Sickle Cell Disease in Pregnancy

Classification :	Guideline
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Authors Division:	Women's and Children's Health
Departments/Group this Document applies to:	Maternity

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Guideline to be followed by (target staff): Maternity Staff, Medical staff

To be read in conjunction with the following documents:

CQC Fundamental standards:
Regulation 9 – person centred care
Regulation 10 – dignity and respect
Regulation 11 – Need for consent
Regulation 12 – Safe care and treatment
Regulation 13 – Safeguarding service users from abuse and improper treatment
Regulation 14 – Meeting nutritional and hydration needs
Regulation 15 – Premises and equipment
Regulation 16 – Receiving and acting on complaints
Regulation 17 – Good governance
Regulation 18 – Staffing
Regulation 19 – Fit and proper

Disclaimer –

Since every patient's history is different, and even the most exhaustive sources of information cannot cover every possible eventuality, you should be aware that all information is provided in this document on the basis that the healthcare professionals responsible for patient care will retain full and sole responsibility for decisions relating to patient care; the document is intended to supplement, not substitute for, the expertise and judgment of physicians, pharmacists or other healthcare professionals and should not be taken as an indication of suitability of a particular treatment for a particular individual.

The ultimate responsibility for the use of the guideline, dosage of drugs and correct following of instructions as well as the interpretation of the published material **lies solely with you** as the medical practitioner.

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Guideline Statement

Sickle cell disease is one of the most common inherited conditions worldwide and mostly affects people of African and Afro-Caribbean origin. In the United Kingdom (UK), there are around 15000 affected individuals and 300 infants born with the condition every year.
SCD is characterised by the inheritance of the abnormal haemoglobin sickle gene (HbS). The most severe form is homozygous HbSS but it can also be due to a compound heterozygous presentation with another haemoglobin variant (HbC, HbE, HbDPunjab or β thalassemia). The abnormal sickle haemoglobin leads to rigid and fragile red blood cells in low oxygen environments, leading to increased breakdown, as well as occlusion of small vessels with associated acute pain or tissue ischaemia.

There are around 110-200 pregnancies in women with SCD annually. This includes patients with HbSS, HbSC, HbSβ thalassemia, HbSE, HbSDPunjab, HbSOArab and HbS/Lepore genotypes. These pregnancies are associated with an increased risk of both maternal and fetal complications. Maternal complications include hypertensive disease, venous thromboembolism (VTE) and caesarean delivery. Women have an increased rate of sickle complications in pregnancy such as acute painful crises, acute chest syndrome (ACS) and infections, particularly urinary tract infections (UTI). Fetal complications include miscarriage and stillbirth, preterm delivery, as well as fetal growth restriction (FGR). Multidisciplinary care is necessary and includes joint management in a maternal medicine clinic in early pregnancy (Haem/Obstetric joint clinic if available) with input from Consultant Haematologist, Obstetrician and Anaesthetist as soon needed.

Executive Summary

Sickle cell disease (SCD) is a common inherited disease particularly affecting people from African and Afro-Caribbean origin.

Women with sickle cell disease (HbSS) have increased risks in pregnancy including developing hypertension, infections and venous thromboembolism (VTE). Their babies are at a higher risk of having fetal growth restriction, preterm birth and stillbirth. To address all these aspects, their antenatal care requires a specialist multidisciplinary team (MDT) input with a Maternal Medicine specialist, as well as Haematology and Anaesthetist overseeing care.

Women with sickle cell disease are at higher risk of having a sickle crisis during pregnancy (including pain or chest crises and stroke); these events should be managed similarly to when they are not pregnant. This includes MDT approach ensuring adequate pain relief, hydration, warmth and consideration of where care would be best provided.

Pre-conception screening for end organ damage (renal, retinal screening, pulmonary hypertension with echocardiogram), optimisation of current medications to ensure they are pregnancy safe and discussion regarding genetic testing is recommended.

All these women require high dose folic acid, vitamin D supplements and Penicillin V continued throughout pregnancy. Influenza and pneumococcal vaccinations should be up to date. Aspirin is offered from 12 weeks for pre-eclampsia prophylaxis.

Monthly antenatal clinic review with observations (including oxygen saturations), urinalysis and urine culture, and consideration of VTE risk is required up until 28 weeks, after which fortnightly review is recommended, then weekly from 38 weeks until birth. Fetal growth scans should be performed 4 weekly from 24 weeks until birth at 38-40 weeks.

