


<b>Guideline for the Management of Thromboprophylaxis and the Treatment of Thromboembolic Disease in obstetric women.</b>		<b>Barnsley Hospital</b>  NHS Foundation Trust	
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## **Introduction**

### **Rationale**

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

### **Scope**

This guidance applies to all Healthcare Professionals working within the Maternity Department at BHNFT.

### **Background**

Pulmonary thromboembolism remains the main direct cause of maternal death in the UK. Pregnancy is a risk factor for VTE and is associated with a tenfold 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.

The recommendations are based on clinical evidence where this is available. However evidence for the management of VTE during pregnancy is lacking and in general guideline recommendations for management of VTE during pregnancy are taken from studies in non pregnant women. This should be borne in mind when making decisions on treatment.

## **Guideline Outline**

### **Risk Assessment**

#### **Thromboprophylaxis Risk Assessment Form**

At the first antenatal clinic visit an individual assessment of risk is undertaken using the Thromboprophylaxis Risk Assessment form for pregnancy and Puerperium

Further assessment of risk is undertaken at each new inpatient episode, postnatally, and following changes in the woman's condition or circumstances which affect her risk of developing a thrombo-embolism. Those women with identified risk factors from the Thromboprophylaxis Risk Assessment Form (TRAF) should also be referred to a Consultant Haematologist

Women with a past history or family history of VTE should be offered screening for acquired and inherited thrombophilia ideally before pregnancy. Screening requires a full thrombophilia screen to include antiphospholipid antibodies and lupus anticoagulant. The diagnosis of the antiphospholipid syndrome requires a positive serology on at least two occasions eight weeks apart when not pregnant. Thrombophilia screening is difficult to interpret in pregnancy and specialist advice should be sought with regard to interpretation.

#### **Management of women with an identified bleeding risk**

For women with an identified bleeding risk, the balance of risks of bleeding and clotting should be discussed in consultation with the Haematologist. 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)

## Thromboprophylaxis during Pregnancy

If risk factors are identified, an individualised thromboprophylaxis management plan should be agreed and documented. This should include a treatment plan for the antenatal period, labour and delivery and the puerperium.

The increased risk of VTE starts from the first trimester. Therefore 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.

### Antenatal assessment and management

Risk Factors	Degree of risk and management
Previous VTE on long term Warfarin Antithrombin deficiency Antiphospholipid syndrome with previous VTE Single previous VTE plus <ul style="list-style-type: none"> <li>• Thrombophilia or family history (first degree relative)</li> <li>• Unprovoked/estrogen related</li> </ul> Previous recurrent VTE (>1) Asymptomatic thrombophilia (combined defects, homozygous FVL)	<b>High Risk:</b> requires antenatal prophylaxis with LMWH and referral to the Consultant Haematologist
Single previous VTE with no family history of Thrombophilia, or other risk factors Thrombophilia plus no VTE Medical Co morbidities such as: <ul style="list-style-type: none"> <li>• Heart disease</li> <li>• Lung disease</li> <li>• Systemic Lupus Erythematosus (SLE)</li> <li>• Cancer</li> <li>• Inflammatory conditions</li> <li>• Nephrotic syndrome</li> <li>• Sickle cell disease</li> <li>• Intravenous drug user</li> <li>• Metabolic disease</li> <li>• Diabetes</li> </ul> Surgical procedures e.g. appendicectomy	<b>Intermediate Risk:</b> Consider antenatal prophylaxis with LMWH and referral to the Consultant Haematologist
Age > 35 years Obesity (BMI > 35) – early pregnancy Parity ≥ 3 Smoker Gross Varicose Veins Current Systemic infection requiring antibiotics or hospital admission Immobility ≥ 3 days e.g. paraplegia, SPD long distance travel (> 4 hours) Pre-eclampsia Dehydration/Hyperemesis/ Ovarian Hyperstimulation Syndrome (OHSS) Multiple Pregnancy or Assisted Reproductive Therapy (ART)	<b>3 or more risk factors – Intermediate risk:</b> Consider antenatal prophylaxis and refer to Consultant Haematologist  <b>2 or more risk factors + admission – Intermediate Risk:</b> Consider antenatal prophylaxis and refer to Consultant Haematologist  <b>Less than 3 risk factors – Lower Risk:</b> encourage mobilisation and avoid dehydration

