Reference Number: UHBOBS213 **Previous documents no reference numbers** **Version Number:** 4	**Date of Next Review:** *2022* **Previous Trust/LHB Reference Number:**

HIV-infected pregnant women and their babies: Multidisciplinary Guidelines for their care

Introduction and Aim

This document is a revision of previous guidelines. It is produced in response to updated national guidelines from the British HIV Association in 2019 regarding the management of pregnant HIV-infected women and their infants. It was written on behalf of a multidisciplinary team from the Department of Sexual Health, Infectious Diseases, Obstetrics and Gynaecology, Paediatrics and Virology. The aim is to standardise care within the C&V UHB in line with current evidence and to minimise risk to patients by issuing clear guidance to all staff involved with this patient group.

Objectives

- To optimise the diagnosis of HIV in pregnancy and the antenatal care of women with HIV.
- To optimise the use of antenatal antiretroviral therapy to reduce mother to child transmission of HIV.
- To provide clear guidance around obstetric management to minimise the risk of vertical HIV transmission whilst facilitating choice for women.
- To optimise the management of women and their babies in the postnatal period with regards to monitoring, neonatal antiretroviral therapy and other means of further reducing the risk of vertical HIV transmission

To provide the foundation for successful multidisciplinary working and holistic care.

Scope This procedure applies to all of our staff that provide HIV care, obstetric care and paediatric care to women with HIV and their families, including those with honorary contracts. It also applies to those services that refer patients into our service for tertiary level care.

Equality Health Impact Assessment	*An Equality Health Impact Assessment (EHIA) /has not been completed. (please delete as necessary)*
Documents to read alongside this Procedure	**British HIV Association guidelines for the management of HIV in pregnancy and postpartum 2018 (2019 interim update)**
Approved by	HIV in Pregnancy MDT Maternity Professional Forum Department of Sexual Health Quality and Safety Group

Accountable Executive	*Ruth Walker, Executive Nurse Director*

or Clinical Board Director	
Author(s)	Dr Laura Cunningham, Consultant Genitourinary Medicine, Department of Sexual Health (DOSH) on behalf on HIV-Pregnancy MDT: Dr Amy Robb, Consultant Obstetrician, Department of Obstetrics and Gynaecology Dr Jennifer Evans, Paediatrics Ms. Natasha Thomas, Women's Unit Dr Nicola Lomax, DOSH Dr Rachel Drayton, DOSH Dr Mary Browning, DOSH Dr Brendan Healy, Infectious Diseases Dr Andrew Freedman, Infectious Diseases Ms. Fiona Clark, Specialist Pharmacist Dr Nicola Price, Public Health Wales

1.1.1.1.1.1 Disclaimer

If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or the Governance Directorate.

Summary of reviews/amendments			
Version Number	**Date of Review Approved**	**Date Published**	**Summary of Amendments**
3	Jan 2015	*Jan 2015*	Newly entitled with significant restructuring and updating.
4	November 2019	Feb 2020	British HIV Association guidelines for the management of HIV in pregnancy and postpartum 2018 (2019 interim update)

1 Table of Contents

Contents

2 PROCEDURE FOR HIV TESTING PREGNANT WOMEN

- **All pregnant women booking their care with the Cardiff and Vale University Health Board should be offered antenatal screening for HIV**. Reasons for declining HIV testing should be explored and documented.

- Women who decline screening should be given a further written or verbal opportunity to have this screening test during pregnancy, prior to the 28 week antenatal appointment (Antenatal Screening Wales Standard 2015)

  For women who screen positive for HIV infection, a record of the HIV antenatal screening result should be made clearly within the All Wales Maternity Record, unless the woman declines to have the result in her hand held notes.
  The woman should be advised that recording of her HIV status in her hospital notes and on the maternity electronic information systems is in the best interests of her and her unborn baby.
- Women withholding consent for information sharing should be asked to discuss this further with a senior clinician and sign a non-disclosure form. Section 15.1 Non Disclosure

- Yellow “At risk” stickers / abbreviation RVI (risk of viral infection) should only be used on blood forms until the HIV viral load has been undetectable for 6 months – after this they are not indicated or appropriate.

Back to Contents

3 INITIAL MANAGEMENT OF WOMEN *NEWLY* DIAGNOSED WITH HIV IN THE ANTENATAL CLINIC

- The Consultant Virologist should urgently phone through a positive HIV result on antenatal screening to the screening midwife or ANC deputy at UHW or Llandough, respectively. The ANC team should be informed of positive HIV results by the laboratory within one working day.

- The screening midwife/ ANC deputy will then contact the HIV clinical nurse specialist (CNS) or health adviser from the Department of Sexual Health (DOSH) at the Cardiff Royal Infirmary to arrange an urgent appointment with the pregnant woman. In some cases it will be more appropriate to refer the woman to the Infectious Diseases Unit (e.g. clinical indication, patient choice).

- The positive HIV result must be given to the woman within five working days whenever possible.

- The pregnant woman herself is phoned by the screening midwife/ antenatal clinic deputy informing her that she needs to attend antenatal clinic to discuss one of the blood results (***she is not told which one at this point)***. A letter and/or home visit may be required if there is no response to the phone call, bearing in mind that all pregnant women must be commenced on antiretroviral therapy by 24 weeks gestation at the very latest and earlier for those women with a high HIV viral load.

- When the woman attends the booking hospital she is seen by the screening midwife/Antenatal Clinic deputy and the HIV CNS/ health adviser and informed of the HIV positive test result.

- Results should be given to the woman alone unless she specifically requests otherwise and it should be explained that this is routine procedure. This is to provide confidentiality, as some women will not wish to disclose their HIV status to partners/family/friends.

- If the woman's first language is not English, an independent advocate or interpreter should be used (not family member or partner).

- The HIV CNS / health adviser gives information on services available and the importance of attending an HIV specialist clinic as soon as possible

to assess her medical situation and options for management.

- The woman is given ASW written information (Information for women who are HIV positive and pregnant) (Print off from http://www.antenatalscreening.wales.nhs.uk/sitesplus/documents/968/Information%20for%20women%20who%20are%20HIV%20Positive%20English.pdf) and a pregnancy pack from the Department of Sexual Health (DOSH). Section 15.2: **DOSH pack**.

- A second sample of blood is obtained for confirmatory HIV Antibody testing**,** which is sent on the hospital number.

- Samples should be labelled and sent with the patient's main hospital number unless consent is specifically withheld. In this case, a CRI anonymised 'F' number may be used.

- The CNS/Health Advisor telephones/emails the virology laboratory on 02920745080 to inform them of corresponding 'F' number (if appropriate), date of birth and EDD for that woman.

- Information is given to the woman regarding the DOSH HIV clinic (Glossop Unit) and an appointment is made to be seen within 2 weeks. The woman may instead be offered care under the ID Unit at UHW if she prefers.

- Screening for other Sexually Transmitted Infections (STI) should be performed at the antenatal clinic. Women who test positive will be managed according to BASHH guidance, by the DOSH clinic. A repeat screen for STIs should be considered at 28 weeks depending on the patient's symptomatology and sexual history.

- The woman should be advised that the following professionals are routinely informed about HIV positive pregnant women within the UHB and form the multidisciplinary team caring for the woman and baby throughout her pregnancy and postnatal period:
    - Glossop Unit HIV MDT at the CRI and/or Infectious Diseases Unit Team at UHW
    - Named Obstetric Consultant & referral to Dr Aamna Ali at UHW
    - Natasha Thomas, Antenatal Screening Midwife
    - Named Community Midwife consider ELAN team

- Consultant Virologist
- Dr Jennifer Evans, Paediatric Consultant
- Emily Blake / Gemma Davies – Paediatric Specialist Nurses
- Woman's GP
- Health visitor
- Fiona Clarke - HIV Pharmacist

- The consultant obstetrician will write to all members of the HIV Pregnancy MDT to include virology to inform them that a pregnant woman has been diagnosed with HIV.
    - To include information regarding medication, viral load and CD4 count – see template letter in Section 15.3 Standard Letter .
- All correspondence will be emailed and uploaded to PMS unless the patient specifically withholds consent.
- A detailed plan will be documented by the Screening Midwife/ANC Deputy or Consultant Obstetrician in the All Wales Maternity Record (on the HIV pathway) in the event of a woman attending another unit.

- **For women who decline to have any information in their hand-held notes, then a duplicate green file containing the HIV pathway, detailed information and blood results will remain in the delivery suite managers' office. This option should be strongly discouraged on the basis of clinical risk.**

Back to Contents

3.1 TESTING OF PARTNER (S)

If a pregnant woman is diagnosed HIV positive it is important to encourage her to disclose to her partner.

This enables:

1) Support from her partner.

2) Discussion and arrangement of HIV testing for the partner (advised via DOSH with regard to confidentiality and professional support).

3) Discussion around continuing sexual practice.

NB some partners are HIV negative and would therefore be at risk of infection if unprotected sex were to continue. Pre-exposure prophylaxis (PrEP) may be indicated.

