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NHS Foundation Trust

Management of Human Immunodeficiency Viruses (HIV) in Pregnancy

For Use in:	Maternity Services
By:	Midwives, Obstetricians, Virologists, Neonatologists
For:	Women who are HIV positive
Division responsible for document:	Women and Children's Services
Key words:	HIV, Syphilis, Hepatitis B/C.
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7	23/10/2020	Re written to incorporate current standards from National screening program	Alison Evans, Jon Lartey

This is a Controlled Document

Printed copies of this document may not be up to date. Please check the hospital intranet for the latest version and destroy all previous versions.

Antenatal screening

All pregnant women who consent will be screened at booking for HIV. Where a woman declines any of the infectious diseases screened in pregnancy, an Antenatal and New-born Screening Midwife (ANSM) will meet the woman at her dating scan to explore her reasons for declining and re-offer screening. This is to ensure the woman has made an informed choice and understands the benefits of screening.

If the woman declines but is at increased risk (current or past intravenous drug use (IVDU), sharing drug taking equipment i.e. spoons/filters/pipes, sex worker, positive for other infectious diseases – Hepatitis B/C/syphilis undergone blood transfusion before 1991, having unprotected sexual intercourse with someone known to carry HIV, hepatitis B/C, having medical or dental treatment in parts of the world where the virus us more common e.g. Africa, Eastern Europe, Central and East Asia and needles may be re-used or equipment not sterilised effectively, unsterile body piercings/tattoos/acupuncture), a NICU alert will be completed so the Neonatologists can assess whether to test the baby after birth.

A woman presenting in labour, either unbooked, previously declined testing or without verifiable results for infectious diseases, should be encouraged to have screening for infectious diseases (Syphilis, HIV and Hep B/C) as these women are often vulnerable and with higher risk factors. Urgent testing can be performed - follow Clinical Guideline for the Management of Concealed or Undiagnosed Pregnancies for the management of concealed or undiagnosed pregnancies Trustdocs Id: 16848

A small number of women show "non-specific reactivity" to the initial laboratory test for HIV, in which case further testing is required. Testing will be arranged by the ANSM in the Antenatal Clinic to ensure appropriate samples taken in a timely manner. The woman will be informed of the reason for repeat, how she will receive the result and be given contact numbers for the ANSM team. She can be reassured that the likelihood of such cases being genuinely HIV positive is very low.

A failsafe process is in place between the laboratory and ANS team to ensure all women who screen positive for HIV receive appropriate care. See Trust Guideline for the Management of antenatal and new-born screening blood results (AO15).

The National Surveillance of HIV in Pregnancy and Childhood collects data about all HIV positive women to monitor, evaluate and guide service provision and care. The Trust must report all HIV positive women via the online reporting system (www.nshpc-online.org). The ANSM team will regularly update and complete this on the required web-based repository.

Screening Safety Incidents

Due to the nature and characteristics of screening tests, safety incidents within screening programmes require special attention and management. Where an incident occurs along any of the UKNSC screening pathways the ANSM should be informed and the UKNSC document "Managing Safety Incidents in NHS Screening Programmes: Aug 2017" referred to.

Antenatal, Intrapartum and postnatal management of HIV positive women.

Please access the full BHIVA guideline with this link: https://www.bhiva.org/file/5bfd30be95deb/BHIVA-guidelines-for-the-management-of-HIV-in-pregnancy.pdf see Appendix 3 for extract)

Lead Consultant Obstetricians/ Neonatologists for Infectious diseases regularly update individualised care plans/ proformas located on the Division S drive. The GUM physicians at iCASH in Norwich communicate by letter, phone call or nhs.net. The nominated obstetrician updates the proforma when they see the woman and this is attached to their maternity IT record as well as being printed out on yellow paper in the third trimester – one copy in the buff folder and the other in the hand held notes if the patient consents. Each time a new version is generated, the previous one is destroyed to avoid confusion. An example of the proforma is shown in Appendix 1.

If there is no proforma (or it is clearly out of date) in the notes and it is out of 'office hours', you will need to retrieve the patient's GUM number (the so called

'FO' number). This number will be on all the GUM letters and any previous proforma. You then open ICE and use the FO number in place of the patient's Hospital number. You can cross check that you have the correct patient by checking the DOB. You can then find the most recent viral load.