## Condition specific management

### Previous VTE with no thrombophilia

Women with previous VTE and a negative thrombophilia screen require thromboprophylaxis for a minimum of six weeks in the post partum period. Antenatal prophylaxis is probably not warranted if the previous VTE was associated with a temporary risk factor such as trauma and where there are no other risk factors. Antenatal prophylaxis should be considered if the previous DVT was in an unusual site related to COCP use, or pregnancy, or other coexisting risk factors are present.

### Previous VTE with inherited thrombophilia

The absolute risk depends on the specific thrombophilia and presence of a family history of VTE. Certain Thrombophilias such as Antithrombin deficiency and Combined Factor V Leiden/Prothrombin gene mutation confer particularly high risk. Current evidence supports treating all women with a past history of VTE and any form of inherited thrombophilia with thromboprophylaxis throughout the antenatal period and for six weeks post partum.

### 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. Antithrombin deficiency, Homozygous Factor V Leiden and Combined Factor V Leiden/Prothrombin gene mutation confer particularly high risk whilst Heterozygous Factor V Leiden and Prothrombin gene mutation are less of a hazard. Individual risk assessment is required.

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 but should be considered in the antenatal period if other risk factors are identified. Advice should be sought from the Consultant Haematologist. If thromboprophylaxis is given antenatally for a persisting risk factor it should be continued postpartum for 6 weeks.

### Acquired thrombophilia (Antiphospholipid Syndrome)

Antiphospholipid syndrome is defined as the presence of:

- A medium or high titre of Lupus anticoagulant and/or Anticardiolipin,  $\beta$ 2-glycoprotein1 antibodies on 2 occasions 12 weeks apart (persistently positive)

In association with:

- A history of thrombosis (arterial or venous) or adverse pregnancy outcome (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 or IUGR, fetal death after 10 weeks gestation)

Women with Antiphospholipid Syndrome and previous thrombosis should be offered antenatal prophylaxis with LMWH preferably in the first trimester as soon as possible.

after diagnosis of pregnancy. Women on Warfarin should convert to LMWH before the sixth week of pregnancy.

Postpartum care should include prophylaxis for 6 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 may be managed with close surveillance in the antenatal period but should be considered for LMWH for 7 days postpartum

### **Antenatal haematological surveillance of women requiring anticoagulant therapy**

Platelet count to be monitored once 4 - 7 days after commencing treatment, then on day 14 and monthly after this until delivery

## **Thromboprophylaxis during Labour and Delivery**

Please refer to Appendix two 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**

Ideally it would be desirable for women on LMWH to continue with the treatment during labour and a full assessment should be carried out on admission to determine the risk factor. However to allow for the use of regional analgesia and anaesthesia during labour women are advised to discontinue the administration of LMWH at the onset of labour or prior to a planned delivery.

A thorough assessment should be carried out on admission before continuing LMWH prophylaxis in labour. This will include checking full blood count and platelet estimation.

It is important that these women are given appropriate advice in advance regarding the adjustment of their LMWH regime to minimise the period of suboptimal prophylaxis and the risk of intrapartum complication:

- Women receiving high prophylactic or therapeutic doses of LMWH should reduce the dose to its thromboprophylactic level on the day before the induction of labour and where appropriate continue on this dose throughout labour
- If LMWH is omitted then thigh length graduated compression stockings, avoidance of dehydration and attempts to keep mobile are essential.
- 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 12 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 4 hours following spinal anaesthesia or catheter removal
  - If LMWH has been administered during epidural then the epidural catheter should not be removed until 12 hours after last dose.
- Delivery by Elective Caesarean Section in women receiving antenatal LMWH requires careful management. The thromboprophylactic 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 4 hours post-operatively or 4 hours post removal of epidural catheter. There is an increased risk of wound haematoma following Caesarean section in patients treated with both unfractionated heparin and LMWH of around 2%
- Delivery by Emergency Caesarean section also requires careful management with by the obstetric and Anaesthetic teams working collaboratively. Options for anesthesia may be limited by timing of the last dose of LMWH. It is the joint



responsibility of the anesthetist and obstetrician 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.

