Thromboprophylaxis guideline for obstetric women

Author/Owner	**Obstetric lead Consultant/ Maternity Guideline Group**	
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1.0 Introduction

Pulmonary thromboembolism remains one of the major direct causes of maternal death in the UK. Pregnancy is a risk factor for Venous Thromboembolism (VTE) and is associated with a ten-fold increase in risk. The highest risk period is around delivery and the puerperium until about six weeks following delivery.

Most women will not require thromboprophylaxis during or after their pregnancy. The majority of those who do can be identified by a number of well-established risk factors.

2.0 Objective

This guideline is intended as a framework for the assessment and management of risk of VTE in pregnancy and the immediate postnatal period, thus ensuring that all women receive care of a consistent standard.

3.0 Scope

This guideline applies to all medical staff on the Maternity unit and midwifery staff/maternity support staff working on the maternity unit and in community.

4.0 Main body of the document

4.1 Risk Assessment

Thromboprophylaxis Risk Assessment

Thromboprophylaxis risk assessment should be completed at the first antenatal visit, or pre pregnancy.

Repeat assessments should then be carried out at every antenatal check; with each new inpatient episode; postnatally and following changes in the woman's condition or circumstances which affect her risk of developing a thromboembolism.

Each risk factor has a numerical risk score. The total score is calculated and management is planned as follows:

- In the antenatal period a score of ≥ 3 requires referral for shared care and an appropriate management plan in accordance with Table 1

- In the postnatal period a score of ≥ 2 requires medical referral and an appropriate management in accordance with Table 2

Thromboprophylaxis should be considered if a woman is admitted to hospital in the antenatal period or has a prolonged postnatal admission (≥ 3 days) or a postnatal re-admission

Management of women with an identified bleeding risk

Risks of bleeding and clotting should be discussed with the Haematologist. Low Molecular Weight Heparin (LMWH) should be used with caution or may be contraindicated. Bleeding risks include:

- Haemophilia or other known bleeding disorder e.g. von Willebrand's disease or acquired coagulopathy
- Active antenatal or postpartum bleeding
- Women considered at risk of major haemorrhage
- Thrombocytopenia (platelet count <75)
- Acute stroke in the previous 4 weeks (haemorrhagic or ischaemic)
- Severe renal disease
- Severe liver disease (Prothrombin time above normal range or known varices)
- Uncontrolled hypertension (BP > 200mmHg systolic or >120mmHg diastolic)

4.2 Thromboprophylaxis during Pregnancy

If the woman has risk factors, document a thromboprophylaxis management plan including a plan for antenatal, labour and delivery and the puerperium.

If thromboprophylaxis is indicated, treatment should start as early in pregnancy as possible and is usually continued until at least six weeks after delivery, unless the risk factor necessitating treatment is resolved.
Women who attend antenatal clinic whose thromboprophylaxis risk assessment necessitates treatment with LMWH should commence this within 14 hours.
Refer to assessment and management charts for instructions regarding risk factors and suggested prophylaxis (Table 1 and table 2).

Table 1 Antenatal assessment and management

Risk Factor	Degree of Risk and Management
Any previous VTE except a single surgery provoked event Women who require antenatal prophylaxis must have postnatal prophylaxis for six weeks. Transient factors e.g. no risk factors except for a surgical procedure in pregnancy e.g. appendicectomy. These women will receive six weeks prophylaxis following the procedure and then will be reassessed regarding the need for ongoing prophylaxis	**High Risk:** • Requires antenatal prophylaxis with LMWH
Hospital admission Single previous VTE related to major surgery Thrombophilia but no VTE Medical co-morbidities such as: Cancer, Heart failure, Inflammatory bowel disease, inflammatory polyarthropathy, Active Systemic Lupus Erythematosus, Nephrotic syndrome, Sickle cell disease, Current intravenous drug user, Type one diabetes with nephropathy Ovarian hyperstimulation syndrome (first trimester)	**Intermediate Risk** • Consider antenatal prophylaxis with LMWH
Obesity (BMI>30) Age >35 Parity ≥ 3 Smoker Gross varicose veins Current pre-eclampsia Immobility e.g. paraplegia, pelvic girdle pain Family history of unprovoked or oestrogen- provoked VTE in first degree relative Low risk thrombophilia Multiple pregnancy In-vitro fertilisation/assisted reproductive technology Transient factors such as: hyperemesis, dehydration, current systemic infection, long distance travel	**Low Risk:** • **Four or more risk factors**: prophylaxis with LMWH from first trimester • **Three risk factors**: prophylaxis with LMWH from 28 weeks gestation • **Less than three risk factors**: consider as lower risk – encourage mobilisation and avoid dehydration
Adopted from RCOG Green top guideline 37a	