Hospital birth is recommended with adequate hydration, oxygenation, warmth, pain relief, regular (hourly) observations and fluid balance; with MDT review daily.

Postnatally, women are encouraged to breast feed. Low molecular weight heparin (LMWH) is given for 6 weeks and a plan for contraception discussed.

1.0 Roles and Responsibilities:

Obstetricians – decision making, discussion, planning care
Haematologists – responsible for detailed individualised management plan
Anaesthetists – responsible for pain management as required
Midwives, Nurses and Student Midwives – antepartum, intrapartum and postpartum care

2.0 Implementation and dissemination of document

This guideline is available on the Trust intranet and has followed the full guideline review process prior to publication.

3.0 Processes and procedures

3. Management of women with sickle cell trait

Sickle cell trait, where one of the two beta- globin genes is affected, is a common finding worldwide as it is likely to be protective for malaria. The person can be entirely asymptomatic and may not know of their carrier status. Any person with sickle cell trait has a 50% chance of passing the affected gene to their offspring and should be referred the NHS Sickle Cell & Thalassaemia Screening Programme website.
During pregnancy, these women have a higher turnover of red blood cells, therefore should be offered

High dose Folic Acid (5mg) from pre-conception until birth
High dose vitamin D 1000 units until birth
If haemoglobin low, check ferritin status prior to giving iron supplementation
If ferritin <50, given Ferrous sulphate 200mg OD

During pregnancy, these women have an increased tendency for urinary tract infection

- Monthly MSU and treat with antibiotics as needed

No additional growth scans are needed

Some woman can have **co-existing** sickle cell trait and beta-thalassemia trait, this confers more risk for the pregnancy and these women should be referred to the Maternal medicine / Joint Haematology Obstetrics clinic.

Biological father testing should be offered ideally by 10 weeks gestation and inform antenatal and newborn screening. Clearly document counselling and discussions.

Management of women with known sickle cell disease (SCD)

3.1 Pre-conception Care

3.1.1 Genetic screening

- Patient and partner screening is recommended pre-conception
  - Refer couples to NHS Sickle Cell & Thalassaemia Screening Programme website

- Women with SCD who have a partner who is a carrier of a β globin variant (HbS, HbC, β thalassemia) will have a 50% chance in each pregnancy of having an affected child
- Counselling is needed about options for fetal diagnosis - non-intervention, prenatal diagnosis, pre-implantation genetic diagnosis (PGD)

3.1.2 Women should be screened for organ dysfunction prior to pregnancy

- Full history should be documented including history of crises and pain management, need for admission to hospital, whether transfusion dependent, together with end organ damage eg renal dysfunction, cardiopulmonary disease, chronic lung disease, avascular necrosis, stroke.
  Women with severe complications should have expert input prior to stopping contraception
- Renal dysfunction:
  - Monitor blood pressure (BP) and consider antihypertensive treatment if BP persistently >130/80 mmHg
  - Monitor creatinine and urinary protein or albumin creatinine ratio (PCR, ACR). If renal function is abnormal or PCR>50mg/mmol, exclude other non-sickle causes
- Cardiopulmonary disease:
  - Screen for pulmonary hypertension (PH) and ventricular diastolic dysfunction Echocardiogram should be performed if not done within the last year and any abnormalities should be discussed with a cardiologist. Significant PH needs careful discussion due to the increased risk (morbidity and mortality) within pregnancy
- Chronic lung disease:
  - oxygen saturations should be recorded. If indicated, consider pulmonary function tests and sleep studies
- Retinal screening
- Iron overload – any concerns should be reviewed with MRI liver/heart as needed

3.1.3 Counsel both parents with respect to pregnancy related risks to the woman and baby

- Fetal complications including growth restriction, premature delivery and stillbirth
- Maternal risks: pre-eclampsia (PET), VTE, worsening anaemia requiring transfusion
- and caesarean section (CS)
- The increased rate of sickle crises during pregnancy (precipitated by nausea /
- vomiting/ dehydration)

3.1.4 Optimisation of medication

- 5mg folic acid from at least 6 weeks prior to conception and continue throughout pregnancy to reduce the risk of neural tube defects and to compensate for increased demands
- Vitamin D – ensure adequate replacement (at least 1000 units per day)
- Daily penicillin prophylaxis should be continued or started in pregnancy due to hyposplenism increasing the risk of infection with encapsulated bacteria (Neisseria meningitides, Streptococcus pneumonia and Haemophilus influenzae) - Erythromycin can be used as alternative if there is a confirmed penicillin allergy.

