Merseyside, Cheshire & North Wales HIV Managed Care Network

Regional Guidelines

Management of HIV Infection in Pregnant Women

2014

Trust

Signed

Date

Review Date  

(When National (BHIVA) guidelines are due to be reviewed)

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### SEPARATE PERINATAL CARE PLAN DOCUMENT

**APPENDIX 1** - Model Perinatal Care Plan

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A. BACKGROUND

All UK hospitals have a policy to offer Antenatal HIV screening to pregnant women, aiming for a minimum uptake of greater than 90%. Many infections have been found in British women without obvious risk factors. If a woman is at continuing risk of acquiring HIV infection in pregnancy, this needs to be recorded and repeat HIV testing offered throughout the pregnancy. Rapid near patient testing should be considered for women who arrive in labour unbooked and a reactive result acted upon.

Untreated HIV infection in pregnant women results in HIV transmission to approximately 15-26% of infants. Vertical transmission of HIV can be easily reduced to <1% by a combination of interventions:

- Antenatal diagnosis of HIV
- Effective maternal antiretroviral therapy to suppress HIV Viral Load
- Pre-Labour Caesarean Section (PLCS) at 38-39 weeks gestation or safe vaginal delivery
- Intravenous (IV) antiretroviral therapy to mother during delivery (only if HIV Viral Load not optimally suppressed)
- Oral or IV antiretroviral prophylaxis to the baby for 4 weeks
- Complete avoidance of breastfeeding

The evidence for these interventions and possible scenarios encountered are outlined in the British HIV Association (BHIVA) guidelines (see references and SECTION I), which should be referred to for cases which are not straightforward eg possible viral resistance, unsuppressed viral load, late presentation, or diagnosis at or after delivery. Each HIV unit or centre should be able to respond appropriately to every possible scenario described in the BHIVA guidelines.

If pre-labour spontaneous rupture of membranes (ROM) occurs the priority is to get the baby delivered (if considered mature enough and upon assessing the risk-benefit). Additional antiretroviral therapy should be considered if indicated by maternal HIV Viral Load. When membranes are ruptured, Caesarean Section should not be unnecessarily delayed by a desire to administer IV ZIDOVUDINE.

Support is strongly recommended from the regional HIV network (www.liv.ac.uk/hiv), ideally via the HIV Multi-Disciplinary Team meetings (2:30pm, second Friday of month, Royal Liverpool University Hospital, videoconferencing available) or directly from group members. A register of current pregnancies and electronic storage of perinatal care plans is maintained by the HIV Specialist Nursing team at the Royal Liverpool (secure email address:rlb-tr.HIV-Pregnancy-Network@nhs.net) on behalf of the network. Advice is also available from the paediatric HIV team at St Mary’s Hospital, London. Please see APPENDIX 2 of accompanying perinatal care plan document for all relevant contact details.
1. **The Perinatal Care Plan (see accompanying document)**

An individual perinatal care plan should be available for all HIV-infected mothers. The model perinatal care plan (APPENDICES 1-3) is standardised throughout Merseyside, Cheshire and North Wales area (available at [www.liv.ac.uk/hiv](http://www.liv.ac.uk/hiv)). This care plan contains details of hospital record numbers - Genitourinary Medicine (GUM), Obstetrics, hospital etc, medications (including antiretroviral) prescribed, relevant baseline investigations and information discussed, as well as details of disclosure of HIV status to the patient’s family and GP. The planned mode of delivery with the date for any PLCS will also be documented. Names and contacts of key health care providers will be included.

The care plan should be completed by the physician overseeing the management of HIV. It should be completed soon after anti-retroviral therapy has been started, and no later than 28 weeks (do not wait for the viral load to become undetectable). Copies of this care plan should be lodged in the following places:

- HIV clinic records
- Obstetric notes
- Patient hand carried notes *(if the patient is agreeable)*
- Labour ward
- Midwife
- Paediatrician
- Neonatologist
- GP *(unless consent withheld)*
- Infectious Diseases Unit Ward 3Y - Royal Liverpool University Hospital

**Electronic Database at Royal Liverpool**

Send securely to: rlb-tr.HIV-Pregnancy-Network@nhs.net. HIV Nurse Specialists are responsible for maintaining this database and sending electronic copies on securely to Alder Hey and Liverpool Women’s Hospital *(for all HIV pregnancies in network)*.