Condition specific management

Previous VTE

If there is a past history or family history of VTE, offer full screening for thrombophilia, ideally before pregnancy. Screening to include antiphospholipid antibodies and lupus anticoagulant.

Women with an unprovoked/idiopathic or oestrogen provoked VTE or one related to a transient risk factor other than major surgery, or who have other risk factors, should be offered thromboprophylaxis with LMWH throughout the antenatal period.

If there is a history of previous surgery provoked VTE for which they have completed treatment, and there are no other risk factors, give prophylactic LMWH from 28 weeks, but monitor closely for development of other risk factors.

If additional risk factors are present offer prophylactic LMWH immediately.

If previous VTE with a family history of VTE, test for antithrombin deficiency.

Before testing for thrombophilia, women should be counselled about the implications for themselves and family members of a positive or negative result. The results should be interpreted along with a haematologist.

Previous VTE with known thrombophilia

Women with previous VTE and antithrombin deficiency, who are on long term thromboprophylaxis, should have full treatment dose LMWH antenatally and six weeks postnatally or until returned to normal anticoagulant.

Women with previous VTE and antithrombin deficiency, who are **not** on long term thromboprophylaxis should have higher dose LMWH (50% or 75% of full treatment dose) antenatally and six weeks postnatally

The consultant haematologist should also be involved, and consideration given to antenatal anti-Xa monitoring and the potential for antithrombin replacement at initiation of labour or prior to caesarean section.

Other heritable thrombophilic defects have a lower risk and can have standard doses of prophylaxis.

Inherited thrombophilia with no previous history of VTE

Inherited thrombophilia is usually diagnosed through family history of VTE with associated thrombophilia and carries variable risk depending on the specific inherited condition. Individual risk assessment is required.

High risk conditions include:	Lower risk conditions include:
• Antithrombin deficiency • Homozygous Factor V Leiden • Homozygous prothrombin gene mutation • Protein C or S deficiency • Combined heterozygotes	• Heterozygous Factor V Leiden • Prothrombin gene mutation

Women should be stratified according to the level of risk associated with their thrombophilia and the presence or absence of a family history or other risk factors. Women with the higher risk thrombophilias will require antenatal and postpartum prophylaxis.

With lower risk thrombophilias, treatment is required in the puerperium and should be considered in the antenatal period if other risk factors are identified.
If thromboprophylaxis is given antenatally for a persisting risk factor, it should be continued postpartum for six weeks

Acquired thrombophilia (Antiphospholipid Syndrome)

Antiphospholipid syndrome is defined as the presence of:

A medium or high titre of antiphospholipid antibodies on two occasions twelve weeks apart when not pregnant, in association with a history of thrombosis (arterial or venous) or adverse pregnancy outcome.

An adverse pregnancy outcome is defined as:

- 3 or more unexplained miscarriages before 10 weeks of gestation
- Premature birth < 35 weeks due to severe pre-eclampsia
- Fetal Growth Restriction (FGR)
- Fetal death after 10 weeks gestation

.
Thrombophilia screening is difficult to interpret in pregnancy and specialist advice should be sought with regard to interpretation, should results be abnormal.