- Ensure vaccinations are up to date: annual influenza vaccination and pneumococcus vaccination within the last five years.
- Optimise medications not compatible with pregnancy:
  – convert antihypertensives (ACE inhibitors or angiotensin receptor blockers (ARB) to pregnancy safe anti-hypertensive medications)
  – Hydroxycarbamide and iron chelators should be discontinued when attempting to conceive.

Some women may need a personalised plan outlining the pros and cons of continuing some medications during pregnancy eg ACE inhibitors, and potential fetal medicine scans organised.

3.2 Antenatal Care

- Antenatal care for women with SCD requires an MDT approach with maternal medicine obstetricians, midwives and a haematologist with links to a specialist haemoglobinopathy team
- All women with SCD should be booked with a midwife by 9 weeks gestation
- Offer an early viability USS from 7-9 weeks.
- An example antenatal care schedule can be found in Table 1
- Any crises should be managed as per non pregnant women, with exception of avoiding NSAIDs use before 12 weeks and after 31 weeks. **(See section 3.5)**

3.2.1 Antenatal haemoglobinopathy screening

- Community midwives to offer biological partner testing ideally by 10 weeks of gestation if not done pre-conception. Clearly document status and subsequent counselling.
- Pre-natal diagnosis can be then be offered if results meet criteria with clear documentation of discussion. This should be performed by 13 weeks if booked appropriately. If the couple opt not to have pre-natal diagnosis, an 'Oxford – at Risk form' is completed and sent to Oxford Molecular Haematology to alert the laboratory for the newborn blood spot sample.

3.2.2 First booking appointment

- Midwife to review housing and work circumstances and identify interventions to reduce the risk factors for the development of potential acute crises
- Folic acid 5mg and penicillin V (all alterative if penicillin allergy) should be continued throughout the pregnancy
- Document baseline oxygen saturations (delay to first ANC if not possible)
- Booking investigations- full blood count (FBC), renal function, liver function tests, ferritin, group and screen, urine culture and PCR
- Prior to offering iron supplementation for presumed anaemia, check haemoglobin and iron status. ONLY supplement women if ferritin<30μg/l
- Screen for red cell alloantibodies and perform an extended red cell phenotype (if not previously performed). If red cell alloantibodies are detected on initial screening, repeat titrations should be performed fortnightly from 16 weeks gestation.
- Booking bloods as normal
- Book and check USS for viability (between 7-9 weeks) and dating USS are in place
- Email obs.gynae@mkuh.nhs.uk to ensure urgent Maternal Medicine Clinic

3.2.3 See in Maternal Medicine / Joint Haem Obs clinic by 14 weeks gestation (or earlier - from 8 weeks)

- Full sickle history including transfusion history and discussion regarding end organ damage, request investigations as needed
- Review medication and ensure compliance, encourage vaccinations (flu/ pneumococcus) and assess for end organ damage as outlined in pre-conception section 3.2.1)
- Advise about crisis prevention, including adequate hydration, rest, warmth and prompt treatment of infections
- Check medications and start aspirin (75 – 150mg BMI dependent) for PET prophylaxis
- Women with hyperemesis gravidarum should seek medical help early to avoid dehydration. Consider in-patient rehydration and thromboprophylaxis
- Consider monthly assessment of renal function and proteinuria, especially if on ACE-I or ARBs pre -pregnancy
- Perform a VTE risk assessment and provide thromboprophylaxis as indicated
- Women with pre-existing proteinuria or known renal impairment will require more frequent monitoring and should be discussed with a multidisciplinary high-risk pregnancy team

3.2.4 Schedule of appointments (Table 1)

Women should be seen monthly from booking to 24 weeks; then fortnightly from 24 weeks to 38 weeks; then weekly to term

- Paracetamol and opiates can be used for pain. NSAIDs should be used with caution before 12 weeks and avoided after 31 weeks of gestation owing to concerns regarding premature closure of the patent ductus
- Refer to **obstetric anaesthetist** to discuss intrapartum analgesia
- Monitor blood pressure, oxygen saturations and urinalysis at every antenatal visit
- Target BP <130/80 mmHg

3.2.5 Scheduled ultrasound scanning

- There is increased risk of fetal anomalies, stillbirth (4x) and growth restriction so additional scans are indicated in pregnancy
- 7-9 weeks (viability scan)
- 10-14 weeks (dating scan)
- 20 weeks (anomaly scan)
- Growth scans at 24, 28, 32 and 36 weeks