It should be emphasised that the Care Plan does not operate in lieu of clinic letters - the latter should be copied to all relevant teams involved in the management of the mother, with particular reference to the latest viral load as this will materially affect management of the delivery and afterwards.

2. **Pharmacy aspects (Obstetric Unit)**

Upon receipt of the Care Plan, the Obstetrician should notify pharmacy of the anticipated drug requirement.

**ZIDOVUDINE (RETROVIR) infusion (for the mother) should be available on the labour ward if required**, together with ZIDOVUDINE oral suspension for the baby. Reserve stocks of ZIDOVUDINE infusion and ZIDOVUDINE oral suspension are kept in the pharmacy emergency drug store cupboard at the Liverpool Women’s Hospital *(please check your own local availability if outside of Liverpool)*. It is the responsibility of the Obstetrician to liaise with the Lead Pharmacist in their organisation to ensure that the required medication for each individual woman is in stock and readily available.
Three drug infant post exposure prophylaxis (PEP) for the baby should be available if required (see SECTION E for details), and is also stocked at the Liverpool Women’s Hospital and Alder Hey Hospital (contact details in APPENDIX 2 of perinatal care plan document). All of the oral medications will require the completion of label details prior to use and should be transferred with the baby at all times until the course of treatment has been completed. Please see APPENDIX 3 regarding dilution of IV ZIDOVUDINE and administration of all medications to infants.

3. Infection Control


Personal Protective Equipment (PPE)
There are no additional items of PPE required because the mother is carrying a blood-borne virus. Recommended PPE is in accordance with the nature of the procedure and should be described in detail in the hospital policy.

Inoculation injuries
Refer to the Trust’s Needlestick/Inoculation Injuries Policy. Contact Occupational Health immediately during normal working hours or seek specialist advice (as per Trust policy) without delay. A risk assessment of the incident will be carried out to ascertain whether or not HIV Post Exposure Prophylaxis (PEP) is required. Note that current expert guidance suggests that PEP is not routinely recommended after occupational exposure from a patient with an undetectable HIV Viral Load.

B. ANTENATAL CARE

1. General Principles

Patients will usually present with HIV in pregnancy either as a new diagnosis during antenatal screening, or as a pregnancy in a woman with known HIV infection. In either case, prompt referral should be made between the obstetrician, HIV physician and specialist midwife/clinical nurse specialist. The lead paediatrician should also be notified. The management of HIV pregnant women requires a multidisciplinary team approach and communication between all parties involved must be seamless. Central to this are copies of clinic letters, communication of HIV Viral Load results (particularly during the third trimester) and the Perinatal Care Plan (APPENDICES 1-3, accompanying document).

2. HIV Management

- Confirmatory HIV serology and discussion of diagnosis if new antenatal HIV diagnosis
- Confidentiality/disclosure issues discussed and documented
- HIV and AIDs Reporting System (HARS) and Sexual Health and HIV Activity Property Type (SHHAPT) coding, if required
- Arrangements for testing partner/previous children and safer sex advice
- Baseline and regular U&E, LFTs, FBC, glucose
• Baseline serology: Hepatitis A, B & C, CMV, toxoplasma, syphilis, rubella, measles, VZV

• Initial CD4 count and HIV viral load *(HIV Viral Load 2-4 weeks after HAART initiation, once per trimester and at 32/40 gestation. If undetectable at 32/40 then no further tests required until delivery, if not may require every 2 weeks until undetectable)*

• HIV resistance genotype *(if required)*

• Initial infection screen in GUM *(including Bacterial Vaginosis)*, repeat at 28/40 gestation

• CXR *(with lead protected abdomen)* if possible previous TB exposure

• Stool Culture for schistosomiasis and strongyloides if lived in tropics or eosinophilia present.