Women with Antiphospholipid Syndrome and previous thrombosis	
Antenatal care:	Offered antenatal treatment with LMWH as soon as possible after diagnosis of pregnancy
	Managed in collaboration with a haematologist/ rheumatologist who will advise on the dose of LMWH.
	Women on Warfarin should be counselled about its risks and converted to LMWH before the sixth week of pregnancy.

Postnatal care:	Treatment for six weeks with LMWH or until re-established on long term oral anticoagulation

Women with persistent antiphospholipid antibodies with no history of VTE and no other risk factors, should be considered to be at risk, and should be considered for LMWH for ten days postpartum.

History of Recurrent VTE

The dose of LMWH should be agreed on after consulting the haematologist (some may need higher doses).

Oral anticoagulants should be converted to LMWH as above. Women not on an oral anticoagulant, should start LMWH as soon as the pregnancy test is positive.

NB It is not necessary to monitor the platelet count for women requiring thromboprophylaxis with LMWH in pregnancy
Women requiring therapeutic management with LMWH should have their platelet count monitored once between days four and seven, then on day fourteen and then monthly following commencement of treatment until delivery.

4.3 Thromboprophylaxis during Labour and Delivery

Refer to Appendix 3 for the management of Thromboprophylaxis at delivery in women already on treatment. The pregnancy associated prothrombotic changes in the coagulation system are maximal immediately after delivery.

Management of women on LMWH

Advise women to discontinue LMWH at the onset of labour/ bleeding or prior to a planned delivery.

Give appropriate advice in advance regarding the adjustment of LMWH to minimise the period of suboptimal prophylaxis and the risk of intrapartum complications:

Induction of labour	**Actions**
Women receiving high prophylactic or therapeutic doses of LMWH:	Induction of Labour in women receiving high dose prophylactic or treatment doses of LMWH needs careful management. Reduce the dose to a prophylactic level on the day before the induction of labour, and where appropriate continue on this dose throughout labour
	If LMWH is omitted then use thigh length graduated compression stockings, Flowtron or consider the use of Geko impulse devices. Dehydration should be avoided and early mobilisation encouraged

	In all cases of induction of labour the interval between omission of LMWH and restarting after delivery should be as short as possible

Elective Caesarean section	**Actions**
Women receiving antenatal LMWH require careful management	A prophylactic dose should be given as normal on the day prior to surgery and omitted on the day of surgery The omission period should not exceed 24 hours, with the post-surgical dose being given four to six hours post -operatively or four to six hours post removal of epidural catheter.

Delivery by emergency Caesarean section	**Actions**
Requires careful management with the obstetric and Anaesthetic teams	Options for anaesthesia may be limited by timing of the last dose of LMWH. It is the joint responsibility of the anesthetist and obstetrician to decide who is to prescribe the first dose of anti-coagulants post-delivery, with following doses being prescribed by the obstetrician. The midwife should check that it is prescribed before the patient leaves the recovery area.

- Regional anaesthesia/analgesia can be sited in line with obstetric anaesthetic protocols following discussion with a senior anaesthetist:
    - Regional techniques should not be used within twelve hours of the last prophylactic dose of LMWH
    - In women on a therapeutic regime of LMWH, regional techniques should be avoided for at least 24 hours after the last dose of LMWH
    - LMWH should be avoided for four hours following spinal anaesthesia or epidural catheter removal
    - An epidural catheter should not be removed until twelve hours after a dose of LMWH.
- Spontaneous labour requires a time lag of at least twelve hours from the last dose of LMWH to the siting of regional analgesia. Alternative analgesia should be offered if the time frame is less
- Women with risk factors for bleeding such as; antepartum haemorrhage, coagulopathy, progressive wound haematoma, intra-abdominal bleeding and postpartum haemorrhage may be managed with anti-embolic stockings, Geko impulse devices, or Flowtron intermittent pneumatic compression devices. Unfractionated heparin use may be considered

NB. Any woman who develops haemorrhagic problems whilst on LMWH should have the treatment stopped and be referred to the Consultant Haematologist. Excessive blood loss and blood transfusion are also risk factors for VTE therefore, treatment should be reinstituted as soon as the risk of haemorrhage is reduced.

