Perinatal Care for Women living with HIV - Full Clinical Guideline

Reference no.: Obst/07:23/H9

Contents

1. Introduction

In December 2022, the number of people living with Human Immunodeficiency Virus (HIV) in the UK was estimated to be 106,890. The prevalence of HIV in pregnant women in the UK is estimated at 2.2 per 1000. With no treatment the reported rates of vertical transmission range from 15-45%. With effective treatment, the risk of vertical transmission is <1%. The UK government has pledged its commitment to the UNAIDS goal of preventing all transmission of HIV by 2030.

This document outlines the care of pregnant women with Human Immunodeficiency Virus 1 (HIV 1) at University Hospitals of Derby and Burton, both at Queens Hospital Burton (QHB) and at Royal Derby

Hospital (RDH). In the case of HIV 2, case discussion with an expert experienced in the management of HIV 2 will be required.

2. Purpose and Outcome

This guideline aims to promote a multi-disciplinary approach to perinatal services for families living with HIV and to support health professionals to provide high quality, evidence-based care in order to

- minimise the risk of vertical transmission
- protect the health of families living with HIV

3. Abbreviations

ARV	-	Anti-Retroviral Therapy
AZT	-	Azidothymidine (Zidovudine)
BASHH	-	British Association for Sexual Health and HIV
BBV	-	Blood Borne Virus
ECV	-	External Cephalic Version
EPR	-	Electronic Patient Record
GBS	-	Group B Streptococcus
GUM	-	Genito-Urinary Medicine
HIV	-	Human Immunodeficiency Virus
IOL	-	Induction of Labour
MDT	-	Multi Disciplinary Team
PCR	-	Polymerase Chain Reaction
PEP	-	Post Exposure Prophylaxis
ROM	-	Rupture of Membranes

4. Key Responsibilities and Duties

In addition to usual maternity care, women living with HIV will receive care from the multidisciplinary (MDT) perinatal HIV team. This consists of the specialist midwife for HIV, consultant obstetrician for infectious diseases, consultant paediatrician and HIV team including HIV consultant, HIV clinical nurse specialist and psychologist. There is a specialist psychologist within the HIV team at Florence Nightingale Community Hospital (FNCH), while women booked at QHB can be referred for psychologist support via the Lotus Team service. As well as planning and providing care, the perinatal HIV team will be responsible for maintaining evidence based clinical guidance and collection of data for audit.

In addition to usual maternity care documentation, pregnant women living with HIV will be asked for consent to use the maternity HIV care plan (Appendix A) which is embedded onto the electronic patient record system at RDH and can be amended by all members of the MDT perinatal HIV team. Results of any relevant blood tests processed via the HIV clinic will be transcribed onto the HIV care plan after each monthly MDT HIV meeting by a nominated member of the team. By the end of the second trimester, a plan for mode of birth, intrapartum care and infant feeding will be entered into the HIV care plan and can be updated contemporaneously by any member of the perinatal HIV team.

5. Screening for HIV

All pregnant women in the UK are offered screening for blood borne viruses (BBV) as per the national screening programme. Women who decline screening for HIV at their initial pregnancy booking consultation will be offered the opportunity to discuss this with the antenatal and newborn screening team and be formally reoffered screening before 20 weeks gestation (or within 2 weeks if greater than 20 weeks pregnant) and the offer will be repeated later in their pregnancy as per local and national guidance for screening for infectious diseases. The purpose of the formal reoffer appointment is to create an opportunity for the woman to revisit their decision, supported by a professional with relevant experience. The screening midwife should ensure that the woman has received adequate information about the infection and understands why screening is recommended.

6. Equivocal screening tests

If there is initial HIV reactivity on first line testing in the UHDB 'in house' laboratory, the sample will be sent to the reference laboratory for further testing. If there is no reactivity on these samples, the test will be reported as negative. If there is any reactivity on these tests, the test will be reported as equivocal and the antenatal and newborn screening team will make an urgent referral to the Integrated Sexual Health Service at FNCH (for women booked at RDH) or to the Burton Sexual Health Service (for women booked at QHB), for a consultant opinion.

7. Positive screening tests

Any new positive antenatal HIV test results should be referred to the specialist midwife for HIV, obstetric consultant for infectious diseases and the GUM team, who will take a collaborative approach to informing the woman of the result, arranging further testing and planning ongoing care.

8. Preconception care

People living with HIV should be encouraged to seek preconceptual care when planning a pregnancy. This will include discussion with their HIV physician about the suitability of their ARV therapy for pregnancy and the recommendation to take folic acid at 400mcg daily and continue till the end of the first trimester.

Folic acid at the higher dose of 5mg per day should be recommended for

- people taking dolutegravir due to the increased risk of neural tube defect (2 per 1000 births compared to 1 per 1000 births in the general population)
- people who meet the criteria for higher dose folic acid for any other reason in accordance with national guidelines

9. Antenatal care

In addition to usual care, pregnant women living with HIV should receive care within a multidisciplinary team including the specialist midwife, specialist obstetrician, GUM consultant, clinical nurse specialist and psychologist, as well as specialist paediatrician to discuss care of the neonate and infant feeding.

Pregnant women newly diagnosed with HIV should be referred to the HIV clinic immediately for counselling and sexual health screening.