• Initial physical examination in relation to HIV disease and investigations pertinent to findings

• Relevant printed information *(eg HIV i-Base “Guide to HIV, Pregnancy and Women’s Health”)* given following appropriate discussion

• Psycho-social support, including HIV Social Worker Assessment/Voluntary sector Support/Domestic Violence Assessment

• Antiretroviral therapy planned, discussed and documented, adherence reinforced. Please seek advice from regional specialists if unsure on choice of therapy

• Inform multidisciplinary team: Paediatrician, Midwife, Obstetrician, HIV Physician, Neonatologist *(and GP if the patient consents)*, other teams as appropriate

• **CARE PLAN** completed by HIV physician by 28 weeks, with copies lodged appropriately

• HIV viral load should be undetectable *(<50 or <40 or <20 copies/ml)* at delivery, ideally by 32 weeks gestation

• Ongoing management of the HIV disease during and following pregnancy in the mother, including relevant monitoring for adverse drug effects

• Discuss postpartum contraception, taking drug-drug interactions between antiretroviral therapy and hormonal contraception into consideration

3. **Choice of Antiretroviral Therapy**

• The standard treatment option for the mother is HIGHLY ACTIVE ANTIRETROVIRAL THERAPY *(HAART, also known as “Triple Therapy”)*. There is most evidence and experience for ZIDOVUDINE/LAMIVUDINE as a nucleoside backbone, although TENOFOVIR/EMTRICITABINE and ABACAVIR/LAMIVUDINE are acceptable. The third agent should usually be to include EFAVIRENZ or NEVIRAPINE or a BOOSTED PROTEASE INHIBITOR. There is insufficient registry data on first trimester exposure to comment on teratogenicity risk for newer agents such as RALTEGRAVIR, DOLUTEGRAVIR, ETRAVIRINE, RILPIVIRINE and MARAVIROC.
• Please especially consider prompt network advice for women not on treatment with a High HIV Viral Load (>30,000 copies/ml) or who present late in pregnancy (>28/40 gestation) – discussed further in SECTION G.

• ZIDOVUDINE MONOTHERAPY may be considered in women planning PLCS who have baseline Viral Load<10,000, are naïve to antiretroviral therapy, have no transmitted resistance and a CD4 cell count >350 cells/mm³ (elite controllers may also be considered for planned vaginal delivery in these circumstances).

• TRIPLE NUCLEOSIDE regimens are not recommended.

• NEVIRAPINE is not advised in women starting anti-retroviral therapy with high CD4 counts (> 250 cells/mm3) or with pre-existing liver disease. Single dose NEVIRAPINE may be given to mothers at any CD4 count during labour or to cover any intrauterine invasive procedure, but risk of resistance should be minimised by appropriate cover with other antiretrovirals (21 days minimum).

• Hepatitis B co-infection may require HAART containing TENOFOVIR. Please discuss all HIV/Hepatitis B or C co-infected pregnant women with the Infectious Diseases Unit, Royal Liverpool University Hospital.

4. Managing the risks of treatment

• Nausea and vomiting after initiation of antiretroviral therapy may be managed conservatively or with use of CYCLIZINE or PROMETHAZINE.

• Bilirubin should be carefully monitored with ATAZANAVIR use due to the risk of maternal hyperbilirubinaemia. There is however no evidence of neonatal harm (eg from Kernicterus). Abnormalities in liver function tests can be due to initiation of HAART, obstetric cholestasis, pre-eclampsia, HELLP syndrome and fatty liver. Serum bile acids and other investigations for liver disease may be required.

• Consider Lactic Acidosis if any woman presents with vomiting, malaise, oedema, abdominal pain and raised transaminases.

