Royal Cornwall Hospitals NHS Trust

Policy Under Review

Please note that this policy is under review. It does, however, remain current Trust policy subject to any recent legislative changes, national policy instruction (NHS or Department of Health), or Trust Board decision. For guidance, please contact the Author/Owner.

Information Category	Detailed Information
Document Title:	Venous Thromboembolism during Pregnancy, Labour and the Post-Partum Period Risk Assessment Clinical Guideline V3.1
This document replaces (exact title of previous version):	Venous Thromboembolism during Pregnancy, Labour and the Post-partum Period Risk Assessment Clinical Guideline V3.0
Date Issued / Approved:	December 2023
Date Valid From:	January 2024
Date Valid To:	July 2025
Author / Owner:	Carrie Gray, DVT Clinic Manager. Mr Andrew McSorley, Thrombosis specialist Nurse. Sophie Haynes, Consultant Obstetrician.
Contact details:	01872 253597
Brief summary of contents:	This gives guidance to midwives and obstetricians in the timing of risk assessments for Venous Thromboembolism (VTE) during pregnancy, labour and post-natal period and the referral pathway for those women identified as being at risk. This gives guidance to obstetricians on the planning and prescribing of thromboprophylaxis for women who have an intermediate or high risk of VTE in pregnancy, labour and post-natal period.
Suggested Keywords:	VTE risk assessment, thromboprophylaxis.
Target Audience:	**RCHT:** Yes **CFT:** No **CIOS ICB:** No
Executive Director responsible for Policy:	Chief Medical Officer

Information Category	Detailed Information
Approval route for consultation and ratification:	Maternity Guidelines Group
Manager confirming approval processes:	Caroline Chappell
Name of Governance Lead confirming consultation and ratification:	Tamara Thirlby
Links to key external standards:	CNST 3.8.
Related Documents:	• Confidential enquiry into maternal and child health. (Dec 2007) **Saving mothers lives. The seventh report**. CEMACH. London. • RCHT July 2012: **clinical guideline for booking, ante natal care and information giving'.** • RCOG 2009: **Reducing the risk of thrombosis and embolism during pregnancy and the puerperium**. Guideline No. 37. November 2009. RCOG, London: 2009. • Knight M, Kenyon S, Brocklehurst P, Neilson J, Shakespeare J, Kurinczuk JJ (Eds.) on behalf of MBRRACE-UK. Saving Lives, Improving Mothers' Care - Lessons learned to inform future maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2009–12. Oxford: National Perinatal Epidemiology Unit, University of Oxford 2014. • RCOG 2015: Reducing the risk of Venous thrombo-embolism during pregnancy and the puerperium, Greentop Guideline 37a April 2015 RCOG, London 2015.
Training Need Identified:	No
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical/ Midwifery and Obstetrics

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express

permission of the author or their Line Manager.

Venous Thromboembolism during Pregnancy, Labour, and the Post-Partum Period Risk Assessment Clinical Guideline

V3.1

January 2024

1. Aim/Purpose of this Guideline

1.1. This gives guidance to midwives and obstetricians in the timing of risk assessments for venous thromboembolism (VTE) during pregnancy, labour and post-natal period and the referral pathway for those women identified as being at risk.

1.2. This gives guidance to obstetricians on the planning and prescribing of thrombo-prophylaxis for women who have an intermediate or high risk of VTE in pregnancy, labour, and post-natal period.

1.3. This guideline makes recommendations for women and people who are pregnant. For simplicity of language the guideline uses the term women throughout, but this should be taken to also include people who do not identify as women but who are pregnant, in labour and in the postnatal period. When discussing with a person who does not identify as a woman, please ask them their preferred pronouns and then ensure this is clearly documented in their notes to inform all health care professionals.

1.4. This version supersedes any previous versions of this document.

Data Protection Act 2018 (UK General Data Protection Regulation – GDPR) Legislation.

The Trust has a duty under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team.

Royal Cornwall Hospital Trust rch-tr.infogov@nhs.net

2. The Guidance

2.1. **Assessment of risk**

Pregnancy, labour, and delivery are associated with a tenfold increase in the risk of VTE. Therefore, all women should undergo a documented assessment of risk factors for VTE as follows:

2.2. **At booking**

2.2.1. Risk assessment for VTE will be performed, on all women, at booking. The pathway for referral should be followed as per the risk assessment tool, which is integral to the maternity handheld notes. (Appendix 3).