Sexual health screening should be offered to pregnant women who are already receiving HIV care .

Treat genital tract infections according to British Association for Sexual Health and HIV (BASHH) guidelines .

Appendix B details recommended treatment options for women who present for maternity care prior to labour.

Appendix C details recommended treatment options for women who present for maternity care during or after labour

10. Anti-retroviral therapy (ARV)

Newly diagnosed women should be offered anti-retroviral (ARV) therapy, to be commenced as soon as possible after diagnosis and continued throughout pregnancy and after birth

Women conceiving on an effective ARV therapy regime should be advised to continue throughout pregnancy and after birth.

Women on ARV therapy will be offered blood tests for viral load and other tests as appropriate at intervals determined by the HIV team and also

- At around 36 weeks gestation
- Immediately post birth

For the purposes of care planning, viral load of < 50 copies/ml is considered to be undetectable.

Blood for viral load testing at 36 weeks should be taken within maternity services and reported on the Trust EPR system to ensure that clinicians in maternity are able to access the result on admission to hospital.

Babies born to mothers living with HIV will receive post-exposure prophylaxis with ARV therapy as per national and local guidance (Appendix D). The specialist midwife for HIV will request zidovudine syrup from pharmacy during the second trimester and will check or nominate another member of the MDT to check that this is present in the labour ward drug cupboard at 36 weeks.

11. Procedures during pregnancy

Invasive prenatal testing should be delayed wherever possible until there is an undetectable viral load. If this is not achievable or clinically practical, then advice should be sought from the HIV team, who will consider a raltegravir-containing regime and a single dose of nevirapine 200mg PO 2-4 hours prior to procedure.

External Cephalic Version (ECV) can be offered to women with undetectable viral load

12. Mode of birth

If viral load is undetectable at 36/40 -

- recommend vaginal delivery if obstetrically appropriate
- vaginal birth after caesarean section (VBAC) can be offered

If viral load 50 - 399 copies/ml at 36/ 40

- liaise with the HIV team and consider planned caesarean section 38- 39 weeks

If viral load ≥400 copies/ml at 36/40

- recommend planned caesarean section 38 –39 weeks

13. Management of spontaneous rupture of membranes (ROM)

Rupture of membranes

- If undetectable viral load, offer immediate Induction of labour (IOL) or augmentation and aim for delivery within 24 hours of ROM
- If viral load detectable recommend Caesarean section

Preterm rupture of membranes ≥ 34 weeks

- As above with added antibiotic prophylaxis as per the Group B Streptococcus (GBS) guideline

Preterm rupture of membranes < 34 weeks

- IM corticosteroids
- MDT discussion re timing and mode of birth
- Consider induction of labour/birth from 34 weeks
- GBS prophylaxis in labour

14. Co infection with other blood borne viruses

In the presence of Hepatitis B co infection - HIV regime should be amended to include 2 active hepatitis B agents (eg: tenofovir disoproxil plus emtricitabine or lamivudine)

In the case of Hepatitis C co infection, treatment for Hepatitis C should be discontinued.

15. Intrapartum care

Recommend birth in the obstetric unit or co-located birth centre if this is obstetrically appropriate

Home birth is not recommended due to the need for timely administration of ARV therapy to the newborn

Women presenting in labour or with ruptured membranes who are unbooked or have no documented HIV result should be offered urgent testing for HIV and other infectious diseases as per the screening guidelines. This test can be done rapidly 'in-house' with a turnaround time of around 4-6 hours for results. Mark bloods as urgent and follow pathway for urgent booking bloods in labour.

For women who meet the criteria above and are planning a vaginal birth, care in labour should be as per the Trust guidelines for intrapartum care, with the exception of the safe duration of ruptured membranes as detailed above. Evidence shows little or no risk from amniotomy, fetal blood sampling or instrumental birth.

There is no evidence to either support or recommend against waterbirth, and women who request this should be supported in the presence of undetectable viral load.

15.1 Untreated pregnant woman presenting in labour at term should be prescribed

- nevirapine stat dose 200mg PO regardless of CD4 count and hepatitis status **and**
- zidovudine 300mg PO bd and lamivudine 150mg PO bd **and**
- raltegravir 400mg PO bd **and**
- IV zidovudine at the rate of 2 mg/kg for 1 hour as a loading dose, followed by the maintenance dose of 1mg/kg per hour until the cord has been clamped

Intrapartum infusion of zidovudine should be recommended in the following cases for women with viral load ≥1000 copies/ml:

Women with a detectable viral load who present:

- in labour
- with spontaneous rupture of membranes
- for planned caesarean section

and for women

- for whom viral load is unknown
- who are known to be HIV positive and are not currently on treatment

For women who present in these situations with viral load 50-999 copies/ml, intrapartum infusion of zidovudine should be considered.

16. Postnatal care

16.1 Care of the neonate

Baby will receive zidovudine as post-exposure prophylaxis (PEP) therapy to minimise the risk of vertical transmission. This will be prescribed as oral syrup by the neonatal team after birth, as per the Trust neonatal guideline for management of babies of HIV positive mothers.

The first dose of ARV therapy should be given within one hour wherever possible but must be given within four hours. This is reported and audited nationally.