• Pharmokinetic data suggest lower plasma levels of all BOOSTED PROTEASE INHIBITORS in the third trimester of pregnancy (weeks 29-40). However, available evidence suggests that routine dose alterations are not recommended. The main exception would be DARUNAVIR, which should be dosed twice daily unless well established and undetectable on once daily. In addition, ATAZANAVIR should not be used unboosted. Therapeutic Drug Monitoring (TDM) in third trimester should be considered, especially if dosing off-licence or combining TENOFOVIR with ATAZANAVIR. When these two drugs are combined, ATAZANAVIR levels fall. A dose increment to 400mg of ATAZANAVIR (with the usual 100mg RITONAVIR boosting) restores levels, but with an increase in the risk of hyperbilirubinaemia. Adherence should be assessed regularly by clinicians with TDM early in pregnancy being an option if there are concerns.

• Proteinuria - consider TENOFOVIR renal toxicity (eg Fanconi’s syndrome, if accompanied by glycosuria), pre-eclampsia (check blood pressure) or urinary tract infection.

• Glycosuria – consider Fanconi’s Syndrome (if on TENOFOVIR) or gestational diabetes.
• Pre-term delivery – there is a possible association with HAART.

5. Obstetric Management

• Early referral to Obstetrician with special interest in HIV

• Review Obstetric History eg for pre-eclampsia/pre-term delivery

• Mode of Delivery discussed and documented in perinatal care plan

• If Mother to Child Transmission of HIV is the indication for PLCS then give date at 38-39 weeks gestation

• Copy correspondence to HIV physician and paediatrician

• Advise complete avoidance of breast feeding *(referral to infant feeding team if available)*

• Inform pharmacy of the need for medication to be in stock to cover the delivery in the event of an unexpected early delivery

• Early referral to Paediatric team indicating the management plan for the baby at delivery

• Advise on the importance of attending delivery suite soon if possible rupture of membranes or preterm labour

• If woman requires first trimester screening for trisomy 21 then the combined screening test is recommended as this has the best sensitivity and specificity and will minimise the number of women who may need invasive testing. If invasive testing is required then ideally this should deferred until HIV Viral Load is undetectable, or at least until HAART has been initiated

• Foetal ultrasound imaging should be performed as per national guidelines regardless of maternal HIV status. It may be indicated if other risk factors are present

• Mother should be advised to bring her HIV medications into hospital with her – care should be taken not to miss doses of antiretrovirals around and following delivery

• Report pregnancy to National Study of HIV in Pregnancy and Childhood *(www.nshpc.ucl.ac.uk)* and possibly also Antiretroviral Pregnancy Registry *(www.apregistry.com)*

6. Mode of Delivery

The benefit of PLCS in reducing HIV transmission has been shown in studies that predate HAART. When maternal HIV Viral Load is undetectable on HAART the rate of Mother to Child Transmission *(MTCT)* is the same for PLCS and vaginal delivery. Planned vaginal is recommended *(in the absence of obstetric contraindication or preference)* if HIV Viral Load is undetectable at 32/40 gestation. PLCS should be considered if HIV Viral Load is 50-399 copies/ml and is recommended if HIV Viral Load >400 copies/ml. Vaginal Birth after Caesarean Section *(VBAC)* should be offered to women with an HIV Viral Load <50 copies/ml.
PLCS is recommended for all women prescribed ZIDOVUDINE MONOTHERAPY apart from elite controllers.

If PLCS is being performed primarily to decrease risk of MTCT, delivery should be between 38-39 weeks gestation. A course of steroids should be considered to decrease the risk of transient tachypnoea of the newborn (TTN) if PLCS occurs before 38 weeks.

It should be noted that Caesarean Section performed in labour has no added benefit in terms of reduction to MTCT.

C. CARE DURING LABOUR/DELIVERY

1. Labour / Delivery

- In women for whom a vaginal delivery has been recommended and labour has commenced obstetric management should follow the same principles as for the uninfected population. The MTCT data regarding fetal blood sampling and the use of scalp electrodes originate from the pre-HAART era. There is a lack of data from the HAART era, but it is felt unlikely that their use confers an increased risk of transmission in a woman with an undetectable HIV Viral Load. This however cannot be proven from the current evidence. Regional advice is to avoid if HIV Viral Load is detectable and discuss with on call Consultant Obstetrician prior to use in patients with undetectable viral load.