- Induction of Labour in women receiving high dose prophylactic or treatment doses of LMWH needs careful management. The need to manage the prophylaxis around delivery may be an indication for induction, allowing for an omission period of 24 hours if regional analgesia or anaesthesia is required. In all other cases LMWH should be omitted in the 12 hours prior to induction commencing.
- Spontaneous labour requires a time lag of at least 12 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 other risk factors such as; antepartum haemorrhage, coagulopathy, progressive wound haematoma, intra-abdominal bleeding and postpartum haemorrhage may be managed with unfractionated heparin or compression stockings

**NB.** Any women who develop 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 thromboprophylaxis therefore treatment should be reinstated as soon as the risk of haemorrhage is reduced

## Thromboprophylaxis during the Postnatal Period

### Postnatal Assessment

An individual risk assessment is undertaken in the postnatal period. Management plans for the postnatal period including discharge arrangements are recorded in the woman's hospital and hand held records

Risk Factors	Degree of Risk and Management
Any previous VTE Anyone requiring antenatal LMWH	<b>High Risk:</b> Will require at least 6 weeks postnatal prophylactic LMWH
Caesarean Section Asymptomatic thrombophilia (inherited or acquired) BMI > 35 Prolonged hospital admission Medical Co morbidities such as: <ul style="list-style-type: none"> <li>• Heart disease</li> <li>• Lung disease</li> <li>• SLE</li> <li>• Cancer</li> <li>• Inflammatory conditions</li> <li>• Nephrotic syndrome</li> <li>• Sickle cell disease</li> <li>• Intravenous drug user</li> <li>• Diabetes</li> </ul>	<b>Intermediate Risk:</b> Will require at least 7 days postnatal prophylactic LMWH  <b>3 or more risk factors or persisting condition:</b> consider extending the treatment time for LMWH
Age > 35 years Obesity (BMI > 35) Parity ≥ 3 Smoker Any surgical procedure in the Puerperium Gross varicose veins Current systemic infection requiring antibiotics or hospital admission Immobility e.g. paraplegia, SPD (≥ 3 days) Long distance travel (> 4 hours) Mid-cavity rotational operative delivery Prolonged labour (>24hours) PPH > 1litre requiring a blood transfusion	<b>2 or more risk factors – Intermediate risk:</b> Will require at least 7 days postnatal prophylactic LMWH. Consider extending the treatment time for LMWH if the condition persists  <b>Less than 2 risk factors – Lower Risk:</b> encourage mobilisation and avoid dehydration

### Postnatal management

The Prothrombic changes of pregnancy do not revert to normal for several weeks after delivery:

- Women with no risk factors following vaginal delivery should be encouraged to mobilise early and avoid dehydration.
- High risk women should continue thromboprophylactic treatment for 6 weeks
- Women at the Intermediate risk level should have thromboprophylactic treatment for 7 days. Women with a persistence of risk factors (especially where ambulation is affected) may need the 7 day period extending.

- Timing of the first dose of LMWH should be; as soon as possible after delivery or 4 hours after the removal of the epidural/spinal catheter provided there is no evidence of postpartum haemorrhage. If an epidural catheter is in situ post delivery the catheter should be removed 12 hours following injection and 4 hours prior to the next injection
- All women who undergo Caesarean section should be considered for thromboprophylaxis with LMWH for 7 days post delivery

### **Breastfeeding**

Warfarin, Unfractionated Heparin and Enoxaparin are all safe for women and babies who are breastfeeding.