PEP ARV therapy will be prescribed by the neonatology team following risk assessment as per the neonatal guideline (Appendix D).

- Very low risk - 2 weeks zidovudine monotherapy at 4mg/kg every 12 hours
- Low risk - 4 weeks zidovudine monotherapy at 4mg/kg every 12 hours
- High risk - 4 weeks combination (triple) therapy (zidovudine lamivudine nevirapine - dose and regime to be confirmed and prescribed by neonatologist)

Immediate postnatal care will include weighing the baby shortly after birth in order to prescribe the correct dose of ARV as quickly as possible. It may be helpful to request a second person to attend the

birth to facilitate timely communication of this information to the prescribing neonatologist. Baby should be returned to skin to skin contact immediately after weighing with parental consent.

Inform neonatology team of birth and of weight of baby and request prescription for ARV therapy.

After administration of the first dose, the ARV medications and the prescription chart should be taken to pharmacy for appropriate patient-specific labelling.

Document the timing of the first dose of AZT on the postnatal checklist for families living with HIV (Appendix E)

There is no reason to recommend bathing baby or anything other than usual care.

Vitamin K should be offered in the usual way.

Blood samples should be taken from the baby for HIV PCR pro-viral DNA as per local guideline 'Management of babies born to HIV positive mothers' by a member of the neonatology team. These should be taken in purple neonatal EDTA bottles and sent to the lab with paired samples of maternal blood (in adult purple EDTA tubes) for HIV DNA amplification.

Baby should be referred to the paediatric clinic at their booking hospital and will be managed as per the paediatric guidelines for babies born to HIV positive mothers.

- Please inform the relevant perinatal HIV team of the date and time of birth and timing of first dose of ART via email at the following address:

  For women booked at QHB - uhdb.perinatalhivteamQHB@nhs.net

  For women booked at RDH - uhdb.perinatalhivteamRDH@nhs.net

- For formula feeding babies, an appointment should be made to be seen in the paediatric clinic at 6 weeks and baby will receive blood tests at 6 weeks, 12 weeks and 24 months of age as per the paediatric guideline
- For breast feeding babies, an appointment should be made in the paediatric clinic at 4 weeks and baby will receive blood tests on a monthly basis until the cessation of breast feeding.

Immunisations for the infant should be offered as per national immunisation programmes. If baby is eligible for BCG vaccination, referral should be made in the usual way with the information 'Baby born to Mother with BBV - on ARV therapy' documented clearly on the referral form. (Reference no.: NIC IN 14/Nov 19/V00)

16.2 Care of the mother

Continue with antiretroviral therapy

Send paired samples of maternal blood for HIV 1 viral load together with neonatal samples as detailed above as per the postnatal checklist for families living with HIV.

Ensure that the woman has an appointment for attendance at HIV clinic within 4 –6 weeks for review and enough ARV medication to last until that appointment.

Assess and support mental health needs and refer to appropriate services or community groups.

Discuss contraception with appropriate MDT involvement.

Discuss and provide Cabergoline 1mg PO for women who are planning to formula feed their baby.

Complete the postnatal checklist for families living with HIV as well as usual documentation.

Be aware that some people may not have chosen to share their HIV status with family members and there should be no documentation of HIV status in hand held records or on documentation to be taken home without the woman's explicit consent.

16.3 Infant feeding

All pregnant women living with HIV in the UK are recommended to exclusively formula-feed their babies to eradicate the risk of vertical transmission via feeding. However, women may wish to explore the options around breastfeeding and nuanced discussion around infant feeding is essential to facilitate informed choice. Women who have an undetectable viral load should be supported to breastfeed their baby if they so choose.

Women will be given the opportunity to discuss their infant feeding choices throughout pregnancy with all members of the multidisciplinary perinatal HIV team. This will include comprehensive discussion of the pros and cons of both breast feeding and formula feeding in order to facilitate informed choice. The BHIVA triangle, (Appendix F) details out the conditions under which breast feeding can be supported and will be shared with parents as part of this discussion.

For women choosing to breast feed, a feeding plan will be developed in coproduction between the woman and the specialist midwife for HIV. This will be inserted into the HIV care plan and also into the baby notes within the maternal hospital notes ready for admission in labour.

Infant feeding advice varies from usual care for women living with HIV in the following ways:

- If there is any evidence of cracked or bleeding nipples, the woman should be advised to express and discard milk until the wound is healed
- Breast feeding should not continue in the presence of mastitis and milk should be expressed and discarded until the mastitis is resolved
- Women should be advised to breast feed for a maximum of 6 months

It is particularly important that breastfeeding women living with HIV receive high quality breast feeding support to avoid nipple damage and the associated complexities of needing to suspend breast feeding. There should be a low threshold for referring women for extra support wherever necessary.

If there is a clinical need to supplement with infant formula, women can be supported to return to breast feeding in the presence of undetectable viral load after supplementation.

If there are concerns about whether breast feeding should continue to be supported, please seek advice from any member of the perinatal HIV team or infant feeding team.

Women who are formula feeding should be offered lactation suppression with Cabergoline 1mg PO as a single dose within 24 hours of delivery

Women who choose to breast feed will be offered monthly viral load monitoring for themselves and their babies for the duration of the breastfeeding relationship and for 2 months afterwards.