4.4 Thromboprophylaxis during the Postnatal Period

Postnatal Assessment

The Prothrombic changes of pregnancy do not revert to normal for several weeks after delivery.
A risk assessment is undertaken in the postnatal period and should be repeated if there are changes to the woman's condition which affect her risk of developing a thromboembolism.
The woman should be weighed as soon as she is mobile following delivery to accurately calculate her risk factors for requirements for postnatal thromboprophylaxis and correct dosage.

Table 2 Postnatal assessment and management

Risk factor	Degree of risk and Management
Any previous VTE Anyone requiring antenatal LMWH High-risk thrombophilia Low risk thrombophilia with family history of VTE (first degree relative)	**High Risk:** • Requires at least 6 weeks postnatal prophylactic LMWH
Caesarean section in labour BMI >40 (based on postnatal weight) Re-admission or prolonged admission (≥ 3 days) in the puerperium Any surgical procedure in the puerperium except perineal repair and manual removal of placenta (unless associated with PPH) Medical co-morbidities such as: cancer, heart failure, active systemic lupus erythematosus, inflammatory bowel disease or inflammatory polyarthropathy, nephrotic syndrome, Type 1 diabetes with nephropathy, sickle cell disease, current intravenous drug user	**Intermediate Risk**: • Requires at least 10 days postnatal prophylactic LMWH **NB** – Consider extending treatment if symptoms persist or there are > three risk factors
Age > 35 Obesity (BMI 30-40 based on postnatal weight) Parity ≥ 3 Smoker Elective Caesarean Section Family history of VTE (first degree relative) Low-risk thrombophilia Gross varicose veins Current systemic infection Immobility e.g. paraplegia, Pelvic girdle pain or long-	**Low Risk:** • **Two or more risk factors**: treat as intermediate risk – at least 10 days postnatal prophylactic LMWH (consider extending treatment if symptoms persist) E.g. infection, gross varicose veins, immobility • **Less than two risk factors**: consider as lower risk – encourage mobilisation and avoid dehydration

distance travel Current pre-eclampsia Multiple pregnancy Preterm delivery (< 37 weeks) Stillbirth in this pregnancy Mid-cavity rotational or instrumental delivery Prolonged labour (>24 hrs) Postpartum Haemorrhage (PPH) > 1litre or blood transfusion	
Adopted from RCOG Greentop guideline 37a	

Postnatal management

Management plans, including discharge arrangements are recorded in the woman's hospital and hand held records

The first dose of LMWH should be given four to six hours after delivery, provided there is no evidence of postpartum haemorrhage. If an epidural catheter is in situ post-delivery, the catheter should be removed twelve hours following injection and four hours prior to the next injection.
Please ensure that the LMWH is prescribed before the woman leaves the Birthing centre.

Contraception

Contraceptive advice should be given pre discharge to all women. The combined oral contraceptive pill is not advised if there is any history of DVT/PE or an inherited thrombophilia.

Thromboprophylaxis in High Risk Women

Warfarin is safe after delivery and in breastfeeding but it requires close monitoring with blood sampling and regular contact with the anticoagulant clinic. The risk of perineal haematoma and postpartum haemorrhage is increased. Warfarin can be commenced between five to seven days postpartum and LMWH continued until the International Normalised Ratio (INR) is in the therapeutic range on at least two consecutive days.

Postnatal follow up

Prescription of Dalteparin

Women who require LMWH for postpartum thromboprophylaxis should have been taught how to self-administer it prior to discharge, and be supplied with a sharps bin with instructions for the safe disposal of needles.
The Trust will provide treatment for the first 28 days (four weeks) antenatally and 42 days (6 weeks) postnatally.

Follow-up appointments

Women requiring prolonged anticoagulant therapy are referred to the anti-coagulant clinic.
The Obstetrician will send a referral letter to the Consultant Haematologist.
Women with a DVT / PE require a three month postnatal appointment with the Obstetrician to discuss treatment and implications for future pregnancies.