3.2.6 Blood transfusion during pregnancy

- Blood transfusion can be used to correct anaemia and to treat sickle related complications, improving blood flow through the placenta and oxygen supply to the fetus.
- Use of transfusion should be discussed and supervised by the Haematology Team and considered for:

    - Previous or current medical, obstetric or fetal problems related to SCD
    - Women previously on hydroxycarbamide due to severe disease
    - Multiple pregnancy

- Women receiving long term transfusions for stroke prevention or amelioration of severe sickle complications
- Consider in worsening anaemia or acute SCD complications (acute chest syndrome, stroke)

• Transfused blood should be ABO compatible, cytomegalovirus (CMV) negative, HbS negative and extended Rhesus and Kell matched.
• There is little evidence to indicate what target Hb or HbS % should be used for optimal care or prior to CS. Women with marked anaemia (<70 g/l) may benefit from pre-operative transfusion prior to CS.

3.3 Intrapartum Care

3.3.1 Mode and timing of delivery

- An MDT birth plan should be available pre labour in eCare, including timing and mode of delivery and monitoring required
- Aim for hospital-based delivery (vaginal or Caesarean) between 38 and 40 weeks in women with SCD and a normally grown baby
- Most women can aim for a vaginal birth. Caesarean section is indicated for obstetric reasons only as it increases the risk of infection and VTE.
- VBAC can be considered if no other contraindications are present

3.3.2 Analgesia in labour

- Epidural anaesthesia is an option to avoid the stress of labour precipitating crises
- Entonox (nitrous oxide) can be used for analgesia for 60 minutes
- Opiates can be used in labour, except pethidine
- Regional anaesthesia is recommended for CS
- General anaesthesia should be avoided if possible

3.3.3 Care and Monitoring in labour

- The relevant MDT (senior midwife in charge, senior obstetrician, anaesthetist and haematologist) should be informed when labour is confirmed as there is an increased risk of SCD crisis in the intrapartum period
- Intrapartum management should incorporate adequate analgesia, keeping warm, hourly monitoring of observations including oxygen saturations, good hydration and avoidance of prolonged labour (>12hours)
- Anti-thrombotic stockings should be worn until discharge from hospital
- Continuous fetal heart rate monitoring is recommended due to higher rates of stillbirth, placental abruption and fetal distress
- Strict fluid balance chart to avoid fluid overload
- Cross-match of blood is required for women with atypical antibodies
- Arterial blood gas (ABG) and supplemental oxygen may be considered if saturations fall below 94%
- Additional routine antibiotic prophylaxis is not needed in labour or postnatally but the threshold for starting broad spectrum antibiotics should be low and pyrexia should be investigated
- Women should continue their routine antibiotic prophylaxis
- Active third stage to avoid PPH

3.4 Postpartum Care

3.4.1 General postpartum care

- Sickle cell crisis is common (21-25% of women) post-delivery
- Women should be monitored for 24 hours on Labour Ward, but encourage hydration, adequate analgesia and early mobilisation
- Daily review by obstetrics and haematology is recommended and re-starting of some breast-feeding safe medication eg Desferrioxamine if needed
- Breastfeeding can be supported, no clinical contra-indicated if mother well
- Watch for postnatal hypertension, minimum observations: 4-6 hourly BP check in hospital for Day 1 and 2, and once between Day 3-5 and Day 10 and each occasion when visited by Community midwife.
- Offer newborn blood spot screening test for the baby as per routine postnatal care
- Ensure postnatal appointment with Haematology within 12 weeks post birth

3.4.2 Analgesia

- Paracetamol, NSAIDs and opioids can be used (avoid codeine if breastfeeding).

3.4.3 VTE prophylaxis

- Start VTE prophylaxis 6 hours post delivery if not bleeding
- Continue with subcutaneous low molecular weight heparin (LMWH) for 6 weeks post delivery

3.4.4 Contraception

- Ensure plan for contraception before leaving hospital
- Ideal is long-acting reversible contraception e.g. (Intramuscular DMPA, implant or intrauterine system)
- Combined oral contraceptive pill (COCP) should be used selectively (FSRH UKMEC 2), avoid if breastfeeding
- Copper intrauterine device (IUD) is classified as UKMEC 2 due to risk of blood loss.