Women will be advised to continue with the ARV therapy post cessation of breast feeding for their own health.

Women who choose to formula feed should be advised that first stage (whey-based) infant formula is the only formula milk preparation their baby will need for the first year of life and that all brands have very similar composition. There is no evidence that other formula milk preparations such as Stage 2 follow-on, hungry baby or anti-reflux formula is beneficial and some research suggests they can sometimes cause harm. For further information and for guidance on how to prepare formula safely, signpost parents to www.firststepsnutrition.org

17. Auditable outcomes

- Proportion of pregnant women newly diagnosed with HIV attending an appointment in 5 or less working days to discuss their results
- Proportion of pregnant women newly diagnosed with HIV having a sexual health screen.
- Proportion of women who have commenced ART by beginning of week 24 of pregnancy.
- Proportion of infants for whom neonatal PEP is commenced within 4 hours of delivery.
- Proportion of women presenting in labour/with SROM/requiring delivery without a documented HIV result having an urgent HIV test result documented and where this result is actioned immediately rather than delayed waiting confirmation of result

- Proportion of infants reviewed postpartum by 6 weeks when formula feeding and by 4 weeks when breastfeeding
- Proportion of mothers reviewed by 6 weeks postpartum
- Proportion with documented mental health assessment at booking, and at 4–6 weeks postpartum.

18. References

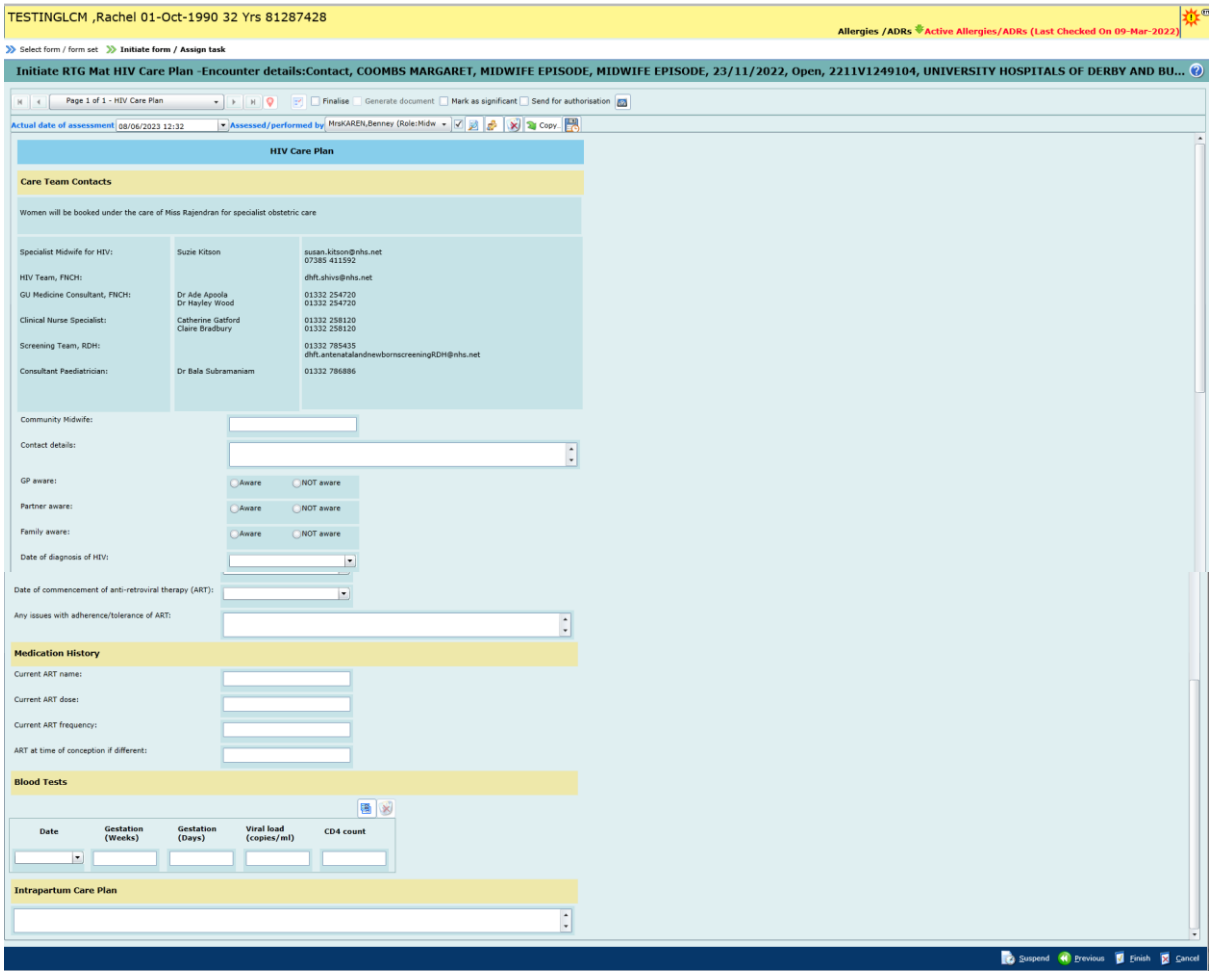
BHIVA guidelines 2020

Infectious diseases in pregnancy screening standards (2023)

Appendix A

Maternity HIV Care plans

For women booked at RDH, this is embedded on Lorenzo.



