Thromboprophylaxis in pregnancy, labour and after vaginal delivery

University Hospitals of Leicester NHS
NHS Trust

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Contents

1. Introduction and Who Guideline applies to

This guideline is intended for the use of all Healthcare Professionals responsible for the care of women and birthing people who require Thromboprophylaxis in pregnancy, labour or after vaginal delivery in an **in-patient setting**.
For risk assessments in other settings please see 'Booking Process and Risk Assessment in Pregnancy and the 'Postnatal Period' Guideline.
For women and birthing people who delivered by Caesarean section please refer to Caesarean section guideline.
For women and birthing people, regardless of age who are admitted outside of maternity and require thromboprophylaxis please refer to "Pregnant Women admitted outside the Maternity Unit (including ED)" guideline (B32/2011).

Related documents:

VTE (Venous Thromboembolism) in Pregnancy UHL Obstetric Guideline

UHL Anticoagulation Policy

Obesity in Pregnancy, Labour and the Puerperium UHL Obstetric Guideline

Booking process and Risk Assessment UHL Obstetric Guideline

Caesarean section UHL Obstetric guideline

2. Assessment

- Complete assessment on admission (in-patient).
- Information leaflet MED038-1108 "Reducing the risk of Blood Clots While You Are in Hospital" to be given to all patients on admission.
- Repeat assessment of new onset or transient risk factors every 48-72 hours (as risk of venous thromboembolism may change as events change).
- Assessment to be completed by trained staff (midwife or obstetrician).
- Assessment to be documented on proforma.

2.1 Assessment of risk factors:

Please see VTE assessment form below.

2.2 VTE risk assessment at booking

A risk assessment should be completed at booking by the Community Midwives and this should be documented in the hand held notes. A score should be documented within the risk category.

Women and birthing people with a score of 3 or more require thromboprophylaxis

Where the score of 3 or more is as a result of previous VTE (except for a single event related to major surgery), known high risk thrombophilia or medical disorders thromboprophylaxis will be considered to be commenced in first trimester, by the Haematology / Obstetric Team in the Antenatal Clinic and this group of women or birthing people require a Haematology / Obstetric Clinic appointment. A referral form should be emailed to HaemObsMailbox@uhl-tr.nhs.uk

Women or birthing people with a score of 3 as a result of a combination of the other risk factors on the risk assessment form (i.e. age 40 or more down to assisted conception, BMI) require thromboprophylaxis from 28 weeks and these women and birthing people should also be referred to the Haematology / Obstetric Clinic and a referral form should be faxed through by the Antenatal Core Midwives.

Women and birthing people who score 4 as a result of the combination of the other risk factors require thromboprophylaxis as soon as is practicable and so a referral to Haematology / Obstetric Clinic should be faxed through by the Antenatal Core Midwives on receipt of the hand held notes.

NB: If the woman or birthing person will be attending another clinic e.g. Diabetic, Health and Wellbeing, Renal, Maternal Medicine etc. thromboprophylaxis should be commenced by the doctor in that clinic. A shared care agreement is no longer required but a letter to the GP is required in order to inform them of the dose, indication and requirement for repeat prescriptions.
No referral to Haem/Obs clinic is then required

Subsequent prescriptions should be provided by the GP.

2.3 Thromboprophylaxis and Covid

At any point during pregnancy, if a woman or birthing person tests positive for Covid-19 a VTE risk assessment (appendix 2) must be carried out as per RCOG Green-Top Guideline No 37a

Being Covid-19 positive carries a VTE risk score of 2.

Community setting

If a woman or birthing person is;
less than 28 weeks gestation and has a VTE score of 4,
Or
is more than 28 weeks gestation and has a VTE score of 3
They require 10 days of thromboprophylaxis.
Contact Maternity Assessment Unit (MAU) to arrange a prescription of Fragmin and a sharps box (see appendix 3).

Hospital setting

All pregnant women and birthing people admitted with confirmed or suspected COVID-19 should receive prophylactic LMWH, unless birth is expected within 12 hours. If severe complications of COVID-19: dosing regimen of LMWH should be discussed with an MDT, including a senior obstetrician and clinician with expertise in managing VTE in pregnancy. If hospitalised with confirmed COVID-19 thromboprophylaxis must be prescribed for 10 days following hospital discharge. If persistent morbidity, consider a longer duration of thromboprophylaxis.