### **Contraception**

Contraceptive advice should be given pre discharge to all women. The Combined Oral Contraceptive pill is not advised to use if there is any history of DVT/PTE or an inherited thrombophilia.

### **Thromboprophylaxis in High Risk Women**

In those women who require continuing thromboprophylaxis for six weeks or longer post delivery, a choice of LMWH or converting to Warfarin should be offered. 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 on the second or third postpartum day and LMWH continued until the INR is in the therapeutic range on at least two consecutive days.

### **Postnatal follow up**

#### Postnatal haematological surveillance for women receiving anticoagulant therapy

In high risk women the platelet count to be monitored once between day 3 and 7, then on day 14, then monthly

For women with an intermediate risk the platelet count can be monitored between days 2 and 4

Routine measurement of peak anti-Xa activity for patients on LMWH for treatment of acute VTE in pregnancy or puerperium is not recommended except in women at extremes of body weight (less than 50kg and 90kg or more) or with other complicating factors (for example with renal impairment or recurrent VTE) putting them at high risk.

#### Prescription of Enoxaparin

Women who require LMWH for postpartum thromboprophylaxis should have been taught how to self administer Enoxaparin 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 (4 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 / PTE require a 3 month postnatal appointment with the Obstetrician to discuss treatment and implications for future pregnancies

## **Thromboprophylactic treatment during pregnancy and the postnatal period**

The principle agents available for thromboprophylaxis are Warfarin, Unfractionated heparin and Low molecular weight heparin (LMWH).

### **Warfarin**

Warfarin has significant teratogenic potential, crosses the placenta and is therefore reserved for very limited circumstances in the antenatal period – principally for women with mechanical prosthetic heart valves. It is however a useful alternative to low molecular weight heparin for prophylaxis in the postpartum period and is safe to use when breastfeeding.

### **Low Molecular Weight Heparin**

Low molecular weight heparins are as effective as and safer than unfractionated heparin. Neither drug crosses the placenta in significant quantities. In the vast majority of women the most convenient and suitable agent for prophylaxis will be low molecular weight heparin.

The LMWH of choice is Enoxaparin. Prophylactic and therapeutic doses are dependant on maternal weight with the booking weight being the guide. Suggested thromboprophylactic doses for the antenatal and post natal management of LMWH

<b>Antenatal and postnatal prophylactic dose of LMWH</b>	
<b>Maternal weight at booking (kg)</b>	<b>Dose of Enoxaparin</b>
< 50kgs	20mg daily
50 – 90kgs	40mg daily
91 – 130kgs	60 mg daily (should be given in 2 divided doses: 1 of 40mgs and 1 of 20mgs)
131 – 170kgs	80mg daily (should be given in 2 divided doses)
> 170kgs	0.6mg/kg/day (should be given in 2 divided doses)
<b>Treatment of VTE in pregnancy</b>	
<b>Maternal weight at booking (kg)</b>	<b>Dose of Enoxaparin</b>
< 50kgs	40mg twice daily
50 - 69kgs	60mg twice daily
70 - 89kgs	80mg twice daily
90 -110kgs	100mg twice daily
> 110kgs	1mg/kg twice daily
<b>Treatment dose for postnatal patients with VTE</b>	
<b>Maternal weight at booking (kg)</b>	1.5mg/kg/daily

## **Unfractionated Heparin**

Unfractionated heparin has a shorter half life than LMWH and the effects can be reversed with Protamine Sulphate. Occasionally the use of unfractionated heparin may be advocated during labour if the woman is at risk of thromboembolism and regional anaesthetic techniques are required. The interval between the administration of unfractionated heparin and regional analgesia is 4 hours compared with 12 for LMWH with less chance of the development of neuraxial haematomas. However there is an increased risk of the development of heparin-induced thrombocytopenia

## **Compression Stockings**

The use of graduated compression stockings is recommended in pregnancy and the puerperium for:

- Women with a previous VTE or thrombophilia
- Women who are hospitalised and have a contra-indication to LMWH
- Post caesarean section in conjunction with LMWH (this recommendation is particularly pertinent if other risk factors are present)
- Outpatients with prior VTE
- Women travelling long distances (> 4 hours)

Graduated compression stockings are recommended for 6-12 weeks post delivery in women with a history of VTE or thrombophilia

Please note that venous compression from graduated compression stockings is of less benefit in ambulant women

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.