For women booked at QHB, a hard copy is filed in the maternity hospital notes.

Care plan for pregnant women living with HIV who are booked for maternity care at Queens Hospital Burton.

Name
Hospital Number
NHS number
(or patient identity label)

G P
EDD

Specialist	Name	Contact Number/s
GU Med Consultant		
GU Med Consultant		
Clinical Nurse Specialist (Lead)		
Clinical Nurse Specialist		
Consultant Obstetrician		
Consultant Paediatrician		
Specialist Midwife HIV		
Antenatal & Newborn Screening Midwives		
Community midwife		
GP		
Pharmacists		
Partner		

GP aware of HIV status: Yes □ No □

Partner aware of HIV status: Yes □ No □

Family aware of HIV status: Yes □ No □

Date of diagnosis of HIV

Date of commencement of Anti-retroviral therapy (ART)

Any issues with adherence/tolerance of ART

Medication (ART & other)

Drug	**Dose**	**Frequency/ timing**	**Date started**	**Gestation started (wks)**

ART at time of conception if different

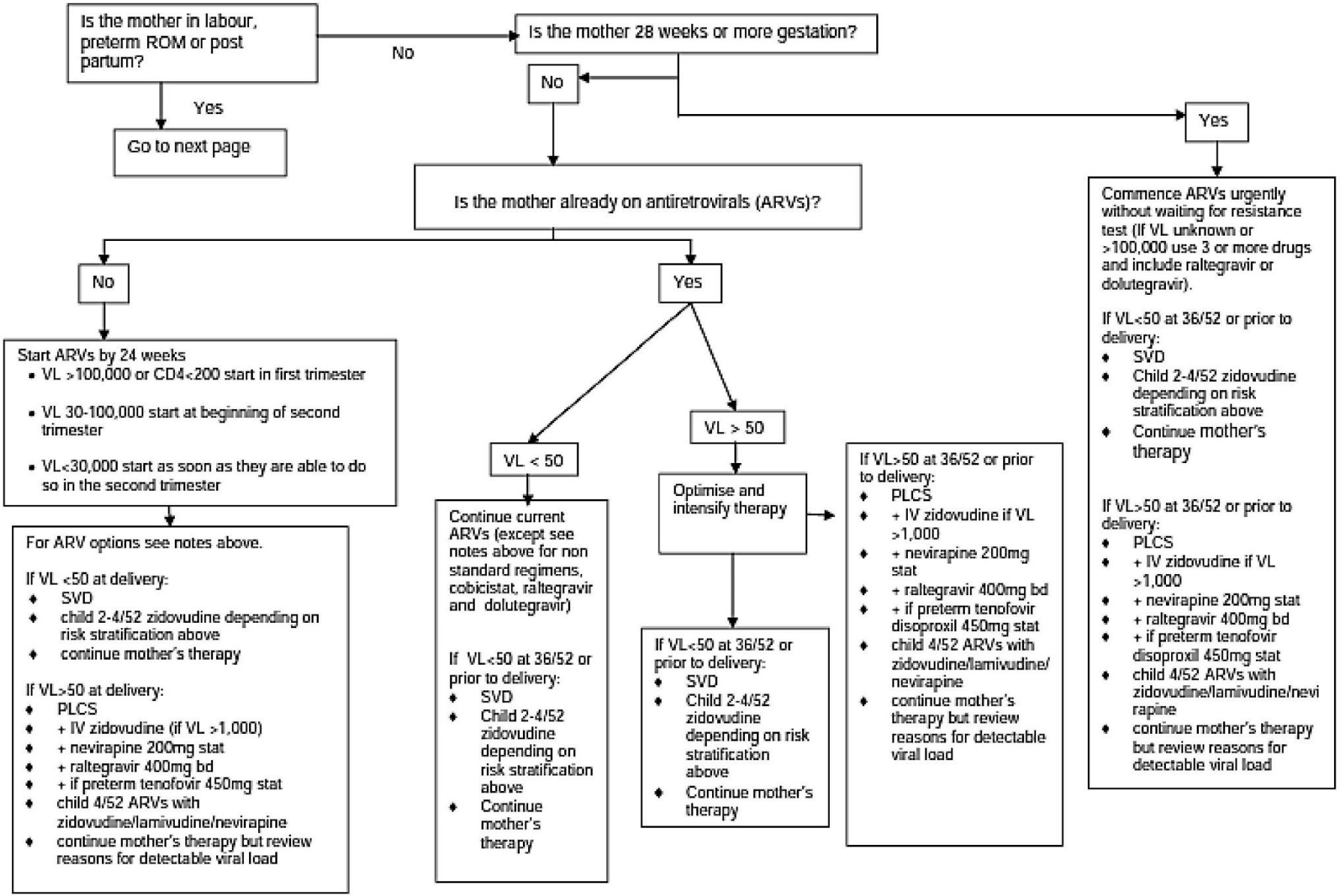
Blood tests & results

Date	Gest. (wks)	Viral Load (copies/ml)	CD4 count

Intrapartum care plan

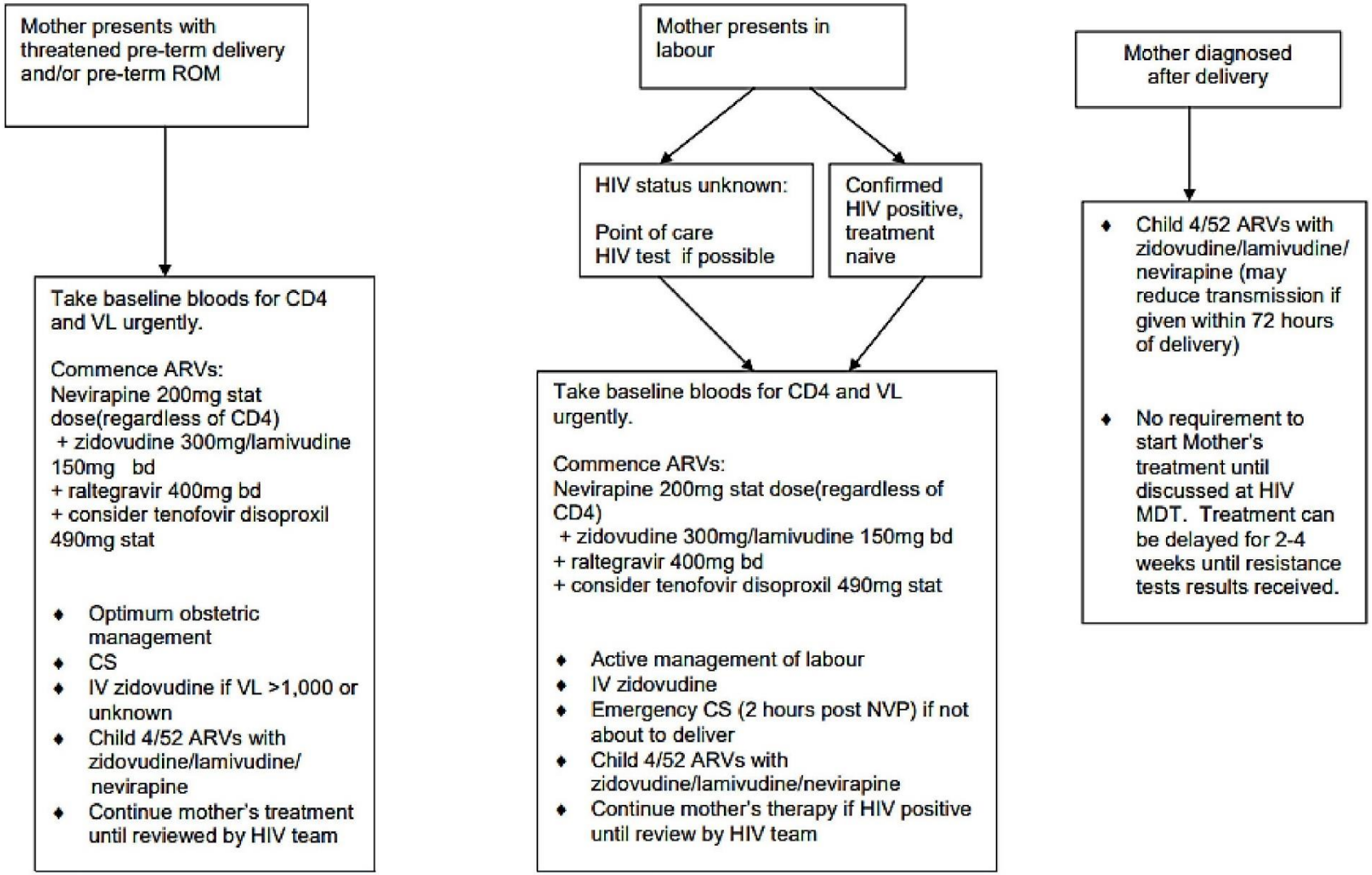
Infant feeding plan

Flow chart to aid treatment choice in HIV positive pregnant women who present before labour