4.5 Agents for Thromboprophylaxis

Low-molecular-weight heparin (LMWH)

- LMWHs are the agents of choice
- Doses of LMWH are based on weight (booking or most recent)
- It is only necessary to monitor the platelet count if the woman has had prior exposure to unfractionated heparin (UFH)
- Monitoring of anti-Xa levels is not required
- Doses should be reduced in renal impairment based on Creatinine clearance
  LMWH is safe in breastfeeding

Antenatal and postnatal prophylactic dose of LMWH

Maternal weight at booking	Dose of Dalteparin
< 50kgs	2500u ONCE daily
50-90kg	5000u ONCE daily
91-130kg	7500u ONCE daily
131-170kg	5000u TWICE daily
≥171kg	75u/kg/day (in 2 divided doses, rounded to nearest syringe)

Contraindications to LMWH

LMWH should be avoided, discontinued or postponed in women at risk of bleeding after careful consideration of the balance of risks of bleeding and thrombosis.
Women with previous or current allergic reactions to LMWH should be offered an alternative preparation or alternative form of prophylaxis.
Further advice on the management of a woman with both VTE risk factors and bleeding risk factors or LMWH allergy should be sought from a haematologist.

Unfractionated heparin (UFH)

In women at very high risk of thrombosis, UFH may be used peripartum in preference to LMWH where there is an increased risk of haemorrhage or where regional anaesthetic techniques may be required.

Prophylactic dose of 5000 IU subcutaneously of UFH could be used and repeated every twelve hours until LMWH can be resumed after delivery. Regional anaesthesia can be given after four hours.

Warfarin

Use in pregnancy is restricted to situations where heparin is considered unsuitable, e.g. some women with mechanical heart valves.

Women receiving long-term anticoagulation with warfarin can be converted from LMWH to warfarin postpartum when the risk of haemorrhage is reduced, usually five to seven days after delivery.
Warfarin is safe in breastfeeding.

Mechanical venous thromboprophylaxis (TEDS, Flowtron, Geko)

Properly applied anti-embolism stockings (AES) providing graduated compression with a calf pressure of 14–15 mmHg can be used in pregnancy and the puerperium for women who are hospitalised and have a contraindication to LMWH. These include women post-caesarean section (combined with LMWH) and considered to be at high risk of VTE (e.g. previous VTE, more than four risk factors antenatally or more than two risk factors postnatally) and women travelling long distance for more than four hours.

Graduated compression stockings are recommended for 6 weeks post-delivery in women with a history of VTE or thrombophilia.
Thigh length stockings are advocated but knee length stockings should be considered if thigh length stockings are ill-fitting. Stockings should be custom fitted. If a woman has been custom fitted for stockings antenatally she will need another assessment for correct sizing in the postnatal period.

The Geko device and Flowtrons can be used in people with a high risk of venous thromboembolism, for whom other mechanical and pharmacological methods of prophylaxis are impractical or contraindicated.
Geko may reduce the high risk of VTE in these patients, and there is a low risk of the device causing harm.

Low-dose aspirin

Not recommended for thromboprophylaxis in obstetric patients.

Danaparoid

Potential use should be in conjunction with a consultant haematologist.

Fondaparinux

Should be reserved for women intolerant of heparin compounds.

Use in pregnancy should be in conjunction with a consultant haematologist.

Dextran

Avoid antenatally and intrapartum because of the risk of anaphylactoid reaction.

Direct acting Oral anticoagulants (DOAC)

The direct acting Oral anticoagulants Rivaroxaban, Apixaban, Dabigatran and Edoxaban should be avoided in pregnant women.

Use of DOACs is not currently recommended in women who are breastfeeding.

5.0 Roles and responsibilities

5.1 Midwives

Midwives must ensure that the VTE risk assessment is reviewed at each antenatal contact and every 24 hours whilst the woman is an inpatient. Once the woman is discharged, the midwife must review this at each postnatal contact.
Whilst the woman is an inpatient, the midwife must ensure the woman administers/ midwife administers her LMWH daily at the time prescribed and confirm the woman is wearing the appropriately sized TED stockings or alternative method of mechanical venous thromboprophylaxis.

