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AMENDMENT HISTORY				
Version No.	**Date of Issue**	**Page/Selection Changed**	**Description of Change**	**Review Date**

Does this document meet the requirements of the Equality Act 2010 in relation to Race, Religion and Belief, Age, Disability, Gender, Sexual Orientation, Gender Identity, Pregnancy & Maternity, Marriage and Civil Partnership, Carers, Human Rights and Social Economic Deprivation discrimination? Yes
Document for Public Display: No
Evidence reviewed by Library Services N/a

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1. The NHS provides a comprehensive service, available to all.	√	1. Provide a positive working environment for staff and to promote supportive, open cultures that help staff do their job to the best of their ability.	√
2. Access to NHS services is based on clinical need, not an individual's ability to pay.	√	2. Provide all staff with clear roles and responsibilities and rewarding jobs for teams and individuals that make a difference to patients, their families and carers and communities.	√
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WHICH AIMS OF THE TRUST APPLY? Click here for Aims	Tick those which apply	WHICH AMBITIONS OF THE TRUST APPLY? Click here for Ambitions	Tick those which apply
1. To offer excellent health care and treatment to our local communities.	√	1. Consistently deliver excellent care.	√
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		4. Fit for the future.	√

Venous Thromboembolism (VTE) Prevention

VTE risk assessment

All women should undergo assessment of risk factors for VTE (inpatient assessments must be recorded electronically):

- Antenatal
  - in early pregnancy
  - if woman develops other intercurrent problems
  - if woman is admitted to hospital for any reason (except if actual/risk of labour or active bleeding)
  -
- Postnatal
  - immediately following delivery
  - if the woman develops other intercurrent problems
  -

The risk of VTE should be discussed with women at risk and the reasons for individual recommendations.

Antenatal risk factors	**Antenatal risk level and management**
Previous VTE - Unprovoked/idiopathic or related to pregnancy/ estrogen-containing contraception or related to a transient risk factor other than major surgery (dehydration/hyperemesis/systemic infection/long distant travel) **	Requires prophylaxis with LMWH; begin as early in pregnancy as practical. Refer to thrombosis in pregnancy expert/team.
Previous VTE associated with anti-thrombin deficiency or antiphospholipid syndrome **	Offer prophylaxis with higher dose LMWH (50% or 75% or full treatment dose)
• Hospital admission • Single previous VTE related to major surgery ** • High-risk thrombophilia + no VTE • Medical comorbidities e.g. cancer, heart failure, active SLE, IBD or inflammatory polyarthropathy, Nephrotic syndrome, type I Diabetes with nephropathy, sickle cell disease, current IV drug use • Any surgical procedure e.g. appendicectomy • Ovarian Hyperstimulation Syndrome (first trimester only) • Asymptomatic antithrombin, protein C or S deficiency or more than one thrombophilic defect (including homozygous factor V Leiden, homozygous prothrombin gene mutation and compound heterozygotes)	Consider prophylactic LMWH Surveillance for development of other risk factors.

Other risk factors: • Obesity (BMI ≥ 30 kg/m2) • Age > 35 • Parity ≥ 3 • Smoker • Multiple pregnancy • Gross varicose veins • Current pre-eclampsia • Immobility, e.g. paraplegia, PGP • 1st degree relative history of unprovoked or Estrogen-provoked VTE • Low-risk thrombophilia • IVF/ART • Transient risk factors - dehydration/hyperemesis/current systemic infection/long distant travel	**Four, or more, other risk factors:** Consider prophylactic LMWH from first trimester **Three other risk factors:** Consider prophylactic LMWH from 28 weeks (repeat VTE risk assessment) **Fewer than three other risk factors:** Encourage mobilisation and avoidance of dehydration

** see additional management below, relating to Previous VTE history

Postnatal risk factors	Postnatal risk level and management
Previous VTE* associated with anti-thrombin deficiency or antiphospholipid syndrome	Offer prophylaxis with higher dose LMWH (50%/75% /full treatment dose) for 6 weeks or until returned to oral anticoagulant therapy
Asymptomatic antithrombin, protein C or S deficiency or with >1 thrombophilic defect (including homozygous factor V Leiden, homozygous prothrombin gene mutation and compound heterozygotes)	Consider prophylaxis
High risk factors: • Previous VTE (see additional management below, relating to Previous VTE history) • Required antenatal LMWH • High-risk thrombophilia • Low-risk thrombophilia + Family history	**High Risk** At least 6 weeks prophylactic LMWH.
Intermediate risk factors: • Caesarean section in labour • BMI ≥ 40 kg/m2 • Readmission or prolonged (≥ 3 days) postnatal stay • Surgical procedure in puerperium, except immediate repair of the perineum • Medical comorbidities e.g. cancer, heart failure, active SLE, IBD or inflammatory polyarthropathy, nephrotic syndrome, type I Diabetes Mellitus with nephropathy, sickle cell disease, current IV drug use	**Intermediate Risk** At least 10 days prophylactic LMWH in doses appropriate for weight, as per table below Note: If persisting, or > 3 intermediate/lower risk factors consider extending prophylactic LMWH