2.2.2. At booking risk assessment for VTE will be performed, on all pregnant people. The pathway for referral should be followed as per the risk assessment tool, which is integral to the maternity handheld notes.

2.2.3. If referral to the specialist clinic is required, this should be completed by electronic referral within the electronic health record.

2.2.4. If a separate referral to a consultant clinic is required, this should be recorded within the patient record in the electric health record system. This will apply for women with significant co-morbidities, cardiac anomalies etc.

2.2.5. Declined referrals (when risk factors have needed further investigation) will be communicated to the community midwife via email and the community midwife should communicate this with the pregnant person will be documented as a telephone call on the electronic record.

2.2.6. Referrals will be received by the bookings team and appointments allocated into the VTE midwife clinic, fortnightly in St Austell and Truro. Patients will be sent an invitation letter generated by the admin team including a patient information leaflet.

2.2.7. Referrals will also be automatically sent into a generic email where they will be screened by the midwife prescriber and the specialist consultant informed, if necessary, patients with a previous personal history of DVT or PE will be offered an appointment with the thrombosis team (rch-tr.thrombosisnurses@nhs.net), patients with a complex medical history may be seen in maternal medicine on a case-by-case basis.

2.2.8. Pregnant people seen in the specialist VTE midwife clinic. These patients will have a combination of background risk factors which means they may be indicated for both ante and post-natal prophylaxis with LMWH.

2.2.9. If prescription is required, this will be issued in the midwife clinic by the midwife independent prescriber for a course of 30 days and a letter will be sent to the GP for a repeat prescription.

2.2.10. Suggested thromboprophylactic doses for antenatal and postnatal LMWH:

See table below (NEW 2023).

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*

*may be given in 2 divided doses

* Women receiving doses above 40 mg should not have an epidural sited until at least 24 hours after their last dose. Between 12-24hrs a spinal anaesthetic maybe considered as this might be lower risk compared to a general anaesthetic. An epidural is still likely to be contraindicated and a remifentanil PCA recommended as an alternative. Neuraxial anaesthesia should not be administered less than 12 hours after any dose more than 40mg. Women on doses on higher of 40mg who have neuraxial anaesthesia within 24hours should have informed consent using the BRAIN tool, about the risks and close bromage score monitoring. Please discuss with the consultant anaesthetist who will advise an individualised plan for the woman.

  Consideration of splitting the LMWH for those people on higher doses due to being greater than 90kg should be made. This can be considered from 37 weeks onwards.

2.2.11. The midwife prescriber will ensure all risk assessments and referrals are completed and have a holistic consultation with the pregnant person, addressing and acting on any concerns they have, they will teach the pregnant person or a support person to administer LMWH if required and how to safely dispose of sharps, the pregnant person will be provided with a pack to take home and sent a follow up email.

2.2.12. When pregnant people are seen by in the VTE midwife clinic, a letter will be added to the patient's electronic maternity record which can be accessed by the midwife, consultant obstetrician and consultant anaesthetist. A copy of this letter will also be sent to the woman's GP informing them of the plan of care and requesting ongoing prescription if required.

2.2.13. **Ongoing care during Pregnancy**

2.2.13.1. LMWH is a safe and commonly used drug which does not cross the placenta, it does however, minimally increase the risk of bleeding following the birth.

2.2.13.2. If the pregnant person experiences any bleeding during their pregnancy, they will be advised to stop injecting LMWH until the bleeding has stopped.

2.2.13.3. Pregnant people taking LMWH in pregnancy are advised against birthing at home or in a birth centre away from hospital. They are within criteria for the alongside birth centre (Truro Birth Centre) regardless of timing of last dose of LMWH.

2.2.13.4. An epidural/spinal block should not routinely be sited if LMWH has been administered within the preceding 24 hours and pregnant people should be advised to stop injecting LMWH immediately if they go into labour or before any planned admission for induction or elective caesarean.

2.3. Antenatal inpatient admission

2.3.1. All antenatal women admitted to RCH should automatically be considered for thrombo-prophylaxis if the risk of VTE outweighs the risk of bleeding (Appendix 5). The appropriate thrombo-prophylaxis should be prescribed, in discussion with the woman.