Disclosure by healthcare professionals of a woman's positive HIV status to partners/relatives/others is almost never indicated and must only occur when there is clear *immediate* risk of transmission. This must always be discussed with the HIV consultant responsible for the patient's care, the multidisciplinary team and the patient.

Back to Contents

3.2 TESTING OF EXISTING CHILDREN

This is recommended and often requested by parents and can be arranged with the Paediatric HIV team, following a written referral to the clinical specialist nurse in paediatrics and Dr Jennifer Evans. Children will have blood taken at UHW by clinical specialist nurse in paediatrics.

Negative HIV results to be given by clinical specialist nurse in paediatrics. Positive HIV results to be given by the Paediatric HIV team.

Back to Contents

4 MANAGEMENT GUIDELINES FOR *KNOWN* HIV POSITIVE WOMEN

- Women should be advised that the following professionals are routinely informed about HIV positive pregnant women within the UHB and form the HIV Pregnancy multidisciplinary team caring for the woman throughout her pregnancy and postnatal period:
    - Glossop Unit HIV MDT at the CRI or Infectious Diseases Unit Team at UHW
    - Obstetric Consultant Dr Aamna Ali at UHW
    - Natasha Thomas (Antenatal Screening Midwife)
    - Named Community Midwife (consider ELAN team)
    - Consultant Virologist
    - Dr Jennifer Evans, Paediatric Consultant
    - Emily Blake / Gemma Davies – Paediatric Specialist Nurse
    - Woman's GP
    - Health Visitor
    - HIV Specialist

- HIV physician (either within DOSH or ID) will write to all members of the HIV Pregnancy MDT to include virology to inform them that a known HIV positive woman is pregnant
    - To include information regarding medication, viral load and CD4 count – see template letter in Section 15.3 Standard Letter.

- All correspondence between HIV services and the rest of the MDT will be emailed and uploaded to PMS unless the patient specifically withholds consent.
- If no ANC appointment exists, the HIV CNS or ID Specialist Nurse should contact the Screening Midwife/deputy directly (02920 745265) to arrange an appointment with Dr Aamna Ali at approximately 12 weeks gestation or as soon as possible, as appropriate.

- Screening for other sexually transmissible infections should be performed when pregnancy is disclosed/confirmed and should also be considered at 28 weeks depending on the patient's symptoms and sexual history.

- A detailed plan will be documented by the Screening Midwife/ANC Deputy or Consultant Obstetrician in the All Wales Maternity Record (on the HIV pathway) in the event of a woman attending another unit.

- For women who decline to have any information in their hand held notes, then a duplicate green file containing the HIV pathway, detailed information and blood results will remain in the delivery suite manager's office. **This option should be strongly discouraged on the basis of clinical risk.**

Back to Contents

5 PSYCHOSOCIAL ISSUES

The prevention of HIV transmission from mother to child is dependent on the engagement of women with the multidisciplinary team and interventions available.

It is also crucial that the many psychosocial factors, which can have an impact on engagement and therefore transmission, are not overlooked.

These include the following:

Issues around new HIV diagnosis, confidentiality, stigma
Education and health promotion regarding transmission to partners
Partner notification/disclosure
Social support
Immigration and dispersal
Disclosure to and testing of existing children
Mental health concerns
Intimate partner violence
Drug and alcohol use
Safeguarding concerns for both mother and child

The following are recommended for all pregnant women with HIV:

Antenatal care should be provided by a multidisciplinary team, including those working in the community if appropriate

Women should be offered peer support where available (via DOSH/ID)

Early assessment of social circumstances

Identification of patients who decline interventions or disengage from care with active follow-up

Assessment of antenatal and postnatal depression at booking, 4-6 weeks postpartum and 3-4 months postpartum in accordance with NICE guidelines. Women in whom mental health concerns are identified should be referred promptly to mental health services, their GP and/or voluntary services as appropriate.

Back to Contents

6 LABORATORY MONITORING OF PREGNANT WOMEN WITH HIV

1. Women who are newly diagnosed with HIV in pregnancy require no additional baseline investigations to non-pregnant women in the antenatal clinic. The baseline bloods will be done by ID/ ISH

2. HIV resistance testing

    a. Results should be available prior to commencement of cART except in late presenting women (after 28 weeks).

    b. In late presenting women, cART should be commenced according to epidemiological assessment of resistance and may be modified when resistance test results are available.

3. CD4 count

    a. Should be performed at baseline in ALL pregnant women
    b. Should be repeated at delivery in ALL pregnant women
    c. For women commencing cART in pregnancy, CD4 should be repeated as per routine initiation of antiretroviral therapy

4. HIV viral load
5. Women commencing cART in pregnancy should have an HIV viral load performed 2 weeks after starting, in each trimester, at 36 weeks and at delivery.
6. Additional testing may be required if there are concerns about adherence, a switch in cART or a failure to suppress viral load

7. Women conceiving on cART should have viral load monitoring at least once per trimester with repeat tests at 36 weeks and at delivery.
8. Additional testing may be required if there are concerns about adherence, a switch in cART or a failure to suppress viral load.

9. Liver function Tests:
10. For women commencing cART in pregnancy, liver function tests should be included with all routine monitoring bloods during the pregnancy due to an increased risk of liver toxicity in this patient group.

11. Therapeutic drug monitoring may be considered in women who do not suppress HIV plasma viral load to <70 IU/ml.

7 ANTENATAL HIV MANAGEMENT

INTERPRETATION OF HIV VIRAL LOAD VALUES

HIV viral load samples processed within Cardiff and Vale UHB are described in *IU/ml* and a cut-off of **<70 IU/ml** is used to guide a number of management decisions.

The British HIV Association Guidelines refer to *copies/ml* and use <50copies/ml as a cut-off.

These two cut-offs are comparable and should be treated in the same way.

7.1 MANAGEMENT TO REDUCE VERTICAL TRANSMISSION

1. Antiretroviral therapy (ART) for the woman
2. Management of labour and delivery
3. ART for the baby
4. Avoidance of breastfeeding

Back to Contents

8 ANTI-RETROVIRAL THERAPY (ART) for the woman[2]

Options for anti-retroviral therapy will be discussed at the specialist HIV clinic and will depend on the following:

- Current ART status
- Stage of pregnancy
- Baseline HIV viral load and stage of maternal HIV infection
- HIV resistance testing results
- Potential for drug-drug interactions
- Co-infection status
- Adherence assessment
- Obstetric history, particularly history of preterm labour
- Other clinical and psychosocial factors

The aim is to effectively and safely suppress viral load during pregnancy and at the time of delivery.

Back to Contents

8.1 Recommended and alternative ARV agents in pregnancy:

	Recommended	Alternative
NRTI backbone	Abacavir/lamivudine Tenofovir DF/emtricitabine	Zidovudine/lamivudine
Third agent	Efavirenz Atazanavir/ritonavir	Rilpivirine Darunavir/ritonavir Raltegravir 400mg bd Dolutegravir (after 8 weeks gestation)

Back to Contents

8.2 Main Treatment Scenarios

There are 4 main treatment scenarios:

1. Women conceiving on ART
2. Women commencing ART during pregnancy
3. Women presenting after 28 weeks but before labour
4. Untreated women presenting in labour/women failing to suppress on ART

Back to Contents

8.2.1 Women conceiving on ART

- Women wishing to conceive should have their ART regimen reviewed.
- Women who conceive on an effective ART regimen should continue this regimen.

Exceptions:

a) Protease inhibitor monotherapy should be intensified (depending on tolerability, resistance and prior ART history) to include one or more agents that have been shown to effectively cross the placenta.

b) Didanosine co-administered with stavudine is contraindicated in pregnancy.

c) Regimens with lower or unknown pharmacokinetics in pregnancy:

- Darunavir/cobicistat or Elvitegravir/cobicistat – Cobicistat should be switched to ritonavir in pregnancy
- Raltegravir 1200mg once daily – Should be switched to 400mg bd in pregnancy

d) Women conceiving on dolutegravir (DTG) should be seen by an HIV specialist as soon as possible to discuss current evidence on neural tube defects – see below.

e) Women should be advised against the combination of tenofovir DF/emtricitabine with lopinavir/ritonavir which has been associated with an increased risk of neonatal death and prematurity in the PROMISE trial.

f) Rilpivirine
Rilpivirine should be taken with food to optimise absorption. Additional viral load monitoring (every 4 weeks) is indicated in the

third trimester due to lower drug exposure.

Back to Contents

8.2.2 Women commencing ART during pregnancy

8.2.2.1 When to start

- All women, including elite controllers, should start ART during pregnancy and should be advised to continue lifelong treatment.
- All women should start ART by 24 weeks gestation at the latest

Baseline Viral Load	When to start ART
(< 52,000 IU/ml)	As soon as possible during the 2nd trimester
(52,000-172,000 IU/ml)	At the start of the second trimester
(>172,000 IU/ml)	Within the first trimester

Consider the following when determining time to start ART:

- The theoretical issues for avoiding medication during pregnancy, in particular the first trimester;
- Evidence of risk of congenital abnormality following exposure to cART
- Maternal health;
- Risk of vertical transmission to the infant as determined by maternal viral load, whether cART is taken in pregnancy, and the time on cART prior to delivery.