5.2 Obstetricians

To ensure that the risk is reviewed and recalculated if necessary on each admission. Postnatally to ensure LMWH prescribed for appropriate length of time.

6.0 Associated documents and references

Dalteparin Summary of product characteristics, accessed online via http://www.medicines.org.uk/emc/medicine/26897

National Institute for Health and Care Excellence. Guideline 89: Venous thromboembolism in over 16s: reducing the risk of hospital acquired deep vein thrombosis or pulmonary embolism. Section 1.16 (2018) [online] https://www.nice.org.uk/guidance/ng89/resources/venous-thromboembolism-in-over-16s-reducing-the-risk-of-hospitalacquired-deep-vein-thrombosis-or-pulmonary-embolism-pdf-1837703092165

RCOG. Green-top Guideline No. 37a. Reducing the Risk of Venous Thromboembolism during pregnancy and the Puerperium. (2015)
https://www.rcog.org.uk/globalassets/documents/guidelines/gtg-37a.pdf

7.0 Training and resources

Training will be delivered as outlined in the Maternity Training Needs Analysis. This is updated on an annual basis.

8.0 Monitoring and audit

Any adverse incidents relating to the management of thromboprophylaxis will be monitored via the incident reporting system.

Any problems will be actioned via the case review and root cause analysis action plans. The action plans are monitored by the risk midwife to ensure that improvements in care are made. The trends and any root cause analysis are discussed at the monthly risk meetings to ensure that appropriate action has been taken to maintain safety.

The guideline for Thromboprophylaxis will be audited in line with the annual audit programme, as agreed by the CBU. The audit action plan will be reviewed at the monthly risk management meetings on a quarterly basis and monitored by the risk midwife to ensure that improvements in care are made.

9.0 Equality and Diversity

This section is mandatory for all Trust Approved Documents and must include the statement below:

The Trust is committed to an environment that promotes equality and embraces diversity in its performance as an employer and service provider. It will adhere to legal and performance requirements and will mainstream equality, diversity and inclusion principles through its policies, procedures and processes. This guideline should be implemented with due regard to this commitment.

To ensure that the implementation of this guideline does not have an adverse impact in response to the requirements of the Equality Act 2010 this policy has been screened for relevance during the policy development process and a full equality impact assessment is conducted where necessary prior to consultation. The Trust will take remedial action when necessary to address any unexpected or unwarranted disparities and monitor practice to ensure that this policy is fairly implemented.

This guideline can be made available in alternative formats on request including large print, Braille, moon, audio, and different languages. To arrange this please refer to the Trust translation and interpretation policy in the first instance.

The Trust will endeavor to make reasonable adjustments to accommodate any employee/patient with particular equality, diversity and inclusion requirements in implementing this guideline. This may include accessibility of meeting/appointment venues, providing translation, arranging an interpreter to attend appointments/meetings, extending policy timeframes to enable translation to be undertaken, or assistance with formulating any written statements.

9.1 Recording and Monitoring of Equality & Diversity

This section is mandatory for all Trust Approved Documents and must include the statement below:

The Trust understands the business case for equality, diversity and inclusion and will make sure that this is translated into practice. Accordingly, all guidelines will be monitored to ensure their effectiveness.