If a woman with HIV is an inpatient for acute reasons and requires GUM input, during clinical hours GUM consultants can be contacted at iCASH, out of hours, on call advice is provided by Addenbrookes Hospital Infectious Diseases service via the Switchboard

References

1. British HIV Association guidelines for the management of HIV in pregnancy and postpartum 2018 (2019 second interim update)

2. NHS Infectious Diseases in Pregnancy Screening Programme Handbook 2016 to 2017

3. HIV: what does my positive screening result mean? NHS Infectious Diseases in Pregnancy Screening Programme

4. Managing Safety Incidents in NHS Screening Programmes : Aug 2017

Appendix 1. Patient Individualised Care Plan

To be completed with each antenatal contact and attached to maternity IT record. In third trimester please print on yellow paper and file in buff notes and patient's yellow notes if she consents. Previous versions to be destroyed when new copy printed.

Patient Initials: _____ **Date of Birth:** _____

Hospital No.: _____ **GU Clinic Code:** _____

i. **Patient history**

HIV positive status Known / Identified at antenatal screening

Partner status Positive / Negative / to be investigated

Hepatitis status B: Positive / Negative C: Positive / Negative

Previous HIV positive pregnancies ____ Mode of delivery – Vaginal / C-section

ii. **Antiretroviral Therapy**

Date started __/__/____

Antiretroviral regimen:

1)
2)
3)
4)

- Importance of compliance and continuation of regime postnatally discussed

Viral Load and CD4 count

Date	No. of	Viral Load	CD4 count

dd/mm/yyyy	**weeks**	**(copies/mL)**	**(cells/µL)**
	Booking		
	36		

iii. **Antenatal management**

Antenatal discussion: (tick as completed)

- Hepatitis B/ C status checked/ discussed
- Review arranged at dating scan __/__/____
- Mode of delivery discussed and recorded
- OGTT discussed. *Required / Not required* (delete as appropriate)
- Serial growth scans discussed. *Required / Not required* (delete as appropriate)
- Serial bloods discussed and arranged
- NICU requirement discussed
- Breast feeding and cabergoline discussed
- Contraception discussed

iv. **Management of Delivery**

Estimated date of delivery: ____/____/____

Have delivery options been discussed with the patient and consent obtained? *Yes / No*

Vaginal Delivery / Pre-labour CS *(delete as appropriate)*

If CS, when? ____/____/____ Why?: High viral load / Other _____

Is intravenous zidovudine indicated? *Yes/No*

a) *Women with viral load >1000: Presenting in labour / SROM / elective C-section*

b) *Untreated women presenting in labour / with SROM and unknown viral load*

c) *Consider in women on cART with plasma HIV viral load 50-1000 regardless of mode of delivery (continued oral dosing on their current regime is also reasonable)*

On the day of delivery, the midwife should take maternal blood samples (3 x 4.5ml EDTA purple bottles) and send to lab for maternal proviral DNA and viral load.

v. **Postpartum management**

- Antiretroviral plan:

  _____
- Breastfeeding been discussed and the patient advised against?
- Lactation suppression been discussed and cabergoline agreed?

Cabergoline 1mg *STAT* (2 x 0.5mg tablets) on the *first* day postpartum

Contraception to be commenced: _____

vi. **NSHPC form returned**

vii. **Healthcare team**

GUM Consultant: _____ Contact No.: _____

Obs Consultant: _____ Contact No.: _____

Neonatal Consultant: _____ Contact No.: _____

Version	Initials of HCP	Date updated
1		
2		
3		
4		
5		
6		

Record of care plan completion/amendment
(Complete every time proforma updated)

To be completed with each antenatal contact. In third trimester please print on yellow paper and file in buff notes and patient's yellow notes if she consents. Previous versions to be destroyed when new copy printed.

Appendix 2 – HIV Referral Pathway

Appendix 3. Management of HIV positive women in pregnancy (extract)

- Antenatal HIV care should be delivered by a multidisciplinary team (MDT).

- Assessment of antenatal and postnatal depression should be undertaken at booking, and 4–6 weeks postpartum and 3–4 months postpartum in accordance with National Institute for Care and Health Excellence (NICE) guidelines.

- Sexual health screening is recommended for pregnant women newly diagnosed with HIV.

Laboratory monitoring for pregnant women living with HIV

- Pregnant women who are newly diagnosed with HIV do not require any additional baseline investigations compared with non-pregnant women living with HIV other than those routinely performed in the general antenatal clinic.