What to start	Recommended	Alternative
NRTI backbone	Abacavir/lamivudine Tenofovir DF/emtricitabine	Zidovudine/lamivudine
Third agent	Efavirenz 600mg od Atazanavir/ritonavir 300/100mg	Rilpivirine 25mg od Darunavir/ritonavir 600/100mg bd Raltegravir 400mg bd Dolutegravir 50mg od (after 8 weeks gestation)

In addition to routine clinical and psychosocial factors as above, the following

must be considered when selecting a starting ART regimen in pregnancy:

A. Risk of preterm delivery (PTD):

- Although likely to be multifactorial, there is some evidence that boosted protease inhibitors (PI) may increase the risk of PTD to a varying extent. In a woman with risk factors for PTD who requires a PI, atazanavir/r is favoured whilst lopinavir/r is not recommended.

B. Pharmacokinetics and dosing considerations:

- Raltegravir must be prescribed at 400mg bd during pregnancy.
- Twice daily dosing of darunavir/r may be considered if starting in pregnancy or if evidence of PI resistance exists. Therapeutic drug monitoring (TDM) may be considered.
- In women taking H2-antagonists during pregnancy, atazanavir/r should be increased to 400/100mg.
- There is some evidence of reduced atazanavir levels when used with tenofovir DF. An increased dose of 400/100mg may be considered in individual cases.
- Women should be advised against taking a combination of tenofovir DF, atazanavir/r and H2 antagonists.
- No other dose modifications are required for ART agents if prescribed at licensed adult doses.
- If dosing off licence, consider a switch to standard dosing until after delivery or perform regular TDM.
- Rilpivirine should be taken with food to optimise absorption. Additional viral load monitoring (every 4 weeks) is indicated in the third trimester due to lower drug exposure.

C. Evidence on teratogenicity and neonatal outcomes:

- The following agents have insufficient data within the APR to exclude a significantly increased risk of congenital malformations when used in the first trimester:
    - cobicistat
    - dolutegravir
    - elvitegravir
    - tenofovir alafenamide
    - saquinavir
    - fosamprenavir

- enfuvirtide
- tipranavir
- maraviroc
- etravirine

Recent data suggests an increased rate of neural tube defects in the babies of women who were exposed to dolutegravir (DTG) at conception.

For a woman on DTG wishing to conceive:

- Switch to an alternative effective ART regimen.
- The best safety data in pregnancy is for efavirenz or atazanavir/r
- All women on DTG wishing to conceive, in whom a switch off DTG is declined or is likely to results in treatment failure, should be started on folic acid 5mg od.

For a woman on dolutegravir who becomes or is pregnant:

- Discontinue dolutegravir until after 8 weeks' gestation is confirmed and switch to a regimen for which there are more safety data in pregnancy, such as efavirenz or atazanavir/r.
- There is no indication to switch from dolutegravir if the pregnancy is confirmed to be already past 8 weeks' gestation.
  Detailed anomaly scans should be performed as per national pregnancy guidelines with no additional scans required.

There has been a reported increase in early neonatal mortality, mostly related to PTD, related to combined use of tenofovir DF and lopinavir/r and this combination is not recommended.

D. High baseline viral load or failure to suppress

- An integrase inhibitor may be a preferred third agent where the baseline HIV viral load is greater than >172,000 IU/ml or where there is failure to suppress the viral load on the original regimen. Raltegravir or dolutegravir may be used in this context.

Back to Contents

8.2.3 Untreated women presenting after 28 weeks but before labour

Women presenting after 28 weeks gestation should commence ART without delay.

If HIV viral load is unknown or greater than 172,000 IU/ml, this should be with a 3 or 4 drug regimen containing raltegravir 400mg bd or dolutegravir 50mg OD.

A late presenting woman can still be managed with a view to vaginal delivery if she starts ART and achieves a viral load of <70 IU/ml by 36 weeks gestation.

Back to Contents

8.2.4 Untreated women presenting in labour/women failing to suppress on ART

8.2.4.1 Women in labour – at term – all women

- Stat dose nevirapine 200mg
- Commence ART with combivir 1 tablet bd and raltegravir 400mg bd
- Intravenous zidovudine (AZT) throughout labour. Section 15.4 ZIDOVUDINE (AZT).

Back to Contents

8.2.4.2 Women in preterm labour

- Double dose tenofovir should be given in addition to the above measures
- This is to pre-load the preterm baby who may not be able to tolerate oral ART in the first few days of life.

Back to Contents

8.2.4.3 Urgent HIV testing if no documented HIV result

Women presenting in labour/with spontaneous rupture of the membranes (SROM)/requiring delivery without a documented HIV result must be advised to have an urgent HIV test.

A rapid result can be delivered even out of hours, discuss with virology.

A reactive/positive result must be acted upon immediately, with initiation of interventions to prevent vertical transmission of HIV without waiting

for further/formal serological confirmation.

3 drug neonatal ART will be required, see below.

Back to Contents

9 ANTENATAL CLINIC CARE

- **CONSULTANT REVIEW & CONTINUITY OF CARER** Regular antenatal visits with Dr Aamna Ali, Consultant Obstetrician, at least at 12-16,24,28,32 and 36 weeks
- **SEXUAL HEALTH SCREENING** at booking (triple swabs) and at 28 weeks if indicated
- **REGULAR MENTAL HEALTH ASSESSMENT** and routine enquiry
- **ASSESSMENT FOR CO-INFECTIONS WITH HEP B/C** and management – See BHIVA HIV Guidance
- **FETAL GROWTH:** Serial USS offered as per GAP/GROW recommendations.
- **GDM:** Screening for gestational diabetes mellitus at 24 weeks, should be performed for all women starting their pregnancy on antiretroviral therapy.
- **DOSH/ ID clinic letters**, including viral load/CD4 results taken during pregnancy, to be sent/emailed to screening midwife and filed in patient's hand held notes or HIV pathway if not consenting to information sharing.
- **MATERNAL WEIGHT** Woman to be weighed at every visit to antenatal clinic and recorded in all Wales hand held notes or HIV pathway.
- **CONTINUITY OF CARER:** Named community midwife, will provide antenatal care in the woman's home / community clinic according to woman's wishes.
- Named community midwife (consider using ELAN team) to ensure that the woman has access to bottle-feeding equipment, including sterilizer and formula feeds.
- Multi-disciplinary team discussion by 32 weeks gestation at the latest. Regular MDTs to be arranged by Screening Midwife.
- **SCREENING:** 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.
- **AMNIO/CVS:** 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 <70 IU/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 (or dolutegravir if >8 weeks) _and be given a single dose of nevirapine 2–4 hours prior to the procedure.
- **ECV:** External cephalic version (ECV) is not contraindicated in women with a viral load <70 IU/ml if vaginal delivery is preferred.

- **CONTRACEPTION:** A plan for this must be made antenatally and documented in the notes. Section 15.5 HIV Drug interactions ORG. Contraception selector

Back to Contents

10 INTRAPARTUM CARE: Obstetric and HIV MANAGEMENT

10.1 General Considerations

- **A detail birth plan should be recorded within the HIV pathway within the woman's hand held notes.**

- **In women who do not consent to have this information within their notes, retrieve their hospital file from the manager's office on delivery suite.**

- If possible, daily oral ART should be taken as normal throughout labour (if vomiting occurs within 2 hours of taking medication ensure anti-emetics are administered prior to retaking medication).

- All women living with HIV are recommended to give birth in a facility that has direct access to paediatric care – in Cardiff this is the CLU, though women may not require continuous monitoring.

- 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.

- **A low threshold for intrapartum antibiotics if chorioamnionitis is suspected.**

- Advise the woman that emergency LSCS may be recommended if there is obstetric delay/complication.

- Women should be advised to attend urgently to Delivery Suite for assessment if early onset of labour is suspected.

- Home birth is not recommended for HIV-infected pregnant women who will be advised to have Consultant-led care in hospital. This may however follow the All Wales Pathway for monitoring if appropriate.