## **Management of suspected deep vein thrombosis**

Please refer to Appendix one for the management of a suspected DVT in pregnancy and the postnatal period

### **Signs and symptoms**

Women who present with the following signs and symptoms during pregnancy or the puerperium could potentially have a DVT or PTE and should be investigated and treated accordingly:

- Leg pain or discomfort, swelling or tenderness
- Raised Temperature
- Lower Abdominal Pain
- Chest pain
- Breathlessness
- Cyanosis
- Agitation
- Maternal Collapse

Women who require treatment for a suspected or diagnosed VTE will require a management plan clearly documented in their health records, including postnatal follow up at 3 months

## **Management of massive life threatening pulmonary thromboembolism in pregnancy**

Collapsed, shocked patients need to be assessed by a team of experienced clinicians. They should decide on an individual basis whether a woman receives intravenous infractionated heparin, thrombo-embolic therapy or thoracotomy and surgical embolectomy. Intravenous unfractionated heparin therapy is the preferred treatment in massive Pulmonary Thromboembolism (PTE) with cardiovascular compromise.

The on-call medical team should be contacted immediately. An urgent portable echocardiogram or Computed Tomography Pulmonary Angiogram (CTPA) within one hour of presentation should be arranged. If massive PTE is confirmed or, in extreme cases prior to confirmation, immediate thrombolysis should be considered.

These patients will be cared for in a HDU / ITU dependent on the woman's condition. Assessment of basic life support requirements will be made and implemented as appropriate. Assessment of the baby and viability will be done and a plan for delivery initiated once the woman is stable enough. Please refer to HDU guideline.

### **Administration of IV Heparin**

- a) Check baseline coagulation and immediately start Heparin treatment
- b) Give bolus loading dose of 5000 units by intravenous injection
- c) Draw up 30mls of PUMP-HEP<sup>®</sup> into a 50ml syringe and infuse via syringe pump at 1.3ml / hour. (Ω 30,000 units over 24 hours) DO NOT DILUTE PUMP-HEP<sup>®</sup>
- d) Check PTT 4 – 6 hours after starting infusion
- e) Change the infusion rate to achieve the therapeutic range. (see below)

It is important to aim for therapeutic level (PTT 1.7 – 3.0) within 24 hours of starting Heparin

### **Variable rates for PUMP-HEP<sup>®</sup> only (1000 units / ml)**

<b>PTT Ratio</b>	<b>Infusion Rate change</b>
>7	Stop for 2 hours and re-check PTT At re-start reduce rate by 0.5ml / hr
5.1 – 7.0	Reduce by 0.5ml / hr
4.1 – 5.0	Reduce by 0.3ml / hr
3.1 – 4.0	Reduce by 0.1ml / hr
1.7 – 3.0	No change
1.2 – 1.6	Increase by 0.2ml / hr
<1.2	Increase by 0.4ml / hr

Repeat PTT ratio every 6 hours after each alteration in rate unless PTT ratio is >5 when measurements should be made more frequently.



### **Management of bleeding when on intravenous Heparin**

- Stop Heparin and send sample for PTT ratio
- Because the half life of Heparin is short this is usually sufficient
- If bleeding is severe / life threatening give Protamine Sulphate by slow intravenous injection in a dose of 1mg for every 100 units (0.1ml PUMP-HEP ®) Heparin infused over the previous HOUR (maximum 50mg)
- Following administration of Protamine, repeat PTT
- If bleeding continues after Heparin has been stopped for 1 hour or despite giving Protamine, call the Haematologist.