- HIV resistance testing should be completed and results available prior to initiation of treatment, except for late-presenting women (after 28 weeks). Women should be encouraged to continue combination anti-retroviral therapy (cART) post-delivery but, where they chose to stop cART, a further resistance test is recommended to ensure that mutations are not missed with reversion during the off- treatment period.

- In women conceiving on cART there should be a minimum of one CD4 cell count at baseline and one at delivery. The same testing regimen applies for women who commenced cART during pregnancy even if CD4 count is <350 cells/mm^3. It is recommended they also have a HIV viral load and liver function test (LFTs) 2-4 weeks after starting cART, at least once every trimester, at 36 weeks and delivery.

Current issues on the use of ART in pregnancy and pregnancy outcomes

- It is recommended that women conceiving on an effective cART regimen should continue this treatment.

- Women who conceive on non-standard regimens (protease inhibitor mono therapy) or regimens with lower pharmacokinetics such as darunavir/ cobicistat and elvitegravir/ cobicistat in pregnancy should have these regimens modified by GUM/ pharmacy teams depending on tolerability, resistance and prior antiretroviral history. Women conceiving on dolutegravir should have this reviewed due to an increase in the risk of neural tube defects.

- All pregnant women, including elite controllers, should start ART during

pregnancy and be advised to continue lifelong treatment.

- Women are recommended to start tenofovir DF or abacavir with emtricitabine or lamivudine as a nucleoside backbone. It is recommended that the third agent in cART should be efavirenz or atazanavir, as these are agents with the most safety data in pregnancy.

- Zidovudine monotherapy is not recommended and should only be used in women declining cART with a viral load of <10,000 HIV RNA copies/mL and willing to have a caesarean section (CS).

Late-presenting women not on treatment

- A woman who presents after 28 weeks should commence cART without delay.

- If the viral load is unknown or >100,000 HIV RNA copies/mL, a three- or four-drug regimen that includes raltegravir 400 mg bd or dolutegravir 50 mg od is suggested.

Management of an untreated woman presenting in labour at term.

- All women should be given

  - a stat dose of nevirapine 200 mg; and

  - oral zidovudine 300 mg and lamivudine 150 mg bd; and

  - raltegravir 400 mg bd; and receive intravenous zidizudine for the duration of labour.

Hepatitis B and C co-infection

Please refer to BHIVA guidelines on the management of HIV in pregnancy.

Antenatal management

- Fetal ultrasound imaging should be performed as per national guidelines regardless of maternal HIV status.

- The combined screening test for fetal aneuploidies and non-invasive prenatal testing (NIPT) for those who screen as high risk is recommended as this has the best sensitivity and specificity and will minimise the number of women who may need invasive testing.

- Invasive prenatal diagnostic testing should not be performed until after the HIV status of the woman is known, and should ideally be deferred until HIV viral load has been adequately suppressed to <50 HIV RNA copies/mL.

- If not on cART and the invasive diagnostic test procedure cannot be delayed

until viral suppression is achieved, it is recommended that women should commence cART to include raltegravir and be given a single dose of nevirapine 2–4 hours prior to the procedure.

- External cephalic version (ECV) can be offered to women with plasma viral load <50 HIV RNA copies/mL.

Mode of delivery

- For women taking cART, a decision regarding recommended mode of delivery should be made after review of plasma HIV viral load results at 36 weeks.

- For women with a plasma viral load of <50 HIV RNA copies/mL at 36 weeks, and in the absence of obstetric contraindications, planned vaginal delivery should be supported.

- For women with a plasma viral load of 50–399 HIV RNA copies/mL at 36 weeks, pre-labour CS (PLCS) should be considered, taking into account the actual viral load, the trajectory of the viral load, length of time on treatment, adherence issues, obstetric factors and the woman's views.

- Where the viral load is ≥400 HIV RNA copies/mL at 36 weeks, PLCS is recommended.

- In women for whom a vaginal delivery has been planned and labour has commenced, obstetric management should follow the same guidelines as for the HIV-negative population, apart from duration of ruptured membranes (see section 8.3).

- Vaginal birth after CS (VBAC) can be offered to women with a viral load <50 HIV RNA copies/mL

- Where the indication for CS is the prevention of vertical transmission, CS should be undertaken at between 38 and 39 weeks' gestation.

- Where PLCS is undertaken only for obstetric indications and plasma viral load is <50 HIV RNA copies/mL, the usual obstetric considerations apply and the CS will usually be performed after 39 weeks' gestation.