IN THE EVENT OF AN OBSTETRIC EMERGENCY (E.G. PRETERM ONSET OF LABOUR, PREMATURE RUPTURE OF MEMBRANES OR OBSTETRIC COMPLICATIONS), PLEASE DISCUSS THE CASE WITH:

- **CONSULTANT OBSTETRICIAN on call – (in day time hours attempt to discuss also with AR or Specialist Midwife)**
- **They will then discuss with neonatal cons/ HIV physician**

IF <u>OUT OF HOURS</u>, THE FOLLOWING ARE AVAILABLE

Back to Contents

10.2 Obstetric Management Pathways

10.2.1 WOMAN ON ART with HIV VL less than 70 IU/ml at 36 weeks (or within 4 weeks of labour/ROM)

TERM LABOUR:

- Manage delivery as per non-infected woman

TERM SPONTANEOUS RUPTURE OF MEMBRANES (SROM):

- Immediate induction
- Low threshold for treatment of intrapartum pyrexia
- Duration of ruptured membranes 24 hours

PROLONGED PREMATURE RUPTURE OF MEMBRANES (PPROM) AT 34 -37 WEEKS

- As for term SROM – immediate IOL
- Group B Strep prophylaxis as per national guidelines

Back to Contents

10.2.2 WOMAN ON ART WITH VL OF (70 - 560 IU/ml AT 36 WEEKS (OR WITHIN 4 WEEKS OF LABOUR/ROM)

THESE CASES MUST BE DISCUSSED URGENTLY WITH THE MDT TEAM

- For women with a plasma viral load of 70 - 560 IU/ml at 36 weeks, pre-labour CS (PLCS) should be considered (with prior AZT infusion), 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. **THESE CASES NEED URGENT DISCUSSION WITHIN THE MDT – THIS IS INITATED VIA THE OBSTERIC CONSULTANT AND SPECIALIST MIDWIFE BEING CONTACTED BY THE ONCALL STAFF.**

Back to Contents

-

10.2.3 WOMAN ON ART WITH VL GREATER THAN 560 IU/ml AT 36 WEEKS (OR WITHIN 4 WEEKS OF LABOUR/ROM)

HIV VL **≥560** IU/ml at MDT review:

- Elective caesarean section at 38-39 weeks
- Admit night before
- IV Zidovudine (AZT) from 12 midnight

SROM / PPROM AT GREATER THAN 34 WEEKS:

- Immediate caesarean section (CATEGORY 2)
- IV Zidovudine (AZT)
- Consider the following if preterm infant is unlikely to tolerate oral therapy:
    - Nevirapine 200mg po stat
    - Tenofovir 490mg (2 x 245mg tablets) po stat
    - Raltegravir 400mg po stat

Back to Contents

10.2.4 PROLONGED PREMATURE RUPTURE OF MEMBRANES (PPROM) / PRETERM LABOUR AT LESS THAN 34 WEEKS

There is no data to specifically inform the optimum management of preterm labour or early preterm pre-labour rupture of membranes in HIV infected women.

- Full MDT Discussion to determine timing of delivery – this will be initiated by a member of the HIV MDT – please notify them ASAP.
- Consider intramuscular steroids as per national guidance
- Group B Strep prophylaxis as per national guidelines

- IV Zidovudine (AZT) if HIV VL greater than 70 IU/ml.
- Stat Nevirapine 200mg po
- Aim to have given at least the AZT loading dose and stat nevirapine prior to delivery.
- Consider the following to further load the baby who may be unable to absorb oral medication:

    - Tenofovir 490mg (2 x 245mg tablets) po stat
    - Raltegravir 400mg po stat

Back to Contents

10.2.5 WOMAN WITH KNOWN HIV INFECTION BUT *NOT* ON ART

TERM LABOUR:

- Commence combination ART immediately:
    - Combivir 1 tablet od po
    - Raltegravir 400mg bd po
- Stat dose Nevirapine 200mg po
- IV Zidovudine (AZT) infusion throughout labour and delivery
- Caesarean section if delivery is not imminent
- Nevirapine stat dose for baby if delivery occurs <2h after maternal nevirapine

PRETERM LABOUR/ROM:

- Commence combination ART immediately:
    - Combivir 1 tablet od po
    - Raltegravir 400mg bd po
- Stat dose Nevirapine 200mg po
- IV Zidovudine (AZT) infusion throughout labour and delivery
- Tenofovir 490mg (2 x 245mg tablets) po stat to further load the baby who may be unable to absorb oral medication
- Full MDT Discussion to determine timing of delivery
- Consider intramuscular steroids as per national guidance
- Group B Strep prophylaxis as per national guidelines.

STAT DOSES OF ARV MEDICATION GIVEN TO THE WOMAN MAY HAVE AN IMPACT ON HER FUTURE TREATMENT AND THAT OF HER BABY. THESE SHOULD BE RECORDED AND COMMUNICATED TO THE PATIENT'S HIV TEAM AND PAEDIATRICS.

Back to Contents

11 POST NATAL CARE OF A WOMAN WHO IS HIV POSITIVE

- All women are recommended to continue cART postpartum.

- There is no need for a woman who is HIV positive to be nursed in isolation, however they may prefer a single room for privacy when discussing issues that they may not want other women to overhear.

- There is no need to appoint dedicated toilet facilities, but advise on high standards of hygiene whilst bleeding post-partum. Give Alco-wipes to all patients to clean any ”spotting” from toilet seat and advise on careful disposal of soiled sanitary towels in orange bags.

  - Use routine universal precautions when handling any body fluids.

  - **Advise mothers who are HIV positive not to breast feed** in order to reduce risk of transmission to the baby. These women should be offered and prescribed Cabergoline 1g PO on day 1 postnatal to suppress lactation.

  - Women who choose to breast feed – need extra support that must involve their community midwife (consider ELAN) and the midwifery team on the postnatal ward. This is to ensure that mixed feeding does not occur and if formula milk is given that breastfeeding does not resume. See Appendix 6 and 7.

  - The new mother may be very anxious about her baby’s condition. Allow time to talk. The paediatrician and specialist paediatric nurse is available to give further information.

  - Complete postnatal checklists that are in the green maternity record and ensure disclosure form is up to date.

  - Ensure mother has the first follow up appointment for her baby at Paediatric clinic (at six weeks) and an appointment for herself with her DOSH/ID physician.

  - Refer to client’s wishes regarding confidentiality. Discuss who to tell in the community e.g. GP, Health Visitor. Mother needs to be aware that information concerning risk of HIV will be written in her baby’s notes to ensure appropriate follow up.

  - Anti-retroviral drugs should be continued and will be prescribed on the drug chart for the mother and baby. Ensure mother and baby have sufficient medication until next appointment and that mother is administering the ` baby’s

medication correctly. Be sure the instructions on the bottle can be read; if English is not her first language.

- Contraceptive needs should be discussed with all women, and ART may be changed to optimise a woman's contraception choice as long as the ART prescribed is fully active against the viral genotype. Section 15.5 HIV Drug interactions ORG. Contraception selector

- Cervical Cytology should be scheduled 3 months post-delivery as per the Guidelines for the NHS Cervical Screening Programme 2016.

Back to Contents

12 CARE OF THE BABY WHO HAS BEEN BORN TO AN HIV POSITIVE MOTHER

A plan of care is written for all babies to be born to a woman with HIV infection. The plan is placed in the maternal notes within the Baby Pack and need to be transferred to the baby notes at delivery. A copy is also placed in the fetal medicine file on NICU. Whereas previously two plans were written, as of 2019 only one plan is written unless there are exceptional circumstances.

In an emergency situation where there is no local Paediatrician with HIV knowledge (i.e. Dr Jennifer Evans or Dr Siske Struik contactable via switchboard) please contact the Paediatric Infectious Disease Consultant on-call at St Mary's Hospital, Paddington, London on 02033126666.

Back to Contents

12.1 Anti-retroviral Therapy recommended for the baby – post exposure prophylaxis (PEP)

Many babies will only need to receive Zidovudine (AZT) monotherapy postnatally.
Following delivery the baby should receive Zidovudine (AZT) as soon as possible but definitely within 4 hours of birth.
Composition and duration of PEP is determined by maternal viral load through pregnancy and at the time of delivery.

VERY LOW RISK	Receive 2 weeks of zidovudine (AZT)
If following criteria are met	**The mother has been on combination anti-retroviral therapy (cART) for longer than 10 weeks** **AND** **Two documented viral loads of <70 IU/ml during pregnancy at least 4 weeks apart** **AND** **Maternal HIV viral load <70 IU/ml at or after 36 weeks**
LOW RISK	**Extend to 4 weeks of zidovudine (AZT) therapy**
If the above criteria are not fulfilled	**BUT** **Maternal HIV viral load <70IU/ml at or after 36 weeks** **Or** **If the infant is born <34 weeks but most recent maternal HIV viral load <70 IU/ml**
HIGH RISK	**Use combination post exposure prophylaxis (PEP)**
	IF **Maternal HIV viral load is known to be or likely to be >70 IU/ml on day of birth, if viral load is not known or if there is uncertainty about maternal adherence**

In the context of known maternal resistance to zidovudine with VERY LOW RISK or LOW RISK zidovudine monotherapy is still recommended for infant PEP.
If HIGH RISK where combination PEP is indicated and there is a documented history of maternal resistance to zidovudine and/or nevirapine seek expert advice, which should be available on the birth plan. If not immediately available commence standard three drug PEP (zidovudine, lamivudine nevirapine).