All postpartum admissions with confirmed/suspected COVID-19 within 6 weeks of birth must be prescribed:

- LMWH for the duration of admission
- LMWH for at least 10 days following discharge
- Extend this for 6 weeks if ongoing morbidity

2.4 Thromboprophylaxis management in women and birthing people who have been reviewed in the Haematology-Obstetric Clinic or who have been admitted to the Ante/Postnatal Ward in the Consultant Unit only:

At 28 weeks gestation or less, women or birthing people with a **score** of **four or more risk factors** should receive Thromboprophylaxis with Low Molecular Weight Heparin for the remainder of the pregnancy and for 6 weeks postpartum.

At more than 28 weeks gestation, women or birthing people with **a score of three or more risk factors** should receive Thromboprophylaxis with Low Molecular Weight Heparin and this should be continued for the remainder of the pregnancy and for 6 weeks postpartum unless on discharge the score becomes 2 or unless an individualised delivery plan specifies longer.

Booking or most recent weight	Enoxaparin Dose
Body weight <50 kg Or e-GFR <30/ml	20mg OD
50-90kg	40 mg OD
91-130kg	60 mg OD
131-170kg	80 mg OD
>170kg	0.6mg/kg/day can be in divided doses

2.5. VTE Risk assessment on discharge

All women and birthing people should have a VTE risk assessment completed at discharge home and this should be documented on the risk assessment form. The score of 1 given as a result of the admission to hospital antenatally or postnatally should be deducted from the final score.

Anyone requiring antenatal thromboprophylaxis with an antenatal VTE risk score of 3 or more should receive 6 weeks of postpartum thromboprophylaxis.

Women and birthing people with a postnatal VTE score of 3 or more:

Start thromboprophylaxis and continue for 7 days postpartum.
• If 3 scored as a result of admission in labour thrombopropylaxis is only required whilst in hospital (Consultant unit only) and not required on discharge home.
• A VTE risk assessment should be documented on discharge and therefore the score of 1 for admission (Antentally or postnatally) should be subtracted from the final score.

2.6 Stand-alone Birth Centre only

Women and birthing people who have scored 3 as a result of admission in labour to the Birth Centre and score 2 on VTE risk assessment on discharge do not require postnatal thrombopropylaxis.

2.7 Contraindications to Enoxaparin

- Known bleeding disorder e.g. Von Willebrands or platelets <50 x 10^9/l
- Haemorrhagic stroke or risk of CNS bleed such as head injury
- Not routinely used in ischaemic stroke unless haemorrhagic risk excluded
- Risk of gastrointestinal bleed
- History of heparin induced thrombocytopenia (consider if platelets fall after 5-10 days of treatment)
- Renal failure GFR<30ml/min (reduce dose of Enoxaparin 20mg OD) OR
- Other condition with high risk of serious bleed (discuss with consultant if risk / benefit balance not clear)
- Regional anaesthesia. At least 12 hours should be allowed to elapse following Enoxaparin, before insertion / removal of an epidural catheter. If therapeutic doses are used, 24 hours should be allowed to elapse.
- After insertion / removal of an epidural catheter, Enoxaparin should be delayed for 4 hours

2.8 Symptoms of VTE

If patients present with symptoms of VTE (e.g. chest pain, breathlessness, calf swelling etc.) during pregnancy or puerperium, their pre-existing and acquired risk factors need to be taken into account and appropriate clinical probability scoring performed to ensure they receive adequate investigations. Please refer to the 'Investigations of VTE in pregnancy' guideline.

3. Intrapartum Care/Management Plan

Low molecular weight heparin should not be given to women or birthing people who are admitted in active labour.

Women or birthing people who have been receiving thromboprophylaxis in the antenatal period should already have an intrapartum care plan within the health record and this should be followed.

As a minimum this should include:

- Peripartum management of thromboprophylaxis (e.g. when to omit LMWH and when to resume if at all)
- Any additional measures to be taken intrapartum including the third stage
- The need for postpartum continuation of thromboprophylaxis, including duration and the need for follow up.
- Prior to discharge, any required follow up arrangements with Haematology services should be made.