- In the event of threatened pre-term delivery, ROM, vaginal bleeding, or regular painful contractions - discuss with on call Obstetric Registrar or Consultant, and arrange admission. If IV ZIDOVUDINE is planned start as soon as possible, ideally prior to transfer.

- In all cases of term pre-labour spontaneous ROM, delivery should be expedited. If maternal HIV Viral Load is <50 HIV RNA copies/ml immediate induction of labour is recommended, with a low threshold for treatment of intrapartum pyrexia.

- For women with a last measured Viral Load of 50–999 HIV RNA copies/ml, immediate 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. If maternal HIV Viral Load is ≥1000 RNA copies/mL plasma, immediate PLCS is recommended.

- If maternal HIV Viral Load at 32 weeks is >1,000 copies/ml or unknown then intrapartum IV ZIDOVUDINE is required. Commence at onset of labour or 4 hours before PLCS and continue until umbilical cord clamped (see APPENDIX 3.1 for administration and dosing). Do not delay Caesarean Section to complete IV ZIDOVUDINE if in labour or if amniotic membranes have ruptured.

- If maternal HIV Viral Load at 32 weeks is <1,000 copies/ml, intrapartum IV ZIDOVUDINE is not recommended. It might be considered if mother is prescribed ZIDOVUDINE MONOTHERAPY or if HIV Viral Load is between 50-10,000 copies/ml, although continued oral dosing of their current regimen is a reasonable alternative.

- Do not discontinue any other antiretroviral medication, which continues throughout delivery period as per antenatal period. Ensure that doses are not missed during or
after delivery. It is better to give a dose late (even if the next dose is due shortly) and delay the next dose slightly, than to miss a dose entirely.

- Inform Consultant Obstetrician or his/her team (or duty team if out of hours).
- Inform Paediatric/Neonatal on-call team.
- In case of drug supply problems (these should already have been anticipated and sorted out) contact Pharmacy urgently (including the on call Pharmacist if out of hours).
- Discuss with the mother the use of a stat dose of CABERGOLINE to suppress lactation.

D. POST NATAL CARE

1. Neonate

- Please place pages 4-5 of perinatal care plan into baby’s notes as a “Neonatal Care Plan”.

- Clean the baby’s skin in accordance with local guidelines before giving Vitamin K (IM or oral according to unit policy). Until the baby has been bathed, staff handling him/her should wear gloves. Staff should wear gloves and a plastic apron when attending to the cord, or taking blood samples according to local policy.

- The baby should not be routinely admitted to the Neonatal Unit. This should only happen if there is a specific medical indication for special or intensive neonatal care. There is no need for routine paediatric attendance at birth.

- Administer antiretroviral prophylaxis as soon as possible (certainly within 4 hours). Do not delay for blood sampling. These babies require antiretroviral prophylactic treatment from birth for 4 weeks to reduce vertical transmission from the mother (see SECTION E for administration and dosing). The paediatrician will be required to prescribe the medication. Prescribe doses in milligrams (mg) and in millilitres (ml).

- In most cases, the need for such treatment will have been recognised during pregnancy. A written management plan should be available (see perinatal care plan - APPENDICES 1-3).

- Consider letting the mother have responsibility for giving treatment to her baby when on the postnatal ward. The mother should be confident in administration of the medication prior to discharge. Please ensure that the antiretroviral drugs are transferred with the baby from the labour ward.

- IV ZIDOVUDINE can be given if not tolerating orally (see APPENDIX 3.2).

- Inform the Paediatric Infectious Diseases Specialist Nurse at Alder Hey (Liverpool deliveries only) in office hours that the baby has been born (plus HIV team).