Monitoring information will be collated, analysed and published on an annual basis as part of Equality Delivery System. The monitoring will cover the nine protected characteristics and will meet statutory employment duties under the Equality Act 2010. Where adverse impact

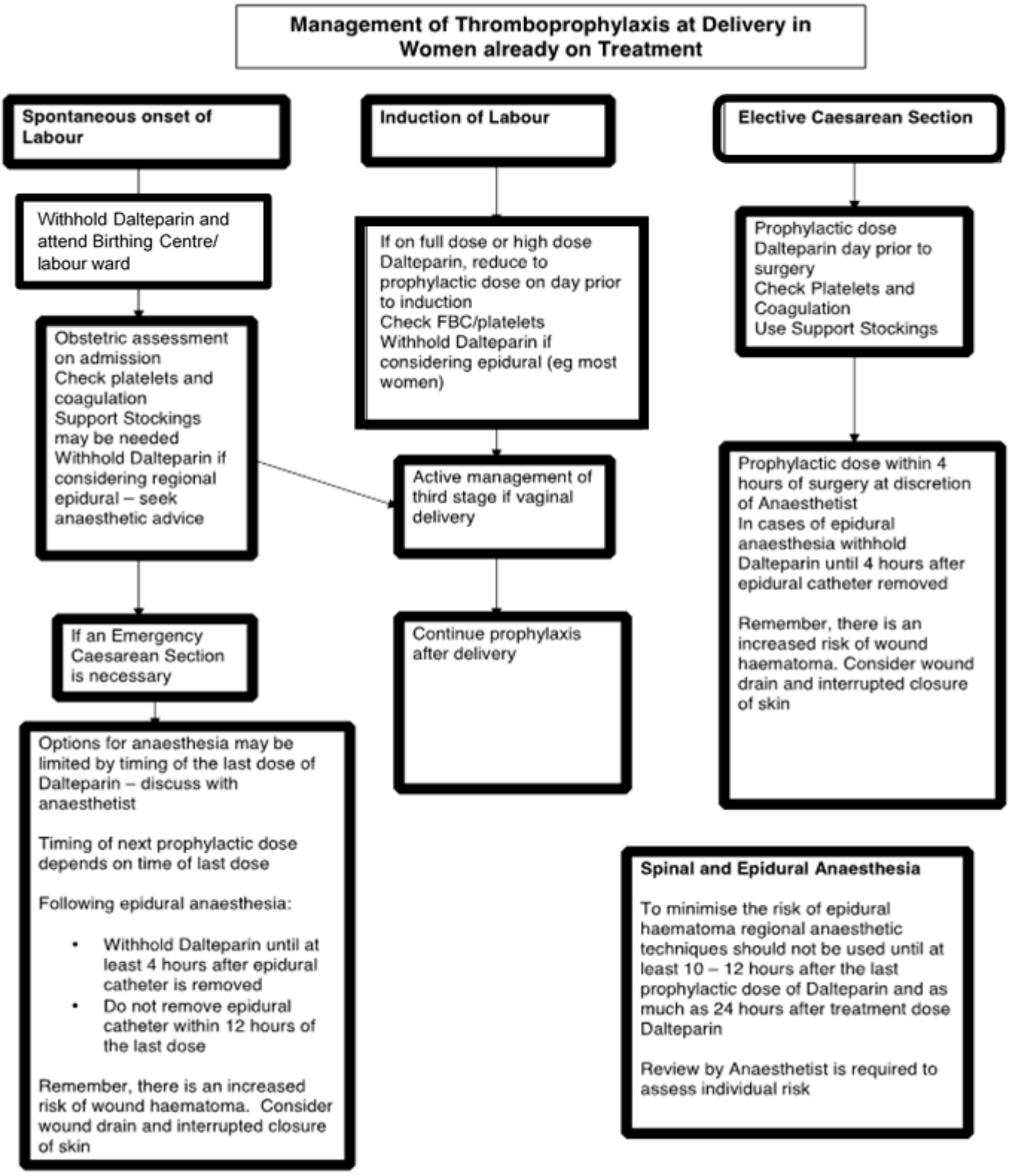
is identified through the monitoring process the Trust will investigate and take corrective action to mitigate and prevent any negative impact.