Weight range	Oral dose (equivalent to 4mg/kg) TWICE A DAY	Volume to be given orally TWICE A DAY
2.01-2.12	**8.5mg**	**0.85ml**
2.13-2.25	**9mg**	**0.9ml**
2.26-2.37	**9.5mg**	**0.95ml**
2.38-2.50	**10mg**	**1ml**
2.51-2.75	**11mg**	**1.1ml**
2.76-3.00	**12mg**	**1.2ml**
3.01-3.25	**13mg**	**1.3ml**
3.26-3.50	**14mg**	**1.4ml**
3.51-3.75	**15mg**	**1.5ml**
3.76-4.00	**16mg**	**1.6ml**
4.01-4.25	**17mg**	**1.7ml**
4.26-4.50	**18mg**	**1.8ml**
4.51-4.75	**19mg**	**1.9ml**
4.76-5.00	**20mg**	**2ml**

DRUG DOSING

Zidovudine (AZT)	Gestation +/- weight	Dose
Liquid 10mg/ml	**<30 weeks gestation at birth**	**2mg/kg twice a day**
	30 – 34 weeks gestation at birth	**2mg/kg twice a day for 2 weeks then 2mg/kg three times a day for 2 weeks**
Zidovudine (AZT) Liquid 10mg/ml	**>34 weeks gestation and <2kg birth weight**	**4mg/kg twice a day – round dose UP to the nearest 0.5mg to assist administration**
	>34 weeks gestation and >2kg birth weight	**See dosing table below**

Zidovudine (AZT) dosing table

Example

Oral Zidovudine (AZT) liquid 10 mg = 1ml

E.g. If Baby's weight = 3 kgs

Dose 4mg per kg = 12 mgs

12 mgs = 1.2mls

Usual dose of oral Zidovudine (AZT) for an averaged size baby = 1ml to 1.5ml

Please note if for any reason the times of baby's medication has changed please ensure the ward pharmacist checks the medication chart as soon as possible – to avoid any drug errors.

Two qualified nurses should check medication given to babies. Administration of the drug should also be witnessed by two nurses/midwives. **Where possible**, a paediatric /neonatal nurse or midwife should do this.

HIGH RISK babies are given combination PEP with zidovudine dosed as above together with lamivudine and nevirapine.

Lamivudine (3TC) Liquid 10mg/ml	ORAL 2mg/kg twice a day - round dose UP to the nearest 0.5mg to assist administration
Nevirapine Liquid 10mg/ml	**ORAL** **2mg/kg once a day for 1 week then check LFTs and increase to 4mg/kg once a day for 1 week** **Round dose UP to the nearest 0.5mg to assist administration** ***If mother has received >3days nevirapine start with 4mg/kg once a day for 2 weeks*** **Stop nevirapine after 2 weeks in view of long half-life. Continue other drugs for total of four weeks**

Other antiretroviral drugs are occasionally used in the event of maternal drug resistance but administration instructions will be included in the birth plan letter.
If the baby is unable to feed then INTRAVENOUS zidovudine (AZT) can be given.
<34 weeks gestation 1.5mg/kg twice a day increasing to four times a day at 34 weeks
>34 weeks gestation 1.5mg/kg IV four times a day

Back to Contents

12.2 Infant 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 ongoing risk of HIV exposure after birth**. It is therefore recommended that women living with HIV feed their babies with formula milk.**
Infant feeding intentions are discussed early in pregnancy and some women will elect to breast feed their babies.
Women who are virologically suppressed on cART with good adherence and who choose to breast-feed should be supported to do so.

They should be informed of the low risk of HIV transmission in this setting and the requirement for extra maternal and infant clinical monitoring.
When a woman decides to breast feed she and her infant should be seen monthly in clinic for HIV RNA viral load testing during and for 2 months after stopping breast feeding.
Information should be provided in written form (see Appendix 6&7) and women who meet the criteria and choose to breast feed should be advised to do so for as short a time as possible, to exclusively breast feed for the first six months and to cease breast feeding if they have breast infection/mastitis or if they or their infant have gastrointestinal symptoms. They should be given clear information as to how to manage the common complications of breast-feeding and have ready access to clinical advice.
When weaning to solids women should follow standard UK guidance introducing complementary foods after 6 months of age if still breast feeding. Abrupt weaning from breast to formula and/or solids can be avoided as long as the maternal viral load remains fully suppressed.

Women who do not fulfil the criteria of a suppressed viral load and good adherence should be advised against breast feeding, as breast feeding with a known detectable viral load puts the child at significant risk. **These cases must all be escalated for discussion urgently within the MDT.**

Back to Contents

12.3 Diagnostic Blood tests recommended for baby

Infants born to mothers with HIV will have passively acquired IgG antibodies to HIV and will therefore test positive for HIV antibody.
To determine whether they are infected, infants should have the following blood tests taken in the first 24-48 hours;
HIV DNA PCR, FBC, U&Es and LFTs taken as appropriate following delivery
Please note for HIV DNA PCR bloods **only take** blood sample between 9 a.m. – 4 p.m. Monday – Thursday. This blood test is sent to Colindale for analysis. The laboratory on Ext 45080 must be informed that the blood is on its way. Any babies born outside these hours must return on Monday to have the blood test.
Maternal bloods must be taken at the same time as the initial birth bloods on baby. Both samples must be sent together.

Testing at birth

Baby's blood – HIV DNA PCR	**>1ml in an EDTA bottle, not cord blood (small purple bottle)**
Baby's blood – FBC	> ½ ml (small purple bottle)
Baby's blood – U&Es and LFTs	> ½ ml (small green bottle)
Mother's blood – HIV DNA PCR	10 ml in an EDTA bottle (2 purple topped bottles)

Further HIV DNA PCR blood tests (>1ml in an EDTA purple bottle) will be required at:

- 2 weeks post infant prophylaxis (4-6 weeks of age, depending on duration of prophylaxis).
- 2 months post infant prophylaxis (10-12 weeks of age depending on duration of prophylaxis).
- When Triple ART treatment was given a further test is required at (16 weeks.)
- HIV antibody testing for seroreversion (loss of maternal antibody) should be checked at 24 months

If the baby is considered HIGH RISK an additional test should be sent at two weeks of age

Testing of BREAST Fed infants

- **During the first 48 hours and prior to discharge**
- **At 2 weeks of age**
- **Monthly for the duration of breast feeding**
- **At 4 and 8 weeks after cessation of breast feeding**
- HIV antibody testing for seroreversion (loss of maternal antibody) should be checked at 24 months

The above blood tests can be taken in the Children's Outpatient Department on Monday – Thursday's between 10:00 and 12:00.
Please inform the laboratory that the blood test is on its way (telephone ext. 45080)

Back to Contents

12.4 Further Recommendations for the baby born to an HIV positive mother

12.4.1 Immunisations

Immunisations should be given as per the national schedule.

Rotavirus vaccine is NOT contraindicated (unless HIV diagnosis has been confirmed in the baby and it is severely immunosuppressed).

If there is VERY LOW or LOW risk of transmission and BCG at birth is indicated then this should not be delayed.

In a HIGH risk baby BCG vaccination should only be given when the infant has had three negative PCRs. The Clinical Nurse Specialist will arrange this.

Back to Contents

12.4.2 Follow-up

The baby should have the normal neonatal check prior to discharge.
Follow up for HIV will be arranged by the CNS for paediatric HIV but if other follow up is required, the baby should be booked into the named Neonatal Consultant's clinic when she/he is 6 weeks old.
Please ensure the mother has these appointments prior to discharge.

Back to Contents

12.4.3 Pneumocystis pneumonia (PCP) Prophylaxis

As transmission rates for mothers who fully take up interventions in pregnancy are <1% it is no longer necessary to give these infants co-trimoxazole for pneumocystis carinii pneumonia prophylaxis.
Co-trimoxazole prophylaxis is recommended from 4 weeks of age if HIV PCR screening is positive at any stage or if the infant is confirmed to be diagnosed as being HIV infected.
Please discuss with paediatricians before commencement.

The dose for infants above 2kg is 120mg once a day 3 times a week (Monday, Wednesday and Friday) Infants below 2kg, 60mg once a day 3 times a week.

Back to Contents

12.4.4 Medication for home

Prior to discharge home the medication will be issued by the Pharmacy Department. Please ensure the medication is dispensed in two bottles (in case of mishap i.e. spillage or breakage once home.) Please check dose and time of medication and ensure the mother/carer is confident in giving the medication. Ensure the instructions on the bottle can be read; if English is not her first language.

Back to Contents

12.4.5 Surveillance

All infants born to mothers with HIV should be reported through the British Paediatric Surveillance Unit (BPSU) study of HIV in Children.

Infants who have received triple therapy

If the baby has three negative PCRs there is a 98-99% chance that the baby is not infected with HIV. It must be stressed however, that a negative HIV diagnosis cannot be 100% confirmed until the final 24-month HIV antibody test is performed. For this reason the parents/carer should be encouraged to make contact if they are

concerned about their child's health during this period. Open access to the Childrens' Assessment Unit will be set up and explained to parents/carers.

Back to Contents

12.5 Role of the Clinical Nurse Specialist

- Inform Dr Jennifer Evans of the infant's birth.
- Check that the blood test (HIV PCR DNA) has been taken and sent from baby and that mother's blood has also been taken and sent.
- Check routine blood tests have been completed FBC U&Es & LFTs
- Check medication has been started, time and dose.
- Check method of feeding. Ensure that the mother has access to bottle-feeding equipment and formula feeds. Check that the mother has been shown how to make up a feed prior to discharge home.
- Offer support to Medical and Nursing team.