3.5 Management of sickle cell related complications during pregnancy

3.5.1 Acute pain episodes in pregnancy

- Pregnancy increases the incidence of acute pain episodes, especially with HbSS genotype
- MDT input is required (senior obstetrician, haematologist, obstetric anaesthetist) to have an agreed pain management plan for crises during pregnancy
- Women should be admitted to a ward based on their gestation and severity of pain. This could be the Labour ward, haematology/ medical ward, or critical care unit
- Follow the NICE guideline on the management of acute episodes
- Mild pain may be managed in the community with rest, oral fluids and paracetamol with weak opioids (such as co-dydramol, co-codamol or dihydrocodeine)
- Severe pain requires inpatient treatment and the analgesia could include oral, intravenous or subcutaneous morphine, diamorphine or oxycodone
- With analgesia administration, assessments of pain score, sedation score and respiratory rate should be monitored initially at 20-min intervals

- Inpatient assessment by Haematology is also required for atypical pain, chest pain, shortness of breath and pyrexia
- Analgesia should be given within 30 minutes of admission to the hospital and pain should be controlled within 60 minutes of analgesia
- Full history should be taken, focusing on precipitating factors and differential diagnoses
- Promptly assess for medical complications and precipitating factors, such as an infection. Perform urine culture and microscopy. Perform chest x-ray if hypoxic or if any abnormalities are detected on chest examination
- Full set of observations, including oxygen saturation, are required every 1-2 hours
- Prescribe antibiotics if the woman is febrile or if there is high clinical suspicion of infection
- Thromboprophylaxis with prophylactic LMWH is required for all inpatient episodes
- Fluid balance needs monitoring and dehydration should be corrected with intravenous fluids. Fluid balance needs reviewing at least every 12 hours. In women with renal disease or PET, monitor for signs of fluid overload.
- Monitor oxygen saturations. Urgent medical review is needed if oxygen saturations fall below 95% or below the usual baseline. If desaturating, prescribe facial oxygen and consider investigating for other causes such as acute chest syndrome or pulmonary embolism (PE). Intensive care team should be involved if saturations are not maintained using facial oxygen. Women with back or chest pain should be offered an incentive spirometer

3.5.2 Management of acute chest syndrome

- Affects up to 10% of women with SCD in pregnancy
- Signs: fever and/or respiratory symptoms and a new pulmonary infiltrate on CXR
- Investigations: CXR, full blood count, blood cultures, sputum culture, consider ABG in adults with low saturations as severe hypoxia is a helpful determinant of disease severity
- Consider PE as a differential diagnosis if CXR and chest examination are normal
- CTPA is safe in pregnancy; this should be discussed with obstetrics and haematologists
- Antibiotics, with cover for atypical organisms, should be used even if blood cultures and sputum cultures are negative
- Management includes pain relief, incentive spirometry and treatment of bacterial or viral infection
- Consider blood transfusion early in the hypoxic patients. A simple (top-up) transfusion may suffice in early or less severe disease but exchange transfusion will be necessary if there are features of clinical severity or a lack of response to simple transfusion.
- Involve the critical care team in cases of severe clinical features or signs of deterioration to consider non-invasive and invasive ventilation and transfer to high dependency or intensive care unit
- Following an episode of ACS requiring a transfusion, women should be offered regular transfusions for the rest of their pregnancy
- The management should follow the Thames Valley Haemoglobinopathy guideline Acute Chest Syndrome Management

3.5.3 Management of acute stroke (infarctive and haemorrhagic)

- Consider stroke in any women with SCD who presents with acute neurological impairment
- Acute stroke requires urgent brain imaging and referral to the stroke team and haematology
- Rapid exchange transfusion could decrease long-term neurological damage
- Discuss thrombolysis with a stroke physician and senior maternal medicine obstetrician

3.5.4 Acute erythrovirus infection

- Erythrovirus (parvovirus B19) can cause aplastic crisis and reticulocytopenia
- A low reticulocyte count could represent acute erythrovirus infection
- Treatment includes a blood transfusion and the woman must be isolated
- Parvovirus can cause fetal anaemia, a fetal medicine review is indicated

3.5.5 Management of VTE and thromboprophylaxis

- Women with SCD are at a higher risk of VTE, antenatally and postnatally
- Rates of VTE are 3.5 times higher in women with complications (vaso-occlusive crisis, ACS or pneumonia) compared to those without
- Consider prophylactic LMWH from 28 weeks gestation; If additional risk factors are present, prophylaxis should start from the beginning of pregnancy
- Women admitted to hospital should have LMWH unless significant concerns with bleeding
- All women should be offered 6 weeks LMWH post birth
- PE often co-exists with pneumonia or ACS so a high index of suspicion for PE is needed when assessing these women
- Confirmed VTE should be treated as per the local VTE guideline