2.3.2. If the risk of bleeding or requiring delivery is high the benefits of VTE prophylaxis needs to be individually risk assessed the obstetric led ward round daily. In these cases, the use of anti-embolic stockings maybe considered.

2.3.3. If using LMWH in pregnant women admitted to hospital, start it as soon as possible and within 14 hours of the risk assessment being completed and continue until the woman is no longer at increased risk of VTE or until discharge from hospital or midwife-led unit.

2.3.4. If an antenatal admission increases a woman's VTE risk to high/intermediate, and this change in risk persists on discharge to home, a referral to the haematology team should be made on discharge.

2.4. Admission at labour/delivery

2.4.1. Those women admitted for induction of labour, early labour and established labour will be exempt from risk assessment until post-delivery and should not be offered thrombo-prophylaxis.

2.4.2. If thrombo-prophylaxis has been given in the antenatal period, this should be stopped at onset of labour.

2.5. Post delivery

2.5.1. After delivery a risk assessment for VTE and bleeding is to be made by the person conducting the delivery by completing the postnatal VTE risk assessment form, which is integral to the maternity handheld notes. (Appendix 6).

2.5.2. If intermediate or high risk this must be communicated to a doctor who will prescribe/offer appropriate prophylaxis in discussion with the woman, using the table on the back of the risk assessment proforma. (Appendix 7).

2.5.3. If the patient was on antenatal prophylaxis or was deemed high risk for needing antenatal prophylaxis, they must be offered 6 weeks postnatal prophylaxis. It is important to check the antenatal risk factors alongside the postnatal risk factors to ensure that this is not missed (NEW 2021).

2.5.4. Consider IPC (intermittently pneumatic compression) if patient is high risk for VTE and bleeding postnatally e.g., those that have a Bakri balloon in situ but high risk of a VTE.

2.6. **Women delivering at home or birthing centre**

All women regardless of the mode or place of delivery should be risk assessed. The midwife conducting the delivery should complete the risk assessment as above. Those women who are at high risk or intermediate risk of VTE should be offered prophylaxis for the recommended duration and if this is accepted it can be prescribed by their GP or they may be referred to the day assessment unit (DAU) at RCHT within the next 24 hours or Wheal Rose if at the weekend.

2.7. **The first dose of post-partum LMWH can be given:**

- Where bleeding is appropriate for the postnatal period.
- After 4 hours of epidural catheter removal and spinal.
- Then daily following the first dose.
- If patient is at risk of low platelets, ensure they are >75.

3. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	• The audit will take into account record keeping by obstetricians and midwives. • The results will be inputted onto an excel spreadsheet. • The audit will be registered with the Trust's audit department.
Lead	Audit Midwives.
Tool	• Was a booking risk assessment completed? • If an ante natal admission (non labour related), was a risk assessment completed? • Was a post-delivery risk assessment completed? • If assessed as intermediate or high, was the appropriate referral made? • If the woman required thromboprophylaxis, was an appropriate management plan documented in her notes?

Information Category	Detail of process and methodology for monitoring compliance
Frequency	1% or 10 sets, whichever is the greater, of all health records of women who have delivered following thromboprophylaxis during the antenatal and/or post-natal period will be audited over a 12-month period.
Reporting arrangements	• A formal report of the results will be received annually at the maternity risk management and clinical audit forum, as per the audit plan. • During the process of the audit if compliance is below 75% or other deficiencies identified, this will be highlighted at the next maternity risk management and clinical audit forum and an action plan agreed.
Acting on recommendations and Lead(s)	• Any deficiencies identified on the annual report will be discussed at the maternity risk management and clinical audit forum and an action plan developed. • Action leads will be identified and a time frame for the action to be completed by. • The action plan will be monitored by the maternity risk management and clinical audit forum until all actions complete.
Change in practice and lessons to be shared	• Required changes to practice will be identified and actioned within a time frame agreed on the action plan. • A lead member of the forum will be identified to take each change forward where appropriate. • The results of the audits will be distributed to all staff through the risk management newsletter/audit forum as per the action plan.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the Equality Diversity And Inclusion Policy or the Equality and Diversity website.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Venous Thromboembolism during Pregnancy, Labour and the Post-Partum Period Risk Assessment Clinical Guideline V3.1.
This document replaces (exact title of previous version):	Venous Thromboembolism during Pregnancy, Labour and the Post-partum Period Risk Assessment Clinical Guideline V3.0.
Date Issued/Approved:	December 2023.
Date Valid From:	January 2024.
Date Valid To:	January 2025.
Directorate / Department responsible (author/owner):	Carrie Gray, DVT Clinic Manager. Mr Andrew McSorley, Thrombosis specialist Nurse. Sophie Haynes, Consultant Obstetrician.
Contact details:	01872 25 35 97.
Brief summary of contents:	This gives guidance to midwives and obstetricians in the timing of risk assessments for Venous Thromboembolism (VTE) during pregnancy, labour and post-natal period and the referral pathway for those women identified as being at risk. This gives guidance to obstetricians on the planning and prescribing of thromboprophylaxis for women who have an intermediate or high risk of VTE in pregnancy, labour and post-natal period.
Suggested Keywords:	VTE risk assessment, thromboprophylaxis.
Target Audience:	**RCHT:** Yes **CFT:** No **CIOS ICB:** No
Executive Director responsible for Policy:	Chief Medical Director.
Approval route for consultation and ratification:	Maternity Guidelines.
Manager confirming approval processes:	Caroline Chappell.