Preterm labour

- Infant unlikely to be able to absorb oral medications, consider addition of double-dose tenofovir DF to the treatment above to further load the infant prior to delivery.

Prelabour spontaneous rupture of membranes (SROM)

- In all cases of term pre-labour SROM, delivery within 24 hours should be the aim.

- If maternal HIV viral load is <50 HIV RNA copies/mL, immediate induction or augmentation of labour is recommended in women who have pre-labour SROM, aiming for delivery within 24 hours of SROM.

- For women with SROM and a last measured plasma viral load of 50–399 HIV RNA copies/mL, immediate CS is recommended

- For women with SROM and maternal HIV viral load ≥400 HIV RNA copies/mL, immediate CS is recommended

- Preterm SROM 34–37 weeks' gestation will require group B streptococcus prophylaxis in line with national guidelines.

- Premature SROM at <34 weeks:

Intramuscular steroids should be administered in accordance with national guidelines. Where HIV viral load is not controlled, this should be optimized. There should be multidisciplinary discussion about the timing and mode of delivery.

Use of intrapartum intravenous infusion of zidovudine

Intrapartum intravenous zidovudine infusion is recommended for

(i) women with a viral load >1000 HIV RNA copies/mL plasma who present in labour or with SROM or who are admitted for PLCS.

(ii) untreated women presenting in labour or with SROM in whom the current viral load is not known

(iii) consider in women on cART with a plasma HIV viral load between 50 and 1000 HIV RNA copies/mL.

Loading dose: 2mg/kg for one hour
Maintenance dose: 1mg/kg/hr until cord is clamped

Method of reconstitution of Zidovudine infusion:

1) Zidovudine vials can be found on Blakeney ward, Delivery Suite and emergency drug cupboard

2) Remove 100ml from a 500ml bag of 5% glucose (leaving 400ml in the bag)

3) Add 5 vials (200mg in 20mls) of Zidovudine and add this to the 400mls of 5% glucose.

Reconstituted solution is stable for up to 48hrs at 25°C. If any visible turbidity occurs the preparation must be discarded.

Place of Birth

- All women living with HIV are recommended to give birth in either co-located birth centre or obstetric unit that has direct access to paediatric care

Water Birth

- Women who choose a water birth should be supported to achieve this ideally in a suitable birthing unit collocated with a paediatric unit

Neonatal management

For Guidelines on Post Natal Management of Neonate see: CA2018 Infants Born to HIV Positive Mothers Trustdocs Id: 1184

The neonatologist should be aware of the delivery and should have been in contact with the mother antenatally for counseling and completion of care plan.

1. The infant should be washed with soap and water to remove blood.

2. Zidovudine syrup should be prescribed and administered as soon as possible and certainly no later than 4 hours of birth at doses below *unless the infant is a special case* (see neonatal guideline and individualised care plan). Can be found on Blakeney ward and Delivery Suite.

Gestation	Dose
<30/40	2mg/kg BD
30-34/40	2mg/kg BD for 2 weeks then 2mg/kg TDS
>34/40	4mg/kg BD

3. Blood tests for HIV status should be taken within 48hrs and sent with a paired maternal sample

4. Avoidance of breastfeeding recommended, give Cabergoline 1mg STAT to suppress lactation

    - There is on-going risk of HIV exposure after birth with breastfeeding, it is therefore recommended that women living with HIV feed their babies with formula milk. In the event that a woman chooses to breast feed, this should

be discussed urgently with the neonatal team – a plan should already be in place (see Individualised Care Plan).

Breast feeding

- In the UK and other high-income settings, the safest way to feed infants born to women with HIV is with formula milk, as there is no on-going risk of HIV exposure after birth. We therefore continue to recommend that women living with HIV feed their babies with formula milk. Women not breastfeeding their infant by choice, or because of viral load >50 HIV RNA copies/mL, should be offered cabergoline to suppress lactation.

- Abstaining from breastfeeding can have financial and psychological repercussions for women, requiring support from the HIV MDT.

- Women advised not to breastfeed for their baby's health should be provided with free formula feed to minimise vertical transmission of HIV.

Choosing to breastfeed in the UK

- Women who are virologically suppressed on cART with good adherence and who choose to breastfeed should be supported to do so, but should be informed about the low risk of transmission of HIV through breastfeeding in this situation and the requirement for extra maternal and infant clinical monitoring.

- When a woman decides to breastfeed, she and her infant should be reviewed monthly in clinic for HIV RNA viral load testing during and for 2 months after stopping breastfeeding.