## **Roles and Responsibilities**

Healthcare Professionals working on the Maternity Department are responsible for ensuring this guideline is followed.

## **Dissemination and Access**

An electronic copy will be available on the Maternity Intranet and via the Practice Facilitator Midwife

## **Training**

Any training will be given as documented in the Maternity Training Needs Analysis. This is updated on an annual basis.

## **Audit**

Venous thromboembolism will be audited in line with the annual audit programme, as agreed by the CSU. The guideline will be audited, as a minimum, on a three-year basis. The results are taken to the multidisciplinary audit presentation group. Any discrepancies are actioned via the audit action plan to try and improve safety and learn from previous mistakes. The audit action plan is 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.

Any adverse incidents relating to venous thromboembolic diseases are monitored via the incident reporting system. Any problems are 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.

## **Review**

This guideline will be reviewed in three years of authorization. It may be reviewed within this period if there are any reports, new evidence, guidelines or external standards suggesting that a guideline review is required

## **Equality Impact Assessment**

Women's and Children's Services are committed to ensure that both current and potential service users and their families will not be discriminated against on the grounds of religion, gender, race, sexuality, age, disability, ethnic origin, social circumstance or background. The principles of tolerance, understanding and respect for others are central to what we believe and central to all care provided.

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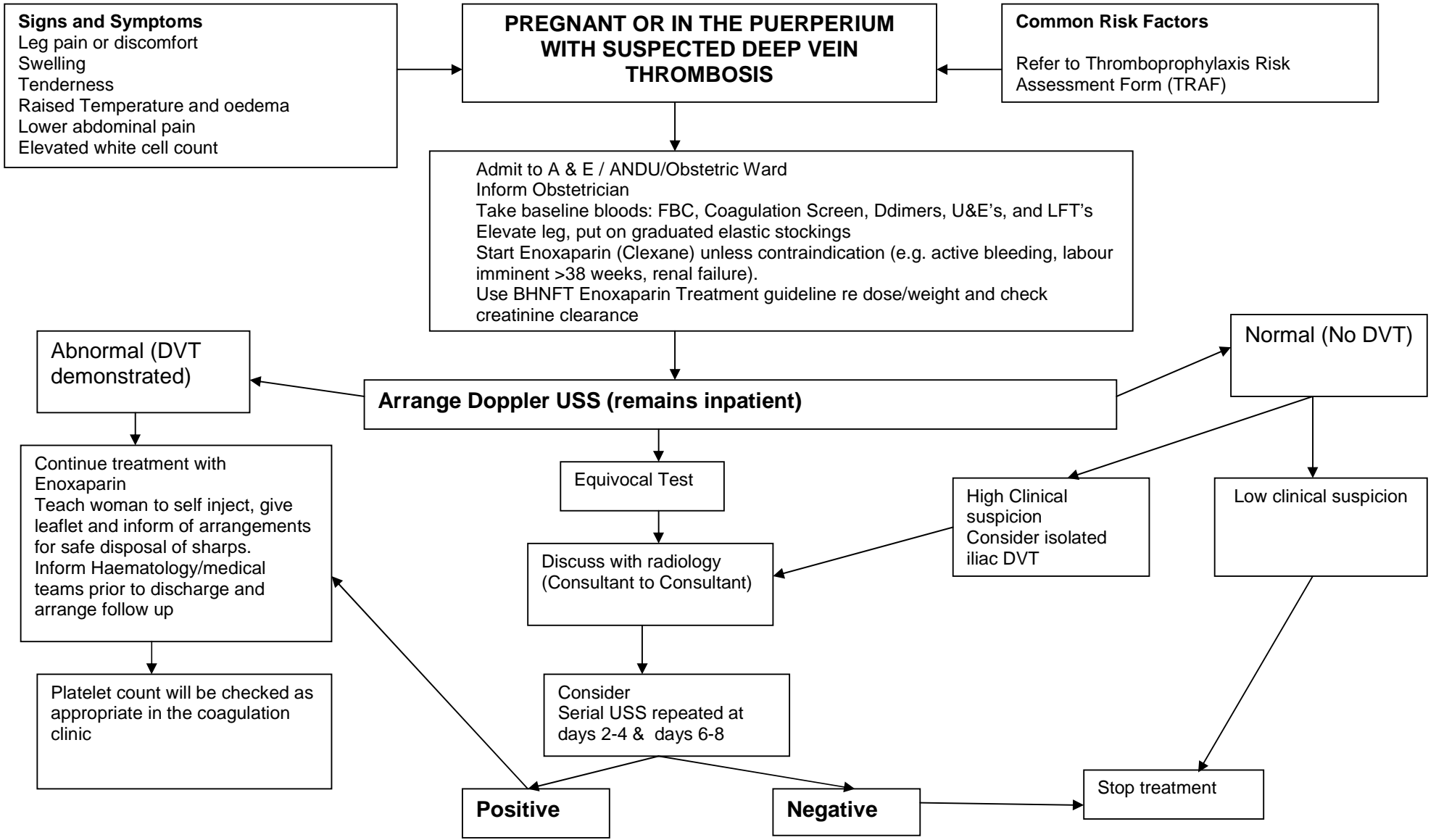
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Walker ID, Greaves M. British Society for Haematology guideline. Investigation and management of heritable thrombophilia. *Br J Haematol* 2001; 114: 512-28.