Information Category	Detailed Information
Name of Governance Lead confirming consultation and ratification:	Mel Gilbert.
Links to key external standards:	CNST 3.8.
Related Documents:	• Confidential enquiry into maternal and child health. (Dec 2007) **Saving mothers lives. The seventh report**. CEMACH. London. • RCHT July 2012: **clinical guideline for booking, ante natal care and information giving'.** • RCOG 2009: **Reducing the risk of thrombosis and embolism during pregnancy and the puerperium**. Guideline No. 37. November 2009. RCOG, London: 2009. • Knight M, Kenyon S, Brocklehurst P, Neilson J, Shakespeare J, Kurinczuk JJ (Eds.) on behalf of MBRRACE-UK. Saving Lives, Improving Mothers' Care - Lessons learned to inform future maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2009–12. Oxford: National Perinatal Epidemiology Unit, University of Oxford 2014. • RCOG 2015: Reducing the risk of Venous thrombo-embolism during pregnancy and the puerperium, Greentop Guideline 37a April 2015 RCOG, London 2015.
Training Need Identified?	No.
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet.
Document Library Folder/Sub Folder:	Clinical / Midwifery and Obstetrics.

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
June 2007	1.0	Initial document.	Dr Aylur Rajasri, Consultant Obstetrician.

Date	Version Number	Summary of Changes	Changes Made by
February 2011	1.1	Updated in line with new RCOG guidance and added compliance monitoring.	Dr Aylur Rajasri, Consultant Obstetrician.
October 2012	1.2	Change to compliance monitoring only.	Dr Aylur Rajasri, Consultant Obstetrician.
May 2016	1.3	Updated in line with new RCOG guidance.	Mr Andrew McSorley, Thrombosis Practitioner VTE/CNS.
Nov 2018	2.0	Updated in line with NICE 89 guidelines	Mr Andrew McSorley, Thrombosis Practitioner VTE/CNS.
October 2019	2.1	Review of document but no additions required to ensure that BMI is based upon the measurement taken at the dating scan	Sarah-Jane Pedler, Practice Development Midwife.
November 2019	2.2	Appendixes 3 to 5 included as per version V2.0 previously.	Mr Andrew McSorley, Thrombosis Practitioner VTE/CNS.
December 2021	3.0	Review of document with minor changes.	Sophie Haynes, Obstetric Consultant.
December 2023	3.1	Changes to treatment in line with Trust change to Enoxaparin	Lizzie Anstey, Community Team Leader.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity, and Inclusion Team rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy / policy / proposal / service function to be assessed:	Venous Thromboembolism during Pregnancy, Labour and the Post-Partum Period Risk Assessment Clinical Guideline V3.1.
Directorate and service area:	Obstetrics and Gynaecology.
Is this a new or existing Policy?	Existing.
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Andrew McSorley, Thrombosis Practitioner VTE/CNS.
Contact details:	01872 25 35 97

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	To give guidance to midwives and obstetrician on risk assessing for VTE and management of thromboprophylaxis.
2. Policy Objectives	Ensure women at risk of VTE are identified and managed.
3. Policy Intended Outcomes	Prevention of VTE in pregnant woman.
4. How will you measure each outcome?	Compliance monitoring tool.
5. Who is intended to benefit from the policy?	Pregnant women.