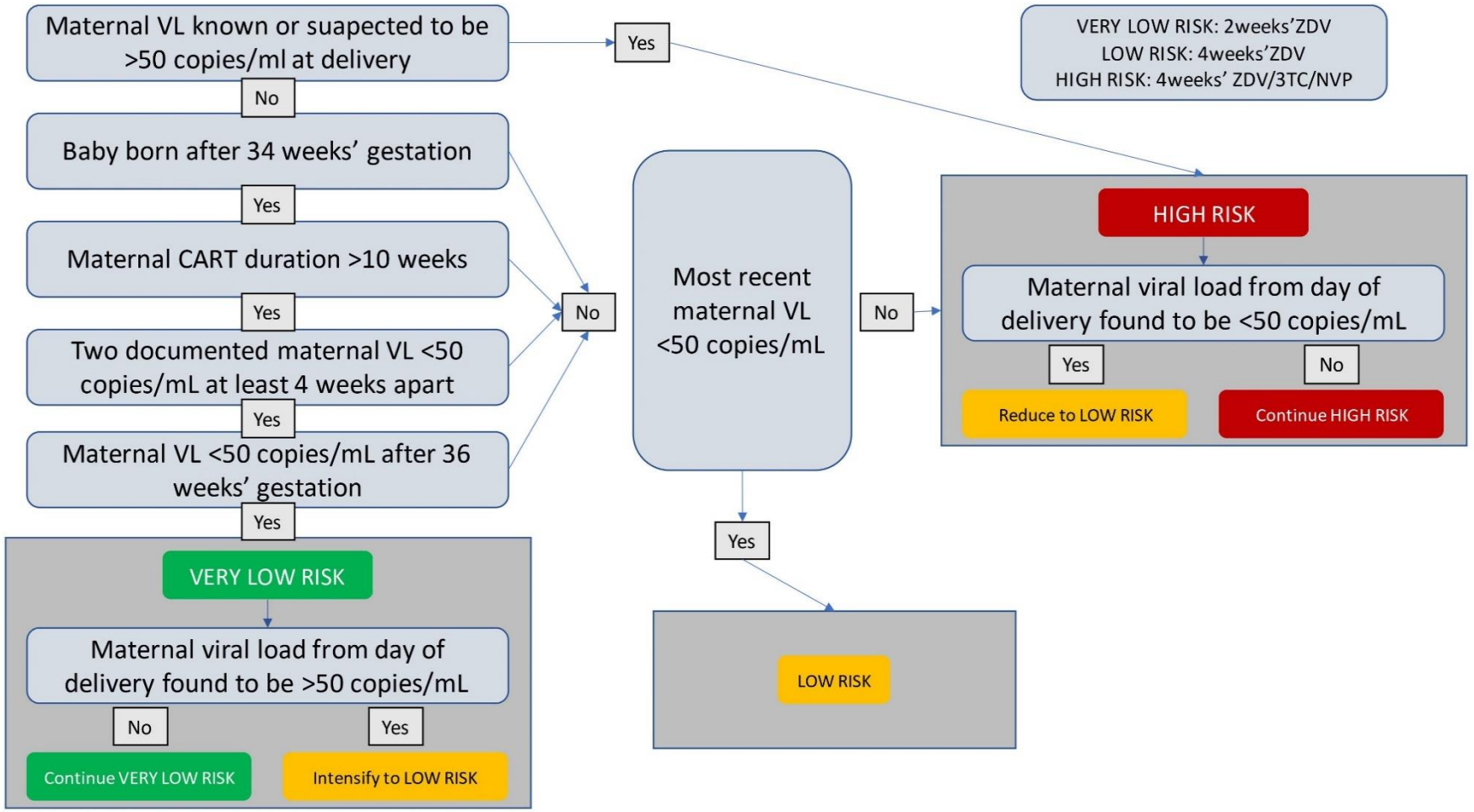


Flow chart to aid treatment choice in HIV positive pregnant women who present during labour, after delivery or with a threatened unplanned delivery

Note: Nevirapine included in these regimes as it crosses the placenta rapidly and lasts in the infant circulation for up to 10 days. Tenofovir disoproxil and Raltegravir also rapidly cross the placenta.



Assessment of risk of vertical transmission of HIV (BHIVA 2020)



Appendix E

Postnatal checklist for families living with HIV

Before transferring to postnatal ward

Task	Completed (initial, date and time)
Inform neonatal team of birth	
Ensure neonatal antiretroviral treatment is: Prescribed Given	
Document the timing of the first dose of neonatal antiretroviral treatment: Time_____ Date_____	
Ensure that maternal and neonatal bloods have been sent to laboratory (2 x purple neonatal EDTA bottles for baby and 2 x purple EDTA bottles for mother sent together as a paired sample) Time_____ Date_____	
If formula-feeding, offer Cabergoline and ensure it is: Prescribed Given	