## **Glossary of Terms**

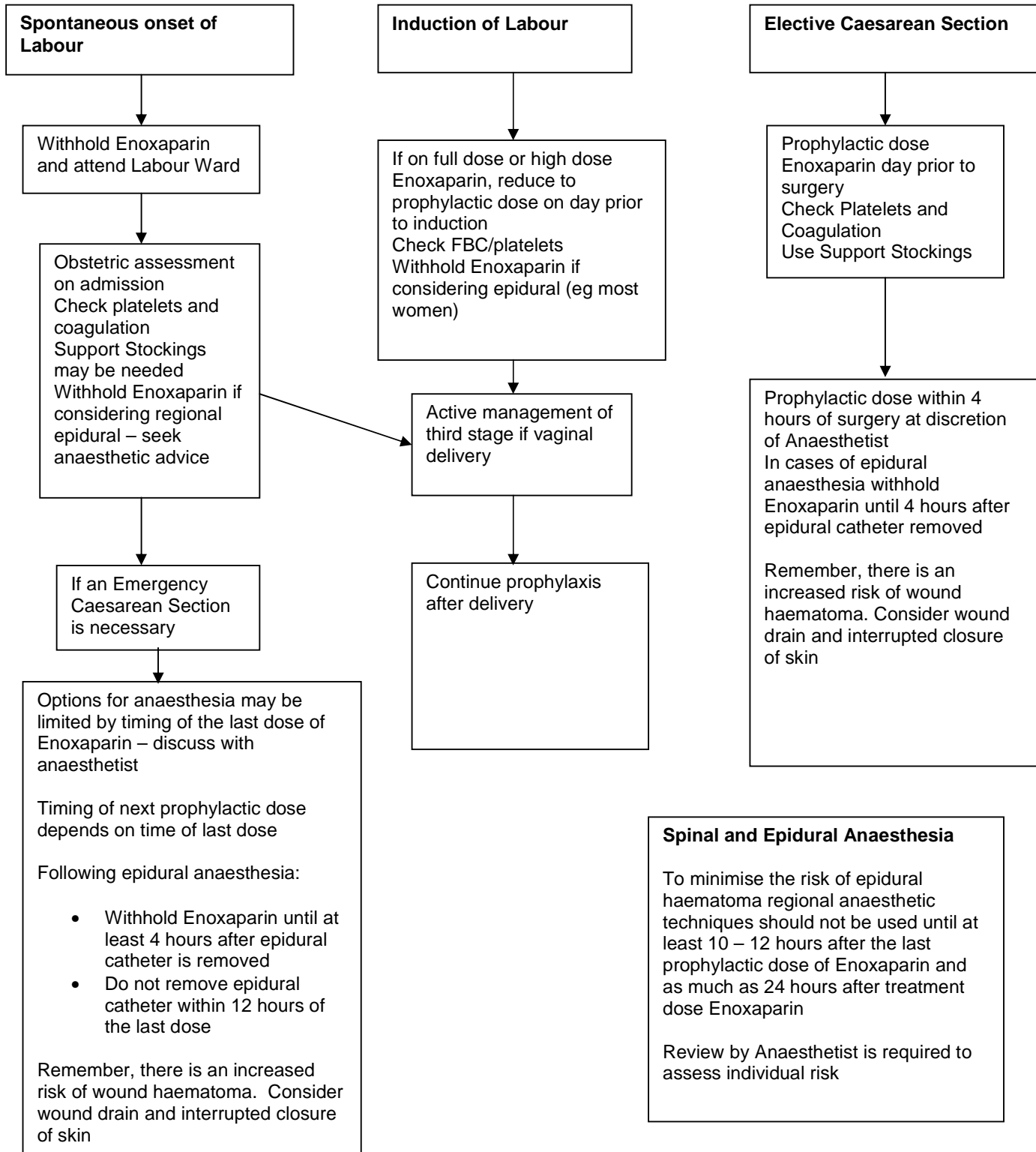
ANDU – Antenatal Day Unit  
ART – Assisted reproductive therapy  
BHNFT – Barnsley Hospital NHS Foundation Trust  
CEMD – Confidential Enquiry into Maternal Deaths  
CNST – Clinical Negligence Scheme for Trusts  
COCP – Combined Oral Contraceptive Pill  
CTPA – Computed Tomography Pulmonary Angiogram  
DVT – Deep Vein Thrombosis  
HDU – High Dependency Unit  
ITU – Intensive Therapy Unit  
IUGR – Intrauterine Growth Restriction  
LMWH – Low Molecular Weight Heparin  
NHS – National Health Service  
OHSS – Ovarian Hyperstimulation Syndrome  
PPH – Postpartum Haemorrhage  
PTE – Pulmonary thromboembolism  
PTT – Partial Thromboplastin Time  
RCOG – Royal College of Obstetricians and Gynaecologists  
SLE – Systemic Lupus Erythematosus  
SPD – Supra-Pubic Dysfunction  
TEDS – Thrombo-embolic deterrent stockings  
TRAF – Thromboprophylaxis Risk Assessment Form  
UK – United Kingdom  
VTE – Venous thromboembolism

Appendix One



## Appendix Two

### Management of Thromboprophylaxis at Delivery in Women already on Treatment



Appendix 3  
**Obstetric Guideline outline**

<b>Guideline</b> Management of Thromboprophylaxis	<b>Lead Professional</b>	<b>Review Date</b> 05/15
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<b>Formatting</b>	Included/attached
Headings	Attached
Quality Impact Statement	Attached
References	Attached

<b>Consultation Process</b>	Date Disseminated/Presented	Relevant information
Initial circulation to Guideline Group and relevant parties (draft 1)		
Amended draft sent to development lead		
Final Draft presented to Guideline Group for ratification	08/05/12	Ratified 08/05/12
Amended/final Draft presented to Women's Governance group for Ratification	14/05/12	Date ratified: 14/05/12

<b>Archiving</b>	Date of distribution	Date of retrieval of old guideline	Date of Archiving
Distribution and Retrieval	10/12/10	10/12/10	10/12/10

<b>Training Package devised</b>	Date	
<b>Training Package Delivered</b>	Date	

<b>Audit/ Monitoring</b>	Method	Date Commenced	Date Completed
Audit Process			
Monitoring process			