Women who score 2 as a result of being admitted in labour (new onset / transient risk factor) do not require thromboprophylaxis. However, they should be kept well hydrated for the duration of their labour.

If they are to remain in hospital for longer than 6 hours after delivery and have a score of 3 or more, they should have Thromboprophylaxis as per the VTE assessment chart.

3.1 Anti Embolic Stockings

- ALL women and birthing people with a score of 3 should wear AES for the duration of their hospital stay, whether in labour or as an inpatient on the Ante / Postnatal Ward
- If AES are contra indicated i.e.
    - Peripheral Vascular Disease or recent vascular surgery.
    - Insensate leg; e.g. numbness due to local anaesthesia, neuropathy, diabetes.
    - Cellulitis.
    - Dermatitis.
    - Massive oedema.
    - Leg/foot ulcers/wounds.
    - Gangrene.
    - Fragile "tissue paper" skin.
    - Cardiac failure.
    - Major limb deformity preventing correct fit
    - Unusual leg size or shape.
    - Allergy to material of manufacture.
    - Suspected or confirmed acute DVT or PE.
    - Presence of malignancy in legs.

- The reason should be documented on the prescription chart
- The woman's or birthing person's leg should be measured so that the correct size is fitted and this should be documented on the prescription chart
- The AES should be removed daily and the skin inspected and this should be documented on the prescription chart

4. Education and Training

All staff will have access to the guideline via INsite (The Trust intranet site). There is also a Specialist Nurse for haematology (available on ext 15990) identified as a lead to assist implementation at clinical level and act as a resource

5. Monitoring Compliance

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements

6. Supporting References

-Lewis G ed Saving mothers' lives: reviewing maternal deaths to make motherhood safer - 2003-2005.

-The seventh report of the Confidential Enquiries into Maternal Deaths in the United Kingdom. London: CEMACH, 2007

-RCOG Reducing the risk of Thrombosis and Embolism during pregnancy and the (No: 37a) Januray 2023 rcog.org.uk/gtg-no37a-2015_amended-2023.pdf

-NICE Reducing the risk of venous thromboembolism (deep vein thrombosis and pulmonary embolism) in patients admitted to hospital. (CG92) March 2018, updated August 2019. nice.org.uk/guidance/ng89/venous-thromboembolism-in-over16s-reducing-the-risk-of-hospitalacquired-deep-vein-thrombosis-or-pulmonary-embolism

Thromboprophylaxis for Venous Thromboembolism UHL Guideline B9/2016 (accessed 17/10/2023)

7. Key Words

VTE, Thromboprophylaxis, risk assessment, Enoxaparin , low molecular weight heparin

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The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

DEVELOPMENT AND APPROVAL RECORD FOR THIS DOCUMENT		
Author / Lead Officer:	C Oppenheimer, F Siddiqui, L Qualie and S Pavord Consultant Obstetricians and Haematologists	**Executive lead:**
Reviewed by:	H Maybury & N Archer	

REVIEW RECORD			
Date	**Issue Number**	**Reviewed By**	**Description Of Changes (If Any)**
December 2016	V2	As above	Dalteparin to be given for 7 days postpartum not 5. Process for VTE risk assessment at booking inserted.
October 2020	V3	R Saxena, H Maybury & N Archer	Dalteparin to be given for 6 weeks not 7 days for risk score of 3 or more antenatally, depending on VTW score postnatally. Covid 19 section added, any women with confirmed covid-19 must have thromboprophylaxis until the woman has recovered from the acute illness (between 7 and 14 days).
December 2020	V4	Natasha Archer and Helena Maybury	Appendix 3 added. To contact MAU for fragmin prescription if in community
January 2022	V4.1	L Taylor	Update flow chart appendix 3 in line with update of guideline C52/2020
October 2023	V5	Natasha Archer and Helena Maybury	Format update Birthing people/person terminology added Contraindications to AES added Updated flow chart appendix 3 Updated references

PREGNANCY AND POSTNATAL VTE RISK ASSESSMENT

Insert date of assessment in the appropriate column and tick all factors that apply.