4.0 Statement of evidence/references

References:

National Institute for Health and Care Excellence. Vitamin D: supplement use in specific population groups. Public health guideline [PH56]. November 2014

National Institute for Health and Care Excellence. Sickle cell disease: managing acute painful episodes in hospital. Clinical guideline [CG143]. June 2012

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Thames Valley Haematology Network. Pregnancy in patients with sickle cell disease: Clinical guideline (HN-510b). November 2018

5.0 Governance

5.1 Document review history

Version number	Review date	Reviewed by	Changes made
1	May 2022	Romana Cuffolo, Anja Johansen-Bibby, Magbor Akanni	Original Document

5.2 Consultation History

Stakeholders Name/Board	Area of Expertise	Date Sent	Date Received	Comments	Endorsed Yes/No
Ellie Tyagi	Consultant Anaesthetist	Jan 2022	Jan 2022	Comments received	Yes
Leanne Holliday	Guidelines midwife	March 2022	March 2022	Amend booking paragraph and include ANNB role	Yes
Monica Wilson	Antenatal screening MW	April 2022	April 2022	Comments for ANNB referrals	Yes
Sophia Yazdanjoo	Community MW	April 2022	April 2022	Sickle cell carrier	Yes

5.3 Audit and monitoring

Audit/Monitoring Criteria	Tool	Audit Lead	Frequency of Audit	Responsible Committee/Board
Number of women having high dose folic acid, vitamin D and aspirin	Notes review	Maternal medicine lead consultant	yearly	Maternal Medicine/ Obstetrics
Birth prior to 40 weeks	Notes review	Maternal medicine lead consultant	Yearly	Maternal Medicine/ Obstetrics
VTE assessment/ treatment pre and post birth	Notes review	Maternal medicine lead consultant	Yearly	Maternal Medicine/ Obstetrics

5.4 Equality Impact Assessment

As part of its development, this Guideline and its impact on equality has been reviewed. The purpose of the assessment is to minimise and if possible remove any disproportionate impact on the grounds of race, gender, disability, age, sexual orientation, religion or belief, pregnancy and maternity, gender reassignment or marriage and civil partnership. No detriment was identified. Equality Impact assessments will show any future actions required to overcome any identified barriers or discriminatory practice.

Equality Impact Assessment			
Division	Women's Health	Department	Maternity
Person completing the EqIA	Anja Johansen-Bibby	Contact No.	
Others involved:		Date of assessment:	24/05/22
Existing policy/service		New policy/service	Yes

Will patients, carers, the public or staff be affected by the policy/service?	Yes
If staff, how many/which groups will be affected?	

Protected characteristic	Any impact?	Comments
Age	NO	Positive impact as the policy aims to recognise diversity, promote inclusion and fair treatment for patients and staff
Disability	NO	
Gender reassignment	NO	
Marriage and civil partnership	NO	
Pregnancy and maternity	NO	
Race	NO	
Religion or belief	NO	
Sex	NO	
Sexual orientation	NO	

What consultation method(s) have you carried out?
-
How are the changes/amendments to the policies/services communicated?
Guideline group meeting, Guideline update poster, on the intranet
What future actions need to be taken to overcome any barriers or discrimination?

What?	Who will lead this?	Date of completion	Resources needed
Review date of EqIA	May 2025		

Appendix. 1

Table for schedule of care for SCD management in pregnancy

APPOINTMENT	SPECIFIC CARE
WEEK 6-8	Review in maternal medicine clinic – history, medication review, vaccination updates, end organ screening, VTE assessment PET screening, MSU
Week 7-9	Early viability scan
Week 10	Booking appointment with MW
Week 12	Dating scan, start aspirin
Week 16	Maternal medicine clinic review
Week 20	Anomaly and maternal medicine clinic review
Week 24	Growth USS, Maternal medicine clinic review
Week 26	Midwife review BP, oxygen sats, urine
Week 28	Growth USS, Maternal medicine clinic review, routine bloods, PET screen, MSU and UPCR, consider VTE
Week 30	Midwife review BP, oxygen sats, urine
Week 32	Growth USS, Maternal medicine clinic review
Week 34	Midwife review BP, oxygen sats, urine
Week 36	Growth USS, Maternal medicine clinic review
Week 38	Maternal medicine clinic review, discuss induction
Week 39	Midwife review BP, oxygen sats, urine
Week 40	Offer induction of labour.