Lower risk factors: • Obesity (BMI ≥ 30 kg/m2) • Age > 35 • Parity ≥ 3 • Smoker • Elective caesarean section • Family history of VTE • Low-risk thrombophilia • Gross varicose veins • Current pre-eclampsia • Current systemic infection • Immobility, e.g. paraplegia, PGP, long-distance travel • Multiple pregnancy • Pre-term delivery in this pregnancy (<37+0 weeks) • Stillbirth in this pregnancy • Mid-cavity rotational or operative delivery • Prolonged labour (> 24 hours) • PPH > 1 litre, or blood transfusion	**Two or more lower risk factors** At least 10 days prophylactic LMWH in doses appropriate for weight, as per table below **Fewer than two lower risk factors:** Encourage mobilisation and avoidance of dehydration

Previous VTE history	Management
Single previous VTE	• Refer at earliest opportunity to a Consultant Obstetrician with expertise in thrombosis in pregnancy. • Document careful history. Where objective documentation is not available, assume previous diagnosis of VTE in cases where woman gives good history and received prolonged (> 6 weeks) therapeutic anticoagulation.
Thrombophilia-associated VTE, heritable thrombophilia	• Management should be undertaken in collaboration with a Haematologist with expertise in thrombosis in pregnancy and consideration given to antenatal anti-Xa monitoring and potential for antithrombin replacement at initiation of labour or prior to caesarean section. • If anti-Xa levels are measured, use a test that does not use exogenous antithrombin and aim for 4-hour peak levels of 0.5–1.0 iu/ml. • Other heritable thrombophilic defects are lower risk and can be managed with standard doses of thromboprophylaxis.

Asymptomatic heritable thrombophilia	• Heterozygosity for factor V Leiden or prothrombin gene mutation or antiphospholipid antibodies are considered risk factors for thrombosis in asymptomatic women: ○ 3 other risk factors - consider antenatal thromboprophylaxis ○ 2 other risk factors - consider antenatal thromboprophylaxis from 28 weeks ○ 1 other risk factor – consider postnatal thromboprophylaxis for 10 days • Women with no personal history or risk factors for VTE but have a family history of an unprovoked/estrogen-provoked VTE in a 1st degree relative when aged <50 should be considered for thrombophilia testing. This will be more informative if the relative has a known thrombophilia.
Acquired thrombophilia	Pregnant women with APS and prior VTE or arterial thromboses should be managed in collaboration with a haematologist and/or rheumatologist with expertise in this area.
Prior VTE and family history of VTE and either anti-thrombin deficiency, or previous thrombophilia not performed	Test for Anti-thrombin deficiency
Prior VTE unprovoked	Test for presence of antiphospholipid antibodies
Previous recurrent VTE	• Advice regarding doses of LMWH in pregnancy should be sought from a Consultant Obstetrician with expertise in haemostasis and pregnancy • Some women with previous recurrent VTE require higher doses of LMWH • Women on long-term warfarin should be advised to stop oral anticoagulant therapy and change to LMWH as soon as pregnancy is confirmed.
Persistent antiphospholipid antibodies in women without previous VTE	Antibodies include - lupus anticoagulant and/or anticardiolipin and/or β2 - glycoprotein 1 antibodies. Should be considered as a risk factors for thrombosis such that if has other risk factors consider antenatal or postnatal thromboprophylaxis.

Thrombophrophylaxis

- LMWH is the agent of choice for antenatal and postnatal thromboprophylaxis.
- Thromboprophylactic doses of LMWH should be based on booking weight, if not available, use most recent weight.
- Doses of LMWH should be reduced in women with renal impairment
- It is only necessary to monitor the platelet count if the woman has had prior exposure to UFH
- Monitoring of anti-Xa levels is not required when LMWH is used for thromboprophylaxis

Contraindications/cautions to LMWH use:

- Thrombocytopenia (platelet count < 75 × 10^9/l)
- Considered increased risk of major haemorrhag e
- Active ante- or post-partum bleeding
- Actual or risk of labour
- Uncontrolled hypertension (systolic> 200 mmHg systolic or diastolic> 120 mmHg)
- Known bleeding disorder (e.g. haemophilia, von Willebrand's disease or acquired coagulopathy)
- Acute stroke in preceding four weeks (haemorrhagic or ischaemic)
- Severe renal disease (glomerular filtration rate [GFR] < 30 ml/minute/1.73m2)
- Severe liver disease (prothrombin time above normal range or known varices)