On Discharge

- Check medication time and dose. Check medication has been dispensed in two bottles and parents/carers are confident in giving.
- Check Red book for documentation. Refer to mothers wishes re confidentiality.
- Arrange appointments for follow up blood tests in Children's Outpatients Dept.
- Arrange open access.
- Inform Liz Weeks re BCG via E Mail
- Inform Emily Blake or Gemma Davies; Clinical Nurse Specialists to
- Dr Jennifer Evans Ex 48262 that baby has been discharged.

For further information on HIV in pregnancy please refer to the British HIV Association (BHIVA) guideline for the management of HIV Infection in pregnant women 20128; 2019 Interim Review

Back to Contents

13 HIV IN PREGNANCY MULTIDISCIPLINARY TEAM

Obstetric Team

Consultants:

Dr Aamna Ali	029 20743543

Antenatal Screening Coordinator

Natasha Thomas	02920 745265

Antenatal Screening Deputy

Catherine Reen	02920 748609

HIV team

Department of Sexual Health, CRI (Mon-Fri 9-5)

Consultants:

Dr Darren Cousins	
Dr Laura Cunningham	
Dr Rachel Drayton	029 20335169
Dr Nicola Lomax	
Dr Jane Nicholls	

HIV Clinical Nurse Specialist	
Stewart Attridge	029 20335427/ 07779724928

Department of Infectious Diseases, UHW

Consultants:	02920 742184 (secretary)
Dr Andrew Freedman	(or via UHW switchboard)
Dr Brendan Healy	
Dr Harriet Hughes	
Dr Jonathan Underwood	
Dr Susie Froude	
Dr Owen Seddon	
Dr Matthijs Backx	
ID Specialist Registrar/Trainee	Bleep 5402 or via UHW switch

HIV specialist Nurses, UHW	
Sarah Nicholas	029 20743618

HIV Specialist Pharmacist, UHW/CRI	
Fiona Clark	029 20335176 Bleep 5991/via UHW switch

Paediatric Team

Consultant Paediatricians, UHW

Dr Jennifer Evans	02920742273
Dr Siske Struik	02920743275 (Or via bleep, switchboard, and mobile)

If Dr Jennifer Evans not on call at UHW:
Paediatric Infectious Disease Consultant on call
St Mary's Hospital, London.
02033126666
Paediatric ID Specialist Nurse, UHW
Emily Blake (neonatal outreach team) 02920 748262

Virology team

Dr Susie Froude	029 20742178
Dr Laura Dexter	029 20742178
Dr Jaisi Sinha	029 20742178
Dr Rachel Jones	029 20744148
Hepatitis Laboratory	029 20745080

Specialist HIV Dietician

Sadie Herbert	029 20 744294

Back to Contents

14 REFERENCES

Revised Policy, Standards and Protocols to support the provision of antenatal screening in Wales (Aug 2019). Antenatal Screening Wales (ASW) Public Heath Wales NHS Trust
http://www.antenatalscreening.wales.nhs.uk/professional/document/349247
Accessed October 2019

BHIVA guidelines on the management of HIV in pregnancy and postpartum 2018 (2019 interim update)

Back to Contents

15 APPENDICES

15.1 Non Disclosure

CONSENT FOR GP DISCLOSURE DECLINED

I ..... have taken the decision after having discussed fully the situation regarding my medical care and confidentiality of my medical records at the Department of ……. that **I do not wish for any information regarding my HIV diagnosis or treatment to be sent to my GP or maintained within my main hospital record.**

I understand the implications of this decision after having discussed it with the medical team here at the Department of ……. and thereby **undertake responsibility myself that should I be prescribed any medical treatment outside of the Department of Sexual Health that I will ensure that this treatment does not interact with my HIV medication.**

I am aware that it is NOT the responsibility of the Department of Sexual Health or the prescriber if interacting medication is prescribed to me if I have declined consent for my diagnosis to be disclosed.

I am aware that it is the recommendation of the Department that I **should** disclose information regarding my HIV status to any healthcare professionals that I see to ensure that safe care is provided for me. However in spite of this discussion I have taken the decision that I do not wish to have this information disclosed. I am aware that this decision will be discussed with me at subsequent clinic attendances in the future.

.....signature

.....print name

.....date of birth

..... date

.....signed by

healthcare practitioner

.....print name

.....date

Back to Contents

15.2 DOSH pack**.**

Back to Contents

15.3 Standard Letter

DEPARTMENT OF SEXUAL HEALTH
ADRAN IECHYD RHYWIOL
TEL (FFON): (029) 2033 5208 –
FAX (FFACS): (029) 2048 7096

(Secretary: Gaynor.inker2@wales.nhs.uk)

PRIVATE AND CONFIDENTIAL

LC/GI/

Dear Colleague,

Re:

This woman is currently pregnant and is living with HIV.

She was last seen in the HIV/Antenatal clinic on ../../…. and this document has been updated accordingly.

Please see below for all relevant information.

Yours Sincerely,

Date completed/updated:

Completed by:

Current gestation:

Patient details	
Name	
DOB	
Hospital Number	
F/M number	
Address	
Telephone number	
Preferred Language/Interpreter	

Multidisciplinary Team	
HIV Clinic	DOSH, CRI / Infectious Diseases, UHW / Other – **please enter**
HIV Consultant	
HIV CNS	
Health Advisor	
Obstetric Consultant	Dr Amy Robb
Screening Midwife	Natasha Thomas
Community Midwife	
Paediatric Consultant	Dr Jennifer Evans
Paediatric CNS	Emily Blake
GP	
Health Visitor	
Other	Eg Social worker/Safeguarding midwife/THT

HIV History		
Date/place of diagnosis		
Current ART		Date:
Previous ART		Date:
Most recent CD4		Date:
Most recent viral load		Date:
Previous treatment failure?	Yes/No	
Adherence issues?	Yes/No	
Known ART resistance?	Yes/No	
Details		

Co-infection status

	Pos/Neg	Date
Hepatitis B		
Hepatitis C		
Syphilis		
Chlamydia		
Gonorrhoea		
HSV		
Other		

Other medical history

Mental Health

Drug History

HIV Disclosure/partner notification		
Partner/father	Yes/No	Tested Yes/No
Other children	Yes/No	

Other children			
Name	DOB	Tested	HIV status

Safeguarding	
Safeguarding issues identified?	Yes/No
Details:	

Other relevant psychosocial issues:

Pregnancy Details	
EDD	
Anticipated mode of delivery	
Other obstetric issues	

Breastfeeding		
Discussed	Yes/No	Date:
Woman's preference	Breastfeeding/ No breastfeeding	
Details:		

Post-natal contraception		
Discussed	Yes/No	Date:
Woman's preference		
Details:		

Forthcoming appointments	
36 week bloods due	
HIV review	
ANC	
Paeds	
Other	

Back to Contents

15.4 ZIDOVUDINE (AZT)

RECOMMENDATIONS FOR USE OF Intravenous Zidovudine (AZT)

Recommended for:
For women with a viral load >1400 units/mL plasma who present in labour or with SROM or who are admitted for PLCS.

For untreated women presenting in labour or with SROM in whom the current viral load is not known;

The use of intrapartum intravenous zidovudine infusion can be considered in women on cART with a plasma HIV viral load between 70 and 1400 units/mL.

Not recommended for:

1. Women with an HIV viral load less than 70 IU/ml on triple ART presenting in labour or for planned CS

2mg/kg/hour = 1ml/kg/hour for 1st hour (loading dose), followed by:

1mg/kg/hour = 0.5ml/kg/hour thereafter.

Start at least 6 hours prior to delivery (12 midnight on day of elective caesarean section).

For emergency delivery, aim to start IV Zidovudine (AZT) at least 2 hours before delivery but unless the HIV viral load is ≥1400 IU/ml, do not delay other emergency interventions to achieve this.

Continue IV Zidovudine (AZT) infusion until the baby is delivered and the umbilical cord clamped.

Administration:

Most recent weight is required to calculate infusion rate

IV Zidovudine should be diluted in 0.9% Sodium Chloride to a maximum concentration of 2mg/ml. Each 200mg Zidovudine vial is in 20ml

Remove 100ml from a 500ml bag of 0.9% Sodium Chloride
Add 1000mg (5 vials) of Zidovudine to the prepared 500ml bag of 0.9% Sodium
Chloride.