Information Category	Detailed Information
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: Yes • Patients/ visitors: No • Local groups/ system partners: No • External organisations: No • Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/ groups:** Maternity Guideline Group.
6c. What was the outcome of the consultation?	Guideline agreed.
6d. Have you used any of the following to assist your assessment?	**National or local statistics, audits, activity reports, process maps, complaints, staff, or patient surveys:** No.

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	
Religion or belief	No	
Marriage and civil partnership	No	

Protected Characteristic	(Yes or No)	Rationale
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: DS Coordinator / Maternity Guidelines Midwife.

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
Section 2. Full Equality Analysis

Appendix 4. Antenatal VTE Assessment

This form are available in from the RCHT green handheld maternity notes.

affix patient label

NHS
Royal Cornwall Hospitals
NHS Trust

Antenatal VTE Risk Assessment and Management at Booking

- Any previous VTE except for a single event related to major surgery

Single risk factor

HIGH RISK
Requires ante-natal prophylaxis with LMWH
Refer to Haematology Services email thrombosis nurses rch-tr.thrombosisnurses@nhs.net ☐

- Hospital admission
- Single previous VTE related to major surgery
- High risk Thrombophilia+ no VTE for example factor 5 lieden/antiphospholipid syndrome
- Ovarian hyperstimulation
- Significant ACTIVE medical Co-morbidities e.g. cancer heart/ lung/ kidney disease, SLE / inflammatory bowel disease/ sickle cell / IVDU

Single risk factor

INTERMEDIATE RISK ☐
- Consider antenatal thromboprophylaxis with LMWH
- Offer referral to VTE Midwife Prescriber Clinic (E3 referral) (appointment or letter of advice will be sent on case to case basis). For significant medical co-morbidities refer to relevant Consultant clinic. The VTE Midwife will discuss high risk cases with mat med.

- Age > 35 years
- BMI > 30
- BMI >40 (count as 2 risks)
- Parity 3 or more
- Smoker
- Gross Varicose veins
- Current pre-eclampsia
- Current systemic infection
- Immobility more than 3 days/ Long haul flight> 4 hours within 2 weeks
- Dehydration, hyperemesis
- Multiple pregnancy or IVF
- Unprovoked or oestrogen based VTE in a first degree relative

3 risk factors

4 OR MORE RISKS: ☐
Prophylaxis from first trimester

3 RISKS: ☐
Prophylaxis from 28 weeks
- Refer into VTE Midwife clinic via E3

<3 risk factors

LOWER RISK
- Mobilisation and avoidance of dehydration ☐

Suggested thromboprophylactic doses for antenatal and postnatal LMWH

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*

**maybe given in 2 divided doses*

Sign & **Stamp** ..... **Date** ..... **Time** .....

Appendix 5. Postnatal VTE Risk Assessment

This form are available in from the RCHT green handheld maternity notes.