Thromboprophylactic Dalteparin (Fragmin) ante- and post-natal Unlicensed indication during pregnancy - see BNF	
Maternal weight (kg) at booking	**Dalteparin (Fragmin) Dose**
≤50	2500 units daily
>50 and ≤90	5000 units daily
>90 and ≤170	5000 units 12 hourly
>170	75 units / kg / day in 2 divided doses

Recommendations

- Advise women receiving antenatal LMWH, if any vaginal bleeding or labour begins, not to inject any further LMWH. Reassess on admission; further doses should be prescribed by medical staff.
- Regional anaesthesia technique - Avoid, if possible, until ≥ 12 hours after previous Prophylactic LMWH, or until ≥24 hours after previous Therapeutic LMWH
- Do not give LMWH < 4 hours after spinal anaesthesia administration/ epidural catheter removal
- LMWH should be administered on day prior to Elective caesarean section, omit any morning dose on day of surgery and perform surgery that morning.
- Postnatal thrombophrophylaxis should be commenced 6 hours after delivery for women who received antenatal LMWH, unless there is ongoing haemorrhage.
- First thromboprophylactic dose of new requirement for LMWH postnatally should be given as soon as possible after delivery unless there is ongoing haemorrhage or regional analgesia used.
- Women with high risk of haemorrhage with risk factors including major APH, coagulopathy, progressive wound haematoma, suspected intra-abdominal bleeding, PPH, may be managed with anti-embolism stockings (AES), foot impulse devices or intermittent pneumatic compression devices. UFH may also be considered. Thromboprophylaxis should be started or reinstated as soon as immediate risk of haemorrhage is reduced.
- Women receiving long-term anticoagulation with warfarin, can be converted from LMWH to warfarin postpartum when risk of haemorrhage is reduced, usually 5 - 7 days after delivery. Warfarin is safe in breastfeeding.
- At very high risk of thrombosis - UFH may be used in preference to LMWH when increased risk of haemorrhage or regional anaesthetic techniques may be required. If UFH is used after caesarean

section (or other surgery), platelet count should be monitored every 2–3 days from days 4–14 or until UFH is stopped.

References:

- Royal College of Obstetricians and Gynaecologists (2015). *Reducing the Risk of Venous Thromboembolism during Pregnancy and the Puerperium* London: RCOG

Appendix 1

Lancashire Teaching Hospitals
NHS Foundation Trust

Equality, Diversity & Inclusion Impact Assessment Form

Department/Function	Women's Health			
Lead Assessor	Ghada M / Amanda Bellis			
What is being assessed?	Venous Thromboembolism (VTE) Prevention			
Date of assessment	02/07/2018			
What groups have you consulted with? Include details of involvement in the Equality Impact Assessment process.	Equality of Access to Health Group	☐	Staff Side Colleagues	☒
	Service Users	☒	Staff Inclusion Network/s	☒
	Personal Fair Diverse Champions	☐	Other (Inc. external orgs)	☐
	Pharmacy, Medicine, Anaesthetics, Scanning, NICE Guidelines and RCOG			

1) What is the impact on the following equality groups?			
Positive: ➢ Advance Equality of opportunity ➢ Foster good relations between different groups ➢ Address explicit needs of Equality target groups		**Negative:** ➢ Unlawful discrimination, harassment and victimisation ➢ Failure to address explicit needs of Equality target groups	**Neutral:** ➢ It is quite acceptable for the assessment to come out as Neutral Impact. ➢ Be sure you can justify this decision with clear reasons and evidence if you are challenged
Equality Groups	**Impact** (Positive / Negative / Neutral)	**Comments:** ➢ Provide brief description of the positive / negative impact identified benefits to the equality group. ➢ Is any impact identified intended or legal?	
Race (All ethnic groups)	Neutral		
Disability (Including physical and mental impairments)	Neutral		
Sex	Neutral		
Gender reassignment	Neutral		
Religion or Belief (includes non-belief)	Neutral		
Sexual orientation	Neutral		
Age	Neutral		
Marriage and Civil Partnership	Neutral		

Pregnancy and maternity	Neutral	
Other (e.g. caring, human rights, social)	Neutral	

2) In what ways does any impact identified contribute to or hinder promoting equality and diversity across the organisation?	

3) If your assessment identifies a negative impact on Equality Groups you must develop an action plan **to avoid discrimination and ensure opportunities for promoting equality diversity and inclusion are maximised.**

- This should include where it has been identified that further work will be undertaken to further explore the impact on equality groups
- This should be reviewed annually.

ACTION PLAN SUMMARY

Action	**Lead**	**Timescale**