Resulting concentration = 2mg/ml (i.e. 1000mg in 500ml)

Initiate infusion at 1ml/kg/hour for the first hour, then continue at 0.5ml/kg/hour

Nb. Woman's weight in mls/hr for the first hour and then continue at half of the woman's weight in mls/hr thereafter

Back to Contents

15.5 HIV Drug interactions ORG. Contraception selector

www.hiv-druginteractions.org — University of Liverpool

Contraceptive Treatment Selector

Charts revised July 2019. Full information available at www.hiv-druginteractions.org

	ATV/c	ATV/r	DRV/c	DRV/r	LPV/r	DOR	EFV	ETV	NVP	RPV	MVC	BIC/ F/TAF	DTG	EVG/c/ F/TAF	EVG/c/ F/TDF	RAL	ABC	FTC or 3TC	F/TAF	TDF	ZDV
Estrogens																					
Ethinylestradiol	↑1% [a]	↓19% [b]	↓30% [c]	↓44% [c]	↓42% [c]	↓2%	↔↓ [d]	↑22%	↓20%	↑14%	↓<1%	↑4%	↑3%	↓25% [e]	↓25% [e]	↓2%	↔	↔	↔	↔	↔
Progestins (Combined Oral Contraceptive, COC)																					
Desogestrel	↑ [a,f]	↑ [b,f]	↑ [c,f]	↑ [f,g]	↑ [f,g]	↔	↓ [h]	↓	↓	↔	↔	↔	↔	↑ [i]	↑ [i]	↔	↔	↔	↔	↔	↔
Drospirenone	↑130%	↑ [b]	↑58% [c]	↑ [g]	↑ [g]	↔	↓ [h]	↓	↓	↔	↔	↔	↔	↑ [i]	↑ [i]	↔	↔	↔	↔	↔	↔
Gestodene	↑ [a]	↑ [b]	↑ [c]	↑ [g]	↑ [g]	↔	↓ [h]	↓	↓	↔	↔	↔	↔	↑ [i]	↑ [i]	↔	↔	↔	↔	↔	↔
Levonorgestrel	↓8% [a]	↑ [b]	↑ [c]	↑ [g]	↑ [g]	↑21%	↓ [h]	↓	↑	↔	↓2%	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Norethisterone (Norethindrone)	↑ [a]	↑ [b,k]	↑ [c]	↓14% [h]	↓17% [h]	↔	↓ [h]	↓5%	↓19%	↓11%	↔	↔	↔	↑ [i]	↑ [i]	↔	↔	↔	↔	↔	↔
Norgestimate	↑ [a]	↑85% [b]	↑ [c]	↑ [g]	↑ [g]	↔	↓64% [h]	↓	↓	↔	↔	↑8%	↓2%	↑126%	↑126%	↑14%	↔	↔	↔	↔	↔
Norgestrel	↑ [a]	↑ [b]	↑ [c]	↑ [g]	↑ [g]	↔	↓ [h]	↓	↑29%	↔	↔	↔	↔	↑ [i]	↑ [i]	↔	↔	↔	↔	↔	↔
Progestins (Progestin only pill, POP)																					
Desogestrel	↑ [f]	↑ [f]	↑ [f]	↑ [f]	↑	↔	↓ [h]	↓	↓	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Levonorgestrel	↑	↑	↑	↑	↑	↔	↓ [h]	↓	↑	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Norethisterone (Norethindrone)	↔ [c]	↑50% [k]	↔ [c]	↑50%	↑50%	↔	↓ [h]	↓	↓	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Progestins (Non-oral)																					
Etonogestrel (implant)	↑	↑	↑	↑	↑52%	↔	↓63% [l]	↓	↓	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Etonogestrel (CVR)	↑	↑~80% [m]	↑	↑ [m]	↑ [m]	↔	↓~79% [l]	↓	↓	↔	↔	↔	↔	↑ [m]	↑ [m]	↔	↔	↔	↔	↔	↔
Levonorgestrel (implant)	↑	↑	↑	↑	↑	↔	↓57% [l]	↓	↑14%	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Levonorgestrel (IUD)	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Medroxy-progesterone (depot)	↔	↔	↔	↔	↑70%	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Norelgestromin (patch)	↑ [c]	↑ [n]	↑ [c]	↑ [o]	↑83% [o]	↔	↓ [h]	↓	↓	↔	↔	↔	↔	↑ [i]	↑ [i]	↔	↔	↔	↔	↔	↔
Norethisterone (Norethindrone) (depot)	↔	↔	↔	↔	↔	↔	↓ [h]	↓	↓	↓	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Other																					
Levonorgestrel (EC)	↑ [p]	↑ [p]	↑ [p]	↑ [p]	↑ [p]	↔	↓58% [q]	↔	↔	↔	↔	↔	↔	↑ [p]	↑ [p]	↔	↔	↔	↔	↔	↔
Mifepristone	↑ [p]	↑ [p]	↑ [p]	↑ [p]	↑ [p]	↔	↓	↓	↓	⇑ [p]	⇑ [p]	↔	↔	↑ [p]	↑ [p]	↔	↔	↔	↔	↔	↔
Ulipristal	↑ [p]	↑ [p]	↑ [p]	↑ [p]	↑ [p]	↔	↓ [r]	↓ [r]	↓ [r]	↔	↔	↔	↔	↑ [p]	↑ [p]	↔	↔	↔	↔	↔	↔

Colour Legend

- No clinically significant interaction expected.
- These drugs should not be coadministered.
- Potential interaction which may require a dose adjustment or close monitoring.
- Potential interaction predicted to be of weak intensity. No *a priori* dosage adjustment is recommended.

Text Legend

↑ Potential increased exposure of the hormone
↓ Potential decreased exposure of the hormone
↔ No significant effect

Numbers refer to increase or decrease in AUC as observed in drug-drug interaction studies.

CVR Combined vaginal ring
IUD Intra uterine device
EC Emergency contraception

Notes

a Product labels for atazanavir/cobicistat advise coadministration with hormonal contraceptives should be avoided and an alternate (non-hormonal) reliable method of contraception is recommended.

b Unboosted ATV increased ethinylestradiol AUC by 48%. Use no more than 30 µg of ethinylestradiol if coadministered with unboosted ATV and at least 35 µg of ethinylestradiol if coadministered with ATV/r.

c Alternative or additional contraceptive measures are recommended.

d Depending on the contraceptive method, ethinylestradiol can be either unchanged (COC) or decreased (CVR). Levels of coadministered progestin were markedly decreased. A reliable method of barrier contraception must be used in addition to oral contraception.

e European SPC states a hormonal contraceptive should contain at least 30 µg ethinylestradiol.

f Increased conversion to the active metabolite, etonogestrel.

g When used in a COC the estrogen component is reduced. In the absence of clinical data on the contraceptive efficacy, caution is recommended and additional contraceptive measures should be used.

h A reliable method of barrier contraception must be used in addition to oral contraception.

i When used in a COC, the estrogen component is reduced to a limited extent. The European SPC states a hormonal contraceptive should contain at least 30 µg ethinylestradiol.

j Coadministration is contraindicated in the US product label due to the potential for hyperkalaemia. The European product label recommends clinical monitoring for hyperkalaemia.

k Unboosted ATV increased norethisterone AUC by 2.1-fold.

l The use of implants or vaginal rings is not recommended in women on long-term treatment with hepatic enzyme-inducing drugs.

m Predicted to increase etonogestrel but to reduce ethinylestradiol concentrations. Since no dosage adjustment of ethinylestradiol is possible with the CVR, alternative forms of contraception should be used.

n The efficacy of norelgestromin patch is unlikely to be impaired since the patch releases 33 µg ethinylestradiol/day which meets the recommendation in the product labels for atazanavir that the hormonal contraceptive should contain at least 30 µg ethinylestradiol in presence of atazanavir/ritonavir.

o Norelgestromin is administered with ethinylestradiol as a transdermal patch. Ethinylestradiol exposure was reduced which may compromise contraceptive efficacy. Caution is recommended and additional contraceptive measures should be used.

p Any increase in exposure is unlikely to be clinically significant when used as a single dose.

q Use 3 mg as a single dose for emergency contraception. Of note, the doubling of the standard dose is outside the product license and there is limited evidence in relation to efficacy.

r Not recommended. Non-hormonal emergency contraception (Cu-IUD) should be considered.

Abbreviations: ATV atazanavir; BIC bictegravir; DRV darunavir; DTG dolutegravir; LPV lopinavir; EVG elvitegravir; /c cobicistat; RAL raltegravir; /r ritonavir; ABC Abacavir; DOR doravirine; F or FTC emtricitabine; EFV efavirenz; 3TC lamivudine; ETV etravirine; TAF tenofovir alafenamide; NVP nevirapine; RPV rilpivirine; TDF tenofovir-DF; MVC maraviroc; ZDV zidovudine

Back to Contents

15.6 Breastfeeding Leaflet 1

https://www.bhiva.org/file/5bfd3080d2027/BF-Leaflet-1.pdf

Back to Contents

15.7 Breastfeeding Leaflet 2

https://www.bhiva.org/file/5bfd308d5e189/BF-Leaflet-2.pdf

Back to Contents

15.8 Pathway for handheld maternity notes

PERINATAL RETROVIRUS CARE PLAN

To be kept with mother's hand-held antenatal notes. Please file immediately behind green intrapartum sheet and bring to all Obstetric and CRI/ ID clinics for updating.

Addressograph

Date of diagnosis ……

Timing of diagnosis ……

Prior to pregnancy ☐ where……..

Or gestation at diagnosis ……..Wks.

Estimated Date of Delivery …….

Mother's consent to record CRI 'F' number in clinical records ☐ Yes ☐ No

Specialists	Name	Contact Number	Date Notified
Community Midwife			
Community Midwife ELAN team			
Specialist Midwife			
Obstetrician			
GU/ID Physician			
Paediatrician			
Neonatal link Nurse			
Pharmacist			

SPECIALIST CARE TEAM

The specialist midwife can usually be contacted between 8.30 and 16.30hrs Monday-Friday

Family Disclosure 	Yes	Patient's signature and date	No	Patient's signature and date
Is partner aware of diagnosis Name ……..				
Dependent(s) (if applicable) Name ……..				
Are other family members aware of diagnosis Names …… ……				
Professional Disclosure General Practitioner Name & Surgery Dr ……				
Community Midwife Name & team …… ……				
Health Visitor Name…….				