Before transfer home

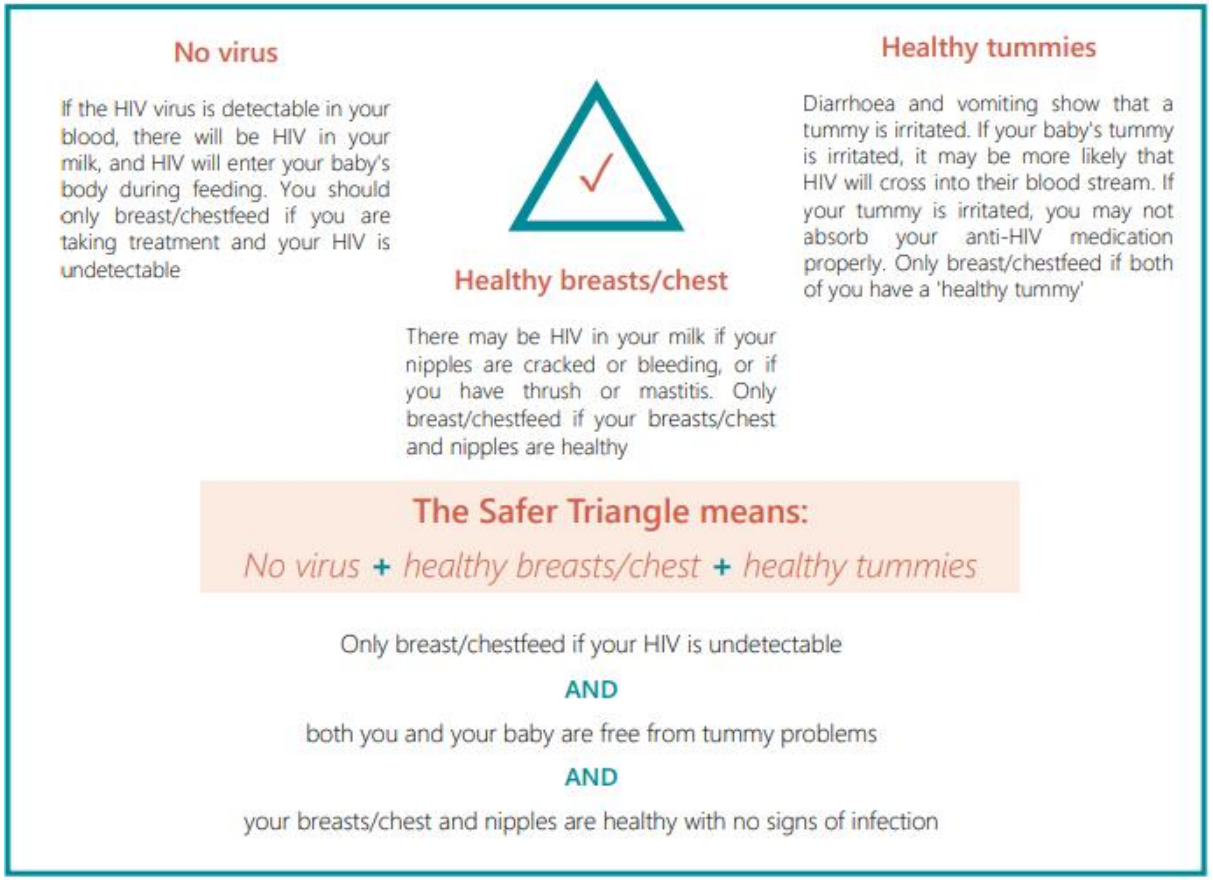
Ensure patient knows date and time of next appointment in HIV clinic	
Arrange appointment for baby in paediatric outpatient clinic at 6 weeks if formula feeding, or 4 weeks if breastfeeding.	
Ensure parent is confident giving AZT at home and has enteral syringes	
Notify the following by email of the date and time of birth and the date and time of the first dose of antiretroviral therapy: uhdb.perinatalhivteamQHB (for women booked at QHB) uhdb.perinatalhivteamRDH (for women booked at RDH)	

If baby is eligible for BCG, refer in the usual way and clearly document 'Baby born to Mother with BBV - on ARV therapy' documented on the referral. This should be done by practitioner performing NIPE examination.

Name of midwife completing this checklist _____ (Print, date & sign)

Appendix F

BHIVA triangle for the conditions required to support breast feeding by women living with HIV



Documentation Control

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Version / Amendment	1	Mar 2007	H Green – Specialist Midwife HIV, Mr V Chilaka – Consultant Obstetrician & Gynaecologist, G.U.M. Consultants	New
	2	Nov 2012	H Green Specialist Midwife HIV, T Doucas - Antenatal & Newborn Screening Midwife, C Gatford - Clinical Nurse Specialist HIV, A Akers - Health Adviser Dr AO Apoola - Consultant Genito-Urinary Medicine, Dr VP Balasubramaniam - Consultant Paediatrician Mr VN Chilaka, Consultant Obstetrician	Update of previous guideline to reflect current BHIVA Guidelines, RCOG Green-Top Guidelines, BASHH Guidelines and National Screening Committee Standards
	3	Aug 2016	H Green - Specialist Midwife HIV, Mr VN Chilaka, Consultant Obstetrician Dr AO Apoola - Consultant Genito-Urinary Medicine, Dr VP Balasubramaniam - Consultant Paediatrician	Review & update
	4	Aug 2019	H Green - Specialist Midwife HIV, Miss S Rajendran – Consultant Obstetrician Dr VP Balasubramaniam - Consultant Paediatrician Dr AO Apoola - Consultant Genito-Urinary Medicine,	Review & Update
	5	March 2023	Miss S Rajendran - Consultant Obstetrician Suzie Kitson - Antenatal Screening Midwife	Reviewed against national guidance
Intended Recipients: This guideline is intended for use by all obstetric, midwifery, GUM, anaesthetic and pharmacy staff involved in the antepartum, intrapartum and postpartum care of pregnant women who are HIV Positive.				
Dissemination: Cascaded through lead midwives/doctors / Published on Intranet NHS mail circulation / Article in BU newsletter				
To be read in conjunction with: Maternal Antenatal Screening Tests Guideline (H11), Newborn Feeding Guideline (B8), Genito-Urinary Medicine Guideline on HIV, Post-Exposure Prophylaxis (PEP) Guidelines for children exposed to blood-borne viruses (HIV/Hepatitis B and Hepatitis C), Caesarean Section Guideline, Infection Control Guideline, Group B Streptococcus guideline (G2), Diabetes Services in Obstetrics (D1).				
Consultation with:	Obstetricians & midwifery staff / Paediatricians			
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Review Date:	July 2026			
Key Contact:	Joanna Harrison-Engwell			