Appendix 1
Equality Impact Assessment – required for policy only

Appendix 2
Glossary of terms

DOAC	Direct acting Oral anticoagulants
AES	Anti-Embolism Stockings
LMWH	Low Molecular Weight Heparin
VTE	Venous Thromboembolism
UFH	Unfractionated heparin
DVT	Deep Vein Thrombosis
PE	Pulmonary Embolism
INR	International Normalised Ratio
RCOG	Royal College of Obstetricians and Gynaecologists
PPH	Postpartum Haemorrhage
FGR	Fetal Growth Restriction

Appendix 3


Management of Thromboprophylaxis at Delivery in Women already on Treatment
Spontaneous onset of Labour
Withhold Dalteparin and attend Birthing Centre/ labour ward
Obstetric assessment on admission
Check platelets and coagulation
Support Stockings may be needed
Withhold Dalteparin if considering regional epidural – seek anaesthetic advice
If an Emergency Caesarean Section is necessary
Options for anaesthesia may be limited by timing of the last dose of Dalteparin – discuss with anaesthetist
Timing of next prophylactic dose depends on time of last dose
Following epidural anaesthesia:
Withhold Dalteparin until at least 4 hours after epidural catheter is removed
Do not remove epidural catheter within 12 hours of the last dose
Remember, there is an increased risk of wound haematoma. Consider wound drain and interrupted closure of skin
Induction of Labour
If on full dose or high dose Dalteparin, reduce to prophylactic dose on day prior to induction
Check FBC/platelets
Withhold Dalteparin if considering epidural (eg most women)
Active management of third stage if vaginal delivery
Continue prophylaxis after delivery
Elective Caesarean Section
Prophylactic dose Dalteparin day prior to surgery
Check Platelets and Coagulation
Use Support Stockings
Prophylactic dose within 4 hours of surgery at discretion of Anaesthetist
In cases of epidural anaesthesia withhold Dalteparin until 4 hours after epidural catheter removed
Remember, there is an increased risk of wound haematoma. Consider wound drain and interrupted closure of skin
Spinal and Epidural Anaesthesia
To minimise the risk of epidural haematoma regional anaesthetic techniques should not be used until at least 10 – 12 hours after the last prophylactic dose of Dalteparin and as much as 24 hours after treatment dose Dalteparin
Review by Anaesthetist is required to assess individual risk

Appendix 4

Maintain a record of the document history, reviews and key changes made (including versions and dates)

Version	Date	Comments	Author

Review Process Prior to Ratification:

Name of Group/Department/Committee	Date
Reviewed by Maternity Guideline Group	04/02/2020
Reviewed at Women's Business and Governance meeting	28/02/2020
Approved by CBU 3 Overarching Governance Meeting	24/02/2021
Approved at Trust NICE Clinical Guidelines Group	25/03/2021
Approved at Medicines Management Committee (if document relates to medicines)	N/A

Trust Approved Documents (policies, clinical guidelines and procedures)

Approval Form

Please complete the following information and attach to your document when submitting a policy, clinical guideline or procedure for approval.

Document type (policy, clinical guideline or procedure)	**Guideline**
Document title	**Thromboprophylaxis guideline for obstetric women**
Document author (Job title and team)	**Obstetric lead Consultant/ Maternity Guideline Group**
New or reviewed document	**Reviewed**
List staff groups/departments consulted with during document development	**Obstetric consultants, Thromboprophylaxis meeting**
Approval recommended by (meeting and dates):	**Maternity guideline group 04/02/2020** **Women's Services Business & Governance meeting 28/02/2020** **CBU 3 Business and Governance meeting 24/02/2021**
Date of next review (maximum 3 years)	**24/02/2021**
Key words for search criteria on intranet (max 10 words)	**Thromboprophylaxis, TRAFF, Thromboembolism, VTE**
Key messages for staff (consider changes from previous versions and any impact on patient safety)	
I confirm that this is the FINAL version of this document	**Name: Charlotte Cole** **Designation: Practice Educator Midwife**

FOR COMPLETION BY THE CLINICAL GOVERNANCE TEAM

Approved by (group/committee): NICE Trust clinical guideline group meeting **Date approved: 25/03/2021** **Date Clinical Governance Administrator informed of approval: 12/04/2021** **Date uploaded to Trust Approved Documents page: 14/04/2021**