oestrogen causation	Prophylactic dose LMWH throughout the antenatal period until 6 weeks postnatally
• VTE provoked by major surgery with no other risk factors	Prophylactic dose LMWH from 28 weeks till 6 weeks postnatally

VTE risk assessment antenatal admission:
Risk assessment should be repeated if the women is admitted to hospital for any reason or develops other intercurrent problems. This must be completed via badger using the 'VTE/Thromboprophylaxis Treatment' form during every hospital admission. A new risk assessment needs to be performed. These risk factors may be transient a list of which is given below with their score:

Any surgical procedure in pregnancy or the puerperium except immediate repair of the perineum	3
Hyperemesis	3
OHSS (first trimester only)	4
Current systemic infection	1
Immobility, dehydration	1

VTE Risk Assessment Postnatal:
Risk assessment should be repeated both intrapartum and postnatally using the badger 'VTE/Thromboprophylaxis Treatment' tool.
This needs to be completed on a new risk assessment, not an edit on an existing risk assessment.

These will deem someone high risk, intermediate or low risk outlined in table below.

High risk: • Previous VTE • Anyone requiring antenatal LMWH • High risk thrombophilia • Low risk thrombophilia + Family Hx	High risk at least 6 weeks postnatal prophylactic LMWH
Intermediate: • Caesarean in labour • BMI 40 or above • Readmission or prolonged admission (3+ days) in the puerperium • Any surgical procedure in the puerperium (except immediate repair of perineum) • Medical comorbidities e.g. SLE, cancer, heart failure, IBF, or inflammatory arthropathy, nephrotic syndrome, type 1 diabetes with nephropathy, sickle cell disease, current IVDU	Intermediate: At least 10 days' prophylactic LMWH postnatally. If persisting risk factors or >3 risk factors consider extending thromboprophylaxis with LMWH
Other risk factors: • Smoker • >35 years old • BMI 30-39.9 • Parity 3 or more • Elective CS • Family History of VTE • Low risk thrombophilia • Gross varicose veins • Current systemic infection • Immobility • Current pre-eclampsia • Multiple pregnancy • Preterm delivery in this pregnancy (<37 weeks) • Stillbirth in this pregnancy • Mid-cavity rotational or operative delivery • Prolonged labour (>24hours) • PPH >1L or blood transfusion	2 or more risk factors – treat as intermediate (see above) Less than 2 risk factors – early mobilisation and avoidance of dehydration

Thromboprophylaxis during labour and regional anaesthesia:

- Women receiving antenatal LMWH should be advised that if they have any vaginal bleeding or once labour begins, they should not inject any further LMWH. They should be assessed on admission to hospital and further doses should be prescribed by medical staff.
- Regional techniques should be avoided if possible until at least 12 hours after the previous prophylactic dose of LMWH, and 24hours after the last treatment dose LMWH.
- LMWH should not be given within 4 hours after the use of spinal anaesthesia or epidural catheter has been removed and the catheter should not be removed within 12hours of the most recent injection of LMWH.
- Women receiving antenatal LMWH having an elective caesarean should receive a thromboprophylactic dose of LMWH on the day prior to delivery and, on the day of delivery, any morning dose should be omitted and the operation performed that morning.
- The first thromboprophylactic dose of LMWH should be given as soon as possible after delivery provided there is no postpartum haemorrhage and regional anaesthesia has not been used.
- Women at high risk of haemorrhage with risk factors including major antepartum haemorrhage, coagulopathy, progressive wound haematoma, suspected intra-abdominal bleeding and postpartum haemorrhage may be managed with anti-embolism stockings, foot impulse devices or intermittent pneumatic compression devices.

If a woman develops a haemorrhagic problem whilst on LMWH, stop LMWH and expert haematological advice sought. Thromboprophylaxis should be restarted at the earliest point considered safe to do so.

Dosing of LMWH:
Doses of LMWH are based on weight. For thromboprophylaxis the booking or most recent weight can be used to guide dosing.

Weight	Enoxaparin	Dalteparin	Tinzaparin (75 u/kg/day)
< 50 kg	20 mg daily	2500 units daily	3500 units daily
50–90 kg	40 mg daily	5000 units daily	4500 units daily
91–130 kg	60 mg daily*	7500 units daily	7000 units daily*
131–170 kg	80 mg daily*	10 000 units daily	9000 units daily*
> 170 kg	0.6 mg/kg/day*	75 u/kg/day	75 u/kg/day*
High prophylactic dose for women weighing 50–90 kg	40 mg 12 hourly	5000 units 12 hourly	4500 units 12 hourly

*may be given in 2 divided doses

Contraindications to LMWH:

- High risk of bleeding
- Current or previous allergic reactions to LMWH should be offered alternative preparations or forms of prophylaxis
- Seek expert advice if at risk of VTE and bleeding simultaneously (platelets <75 x 10^9/L, active bleeding).

Monitoring

Page/ Section of Key Document	Key control:	Checks to be carried out to confirm compliance with the Policy:	How often the check will be carried out:	Responsible for carrying out the check:	Results of check reported to: *(Responsible for also ensuring actions are developed to address any areas of non-compliance)*	Frequency of reporting:
	WHAT?	**HOW?**	**WHEN?**	**WHO?**	**WHERE?**	**WHEN?**
	Postnatal VTE assessments	Rolling Audit	Monthly	Ward Manager	Maternity Governance Meeting – through ward-to-board reports	Monthly

References

RCOG guideline (RCOG Green-top Guideline No. 37a) on Thromboprophylaxis during pregnancy and puerperium. https://www.rcog.org.uk/media/qejfhcaj/gtg-37a.pdf

Contribution List

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This key document has been circulated to the following individuals for consultation;

Designation
All Maternity Staff – Newsletter

This key document has been circulated to the chair(s) of the following committee's / groups for comments;

Committee
Maternity Guidelines Forum
Maternity Governance Meeting Group