Pre-existing factors- Date	Score
Previous VTE (except a single event related to major surgery)	4
Previous VTE provoked by major surgery	3
Known high-risk thrombophilia	
Medical disorder e.g. Nephrotic syndrome, sickle cell, heart or lung disease, SLE, IV drug user, Cancer, Myeloproliferative disorder e.g. thrombocythaemia, polycythaemia vera	3
Age ≥40 years	1
Obesity BMI>30	1
Obesity BMI>40	2
Parity ≥3	1
Smoker	1
Gross varicose veins	1
First degree family history of unprovoked or oestrogen related VTE	1
Known low-risk thrombophilia	1
Assisted conception (antenatal only)	1
Total number of pre-existing risk factors	
Assessment completed by – sign and print name	

New onset or transient factors- Date	Score	Date					
ADMISSION to hospital (antenatal or postnatal)	1						
Dehydration and/or hyperemesis.	3						
Covid 19 Positive	2						
Current infection e.g. COVID, pyelonephritis, chest infection, cellulitis, HIV, post-partum wound infection or postnatal re admission	2						
Multiple pregnancy	1						
Midcavity or rotational delivery							
Caesarean Section in labour	**3**						
Elective caesarean section	2						
Immobility or paraplegia (Long term)	2						
Pre-eclampsia	1						
New onset proteinuria >3g/day	2						
PPH >1L or blood transfusion given	2						
Stillbirth in current pregnancy	2						
Preterm birth <37w in current pregnancy	1						
Prolonged labour >24hrs	1						
Total number of combined pre-existing and new onset / transient factors							
Assessment completed by – sign & print name							

Thromboprophylaxis management:	**Duration of thromboprophylaxis:**
Antenatal: Women with **a score of 4 or more**	Start thromboprophylaxis and continuefor remainder of pregnancy and for 6 weeks postpartum
Antenatal: Women with **a score of 3 or more**	Start thromboprophylaxis and continue for the remainder of the pregnancy if >28 weeks and for 6 weeks postpartum.
Postnatal: Women with **a score of 3 or more**	• Start thromboprophylaxis and continue for 7 days postpartum. • If 3 scored as a result of admission in labour thrombopropylaxis is only required whilst in hospital Consultant unit only) and not required on discharge home • A VTE risk assessment should be documented on discharge and therefore the score of 1 for admission (Antentally or postnatally) should be subtracted from the final score

Pre-pregnancy or booking weight	Enoxaparin dose
< 50kg	20 mg OD
50-90kg	40 mg OD
91-130kg	60mg OD
131-170kg	80 mg OD
>170kg	0.6 mg/ kg/ day

High Risk.
Has patient been seen or discussed in Haem / Obs Clinic?
Yes: see individual plan of care
No: Urgent referral
Requires antenatal prophylaxis with LMWH
AES should be worn

High risk thrombophilia: Antithrombin deficiency, Protein S or C deficiency, Homozygous factor V Leiden, compound heterozygote

Low risk thrombophilia: Heterozygous factor V Leiden, Prothrombin gene mutation

Appendix 2: VTE risk assessment for community midwives for Covid-19 positive women

Pre-existing factors- **Date**	Score
Previous VTE (except a single event related to major surgery)	4
Previous VTE provoked by major surgery	3
Known high-risk thrombophilia	3
Medical disorder e.g. Nephrotic syndrome, sickle cell, heart or lung disease, SLE, IV drug user, Cancer, Myeloproliferative disorder e.g. thrombocythaemia, polycythaemia vera	3
Covid 19 confirmed	2
Obesity BMI >40	2
Age ≥40 years	1
Obesity BMI>30	1
Parity >3	1
Smoker	1
Gross varicose veins	1
First degree family history of unprovoked or oestrogen related VTE	1
Known low-risk thrombophilia	1
Assisted conception (antenatal only)	1
Total number of pre-existing risk factors	
Assessment completed by – sign and print name	

If the woman is self-isolating, thromboprophylaxis must be prescribed until the woman has recovered from the acute illness (between 7 and 14 days) email HaemObsMailbox@uhl-tr.nhs.uk to have a prescription arranged.