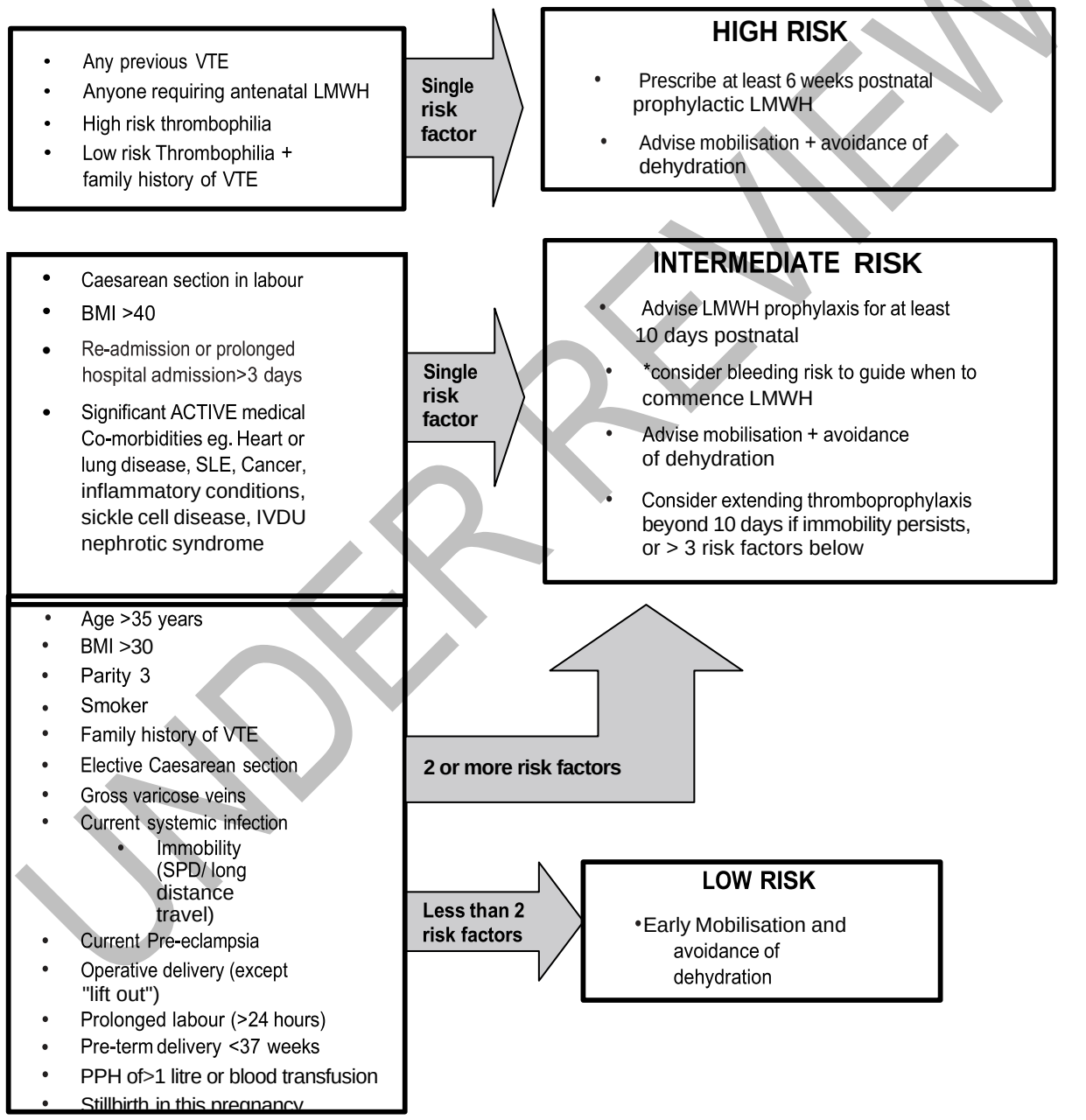
affix patient label

NHS
Royal Cornwall Hospitals
NHS Trust

Postnatal VTE Assessment

(To be completed after birth by named midwife or when admitted in the postnatal period)

Place of risk assessment ..... **Date** .....



Bleeding risk: Platelets <75; active PPH; within 4 hrs of epidural/ spinal

Royal Cornwall Hospitals NHS Trust

VTE Assessment and Management in the Postnatal Period

To be filled by the Doctor clerking the patient

Risk of VTE	Thromboprophylaxis
High/intermediate risk of VTE (with **low** bleeding risk)	• LMWH • Early mobilisation • Adequate hydration
High/intermediate risk of VTE (with **significant** risk of bleeding or declines fragmin)	• TEDS stockings • Early mobilisation • Adequate hydration
Low risk of VTE	• Early mobilisation • Adequate hydration

- If LMWH prescribed- Dose and duration.
- Drug chart checked / woman informed.
- FBC checked / performed before prescription.

Suggested thromboprophylactic doses for antenatal and postnatal LMWH

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*

*maybe given in 2 divided doses

Epidural / spinal analgesia: Placement or removal of catheter should be delayed for 12 hours after administration of LMWH. LMWH should not be given sooner than 4 hrs after catheter removal.

If woman delivered at home or in birthing centre and accepts LWMH - refer to DAU for FBC and Prescription

There is no need to repeat FBC for 10 days prophylactic LMWH, unless the woman reports with rashes.

Sign and **Stamp** ..... **Date** ..... **Time** .....