ANTENATAL CARE PLAN

Antenatal Discussions

sign and date

Perinatal Mental Health ☐ discussed

Routine Enquiry ☐ discussed

Previous Obstetric History ☐ discussed

Family Members ☐ discussed

Vertical transmission ☐ discussed

Antiretroviral therapy ☐ discussed

Screening for Gestational Diabetes with GTT ☐ discussed

Management of labour/mode of delivery ☐ discussed

Criteria for trial of vaginal birth ☐ discussed

Benefit of caesarean section if criteria not met ☐ discussed

ANTENATAL CHECKLIST

Paediatric consultation ☐ referred

Avoidance of breastfeeding ☐ discussed Sign_____ Date_____

Prescription of Cabergoline 1mg PO ☐ discussed Sign_____ Date_____

Neonatal ART ☐ discussed Sign_____ Date_____

Resistance testing if new diagnosis ☐ yes ☐ No

Hepatitis C testing ☐ yes ☐ No

Future contraception ☐ discussed Choice

Date	Gest. (wks)	CD4	Viral Load	Hb	Platelets	WCC	Initials

		Glucose Tolerance Test result:					

INFECTION SCREEN

Date	Gest (wks)	Syphilis	Chlamydia	BV	Gonorrhoea	HSV	TV	Treatment given

ANTI RETROVIRAL DRUGS

Date	Drug	Dosage	Frequency	Gestation when started or pre-pregnancy

Paediatric alert forms sent ☐ discussed Sign_____ Date_____

Pharmacy ☐ yes date_____ signature_____

Maternal ART postnatally ☐ continue

Cabergoline prescribed ☐ discussed Sign_____ Date_____

Follow up in CRI/ID ☐ weeks

	DOSH / ID	ANC
Baseline (new diagnosis of HIV and/or pregnancy)	Baseline/routine assessment Baseline/monitoring HIV investigations Assess for co-infections (HBV/HCV/syphilis) Pregnancy in HIV info pack Consent for information sharing Assess mental health Assess social situation Offer Peer Support Assess Safeguarding concerns Assess disclosure and PN Assess existing siblings Commence/review ARVT Assess adherence Discuss mode of delivery Discuss breastfeeding/Cabergoline	DICTATED LETTER FROM EITHER OBSTETRICS OR DOSH/ID

	Discuss postnatal contraception Liaise with MDT Complete data collection and reporting (NSHPC/APR) Add to CVUHB Pregnancy spread sheet Complete hand held notes	
+2 weeks if newly commenced on ARVT	Women newly commenced on ARVT: Repeat viral load and routine monitoring Assess adherence Complete hand held notes Arrange additional visits as necessary	
12-16 weeks	Routine assessment Routine monitoring including viral load CD4 if appropriate Review ARVT and consider pharmacodynamics and need for switch Assess adherence Assess mental health Assess social situation Assess Safeguarding concerns Assess disclosure and PN Discuss mode of delivery Discuss breastfeeding/Cabergoline Discuss postnatal contraception Liaise with MDT Complete data collection and reporting (NSHPC/APR) Complete hand held notes	Booking ANC LFTS with booking bloods Consultant Appointment STI screen Screening results Past Obstetric notes review Assess risk of preterm birth Assess for aspirin and for method of fetal growth surveillance
Approx. 24 weeks in DOSH/ID)	Routine assessment Routine monitoring including viral load CD4 if appropriate Assess adherence Assess mental health Assess social situation Assess Safeguarding concerns Assess disclosure and PN Discuss mode of delivery Discuss breastfeeding/Cabergoline Discuss postnatal contraception Liaise with MDT Complete data collection and reporting (NSHPC/APR) Complete hand held notes	Review anomaly USS and placental site Viral load and LFTS Glucose Tolerance Test Discuss mode of delivery Discuss breastfeeding/Cabergoline Discuss postnatal contraception Liaise with MDT

28 weeks	Complete hand held notes	Routine Antenatal care, Consultant led clinic and ELAN midwife Vaccinations as recommended 28 week bloods inc BBS. Review need for further STI screen Assess fetal growth
32 weeks	Repeat viral load Discuss mode of delivery Discuss breastfeeding/Cabergoline Discuss postnatal contraception Liaise with MDT	Consultant led clinic and ELAN midwife Assess fetal growth
36 weeks	Repeat viral load Assess adherence Assess mental health Assess social situation Assess Safeguarding concerns Assess disclosure and PN Discuss mode of delivery Discuss breastfeeding/Cabergoline Discuss postnatal contraception Liaise with MDT Complete data collection and reporting (NSHPC/APR) With viral load results: Finalise birth plan with MDT Complete hand held notes	Finalise birth plan. Book caesarean/ Plan for awaiting spontaneous labour with monitoring or IOL if indicated. Discuss breastfeeding/Prescribe Cabergoline Prescribe postnatal contraception Liaise with MDT
38-42 weeks	Further viral load not normally required	Routine late pregnancy care Assessment of fetal growth
Delivery	Repeat viral load and CD4 ARVT as per birth plan	Ensure contraception

	Neonatal PEP as per birth plan Complete hand held notes	provided. Cervical cytology recommended at 12 weeks post-partum

INTRAPARTUM CARE PLAN

Mode of delivery – finalise plan at 36 weeks **Mother's Weight. Kg (reweigh 36wks)**

Viral load result at 36 weeks ☐<70 IU/ml ☐ >70 IU/ml

- If mother on cART and viral load <70 IU/ml at 36 weeks, No IV AZT infusion during delivery and baby receives AZT alone. ☐

- If mother on cART and viral load >70 IU/ml at 36 weeks, IV AZT infusion and Nevirapine 200mg orally is required during delivery and baby should be commenced on combination PEP. ☐

BIRTH PLAN: - IDENTIFIY MOST APPROPRIATE

- For women on combination ART with a plasma HIV RNA viral load of less than 70 IU/ml at 36 weeks, in the absence of obstetric complications, a planned vaginal delivery is recommended.
- For women with a plasma viral load of 70-560IU/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. **THESE CASES NEED URGENT DISCUSSION WITHIN THE MDT.**
- Where the viral load is ≥560IU/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

Caesarean Section

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

These women will be admitted the night before and If indicated and in the birth plan, the zidovudine (AZT) infusion should be commenced at 12 midnight (Appendix 4)

Where PLCS is undertaken only for obstetric indications and plasma viral load is <70 units/mL, the usual obstetric considerations apply and the CS

will usually be performed after 39 weeks' gestation. These women can be admitted on the day in the same manner as non-infected women.

Vaginal delivery

Those who opt for labour and vaginal delivery will be admitted when early onset of labour is suspected.

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 <70 iu/mL, immediate induction or augmentation of labour is recommended in women who have pre-labour SROM, with a low threshold for treatment of intrapartum pyrexia. Obstetric management should aim for delivery within 24 hours of SROM.
- For women with SROM and a last measured plasma viral load of 70-560 IU/ml, immediate CS is recommended, but should take into account the actual viral load, the trajectory of the viral load, and length of time on treatment, adherence issues, obstetric factors and the woman's views. **THESE CASES NEED URGENT DISCUSSION WITHIN THE MDT.**
- For women with SROM and maternal HIV viral load ≥560 units/mL, immediate CS is recommended.

MATERNAL POST PARTUM CARE PLAN

Perinatal mental health discussed ☐ yes

Avoidance of breast-feeding advice accepted ☐ Yes ☐ Declined

Cabergoline 1mg PO accepted ☐ Yes Date given…….. ☐ Declined

If breastfeeding (see Separate information sheets, appendices 7&8 'Advice for Breastfeeding mothers')

Maternal ART postnatally ☐ recommended for all women to continue

Contraception discussed and provided ☐

Medical follow up plans discussed ☐

CRI

ID ☐

Appointment given to patient ☐ Date _____

Midwife signature _____

Name _____Date _____

Back to Contents

15.9 Postnatal checklist

GIG CYMRU NHS WALES
Bwrdd Iechyd Prifysgol Caerdydd a'r Fro
Cardiff and Vale University Health Board

Place addressograph here

HIV POST NATAL CHECK LIST

Date of Delivery……(When achieved)

Baby

- Oral Zidovudine Suspension given as soon as possible or at least within 4 hours of delivery and sent with baby to ward ☐
- 1st **PCR** blood specimen is obtained according to protocol ☐
- Specialist ID Paediatric Nurse to arrange appointment for 2nd PCR blood test at Paediatric clinic ☐

Mother

- PCR Blood sample taken as per protocol ☐
- Anti-retroviral therapy continued ☐
- Postnatal appointment at GUM /ID Clinic arranged by Specialist Health Advisor / Specialist ID Nurse ☐

Signature of Midwife

Back to Contents