- The baby does not require CO-TRIMOXAZOLE prophylaxis for Pneumocystis jiroveci Pneumonia (PCP) unless very high risk (see SECTION E).
2. Diagnosis of transmission of HIV to the baby

- Specimens should be labelled “Biohazard” until the baby's HIV status is clarified, and handled according to Trust policy.

- “Day 1” samples (<48hrs since birth): 1 x ml EDTA sample for “HIV proviral DNA PCR" (note this is not HIV viral load) plus FBC/LFT. Also send a 5ml EDTA sample from mother to ensure the “HIV proviral DNA PCR” amplifies to mothers HIV type. Ask virology to send the “day 1” baby sample with this.

- These should be sent by microbiology to Colindale HPA in London.

- Ensure the lab also copies results to the paediatrician who is following up the infant.

- HIV RNA viral testing is an acceptable alternative for laboratories able to use low volume neonatal samples. This is not currently the case in Liverpool, please discuss with your local virology service.

3. Discharge home

- Please prescribe the full course of 4 weeks anti-retroviral drugs for the baby on going home, and ensure the mother/father/carer knows when to give this. The times should be convenient to her (ie not 3:00am).

- The baby can be discharged when well and tolerating oral medication (Consultant decision).

- Remember to report births to the British Paediatric Surveillance Unit (BPSU).

- Write a discharge letter to the paediatrician – follow-up appointment 6 weeks post partum)

- Do not copy letter to GP unless mother agrees to this (See Care Plan), do not fax to open lines.

4. Immunisations

- Do not give BCG. BCG should only be given if baby is in a group at high risk of TB and is HIV ProViral DNA PCR negative after 3 months old. Otherwise normal immunisation schedule should be followed.

5. Mother

- Only those health professionals directly involved with care of the baby should know that mother is HIV positive.

- Maternal Blood sample for “HIV proviral DNA PCR” at same time as neonatal test, as per above.

- Ensure that doses of antiretrovirals are not missed and if any have been omitted, it is better to give treatment straight away followed by ALL other scheduled doses, than to wait until the next prescribed dose.

- Check if antiretroviral therapy is to be continued or stopped
• Breast feeding is not recommended, and this will have been discussed with mother.

• Contraceptive options discussed (and effect of antiretroviral therapy on contraceptive options).

• Check that HIV Follow up organised (under no circumstances should the patient ever be at risk of running out of medication).

Note: If stopping Non-Nucleoside Reverse Transcriptase Inhibitor (NNRTI) containing regimen, care must be taken with regard to half-lives and staggered stop withdrawal is recommended (seek advice if in doubt).

Note: BLOOD TESTS required are also listed in the Perinatal Care Plan (APPENDIX 1)

E. INFANT POST-EXPOSURE PROPHYLAXIS (PEP)

1. BABY AT LOW RISK – ZIDOVUDINE MONOTHERAPY
   Maternal HIV viral load <50 copies/ml at 32/40 gestation or thereafter

   • Term Babies:
     - Oral ZIDOVUDINE (RETROVIR, AZT) 4mg/kg bd. Start as soon as possible, certainly within 4 hours of birth - See APPENDIX 3.
     - If unable to feed, give ZIDOVUDINE infusion - See APPENDIX 3. This should be changed to the oral preparation once enteral feeds tolerated, and continued to complete 4 weeks.

   • Preterm Babies < 34 weeks:
     - Oral ZIDOVUDINE - See APPENDIX 3.
     - If unable to feed, ZIDOVUDINE infusion is given.

2. BABY AT HIGH RISK-TRIPLE COMBINATION PEP

   • Triple Combination (three drugs) infant PEP should be considered where:
     - There is a detectable viral load (>50 copies per ml) at the time of delivery, poor compliance/no treatment or drug resistance in mother (this should be known prior to delivery)/delivery before complete viral suppression/unplanned delivery DISCUSS WITH HIV SPECIALIST/ PAEDIATRICIAN.
     - Maternal HIV is discovered after delivery and baby is less than 72 hours old. There is probably no benefit from commencing HIV treatment after 72 hours.

      If triple therapy is being considered, seek regional (or national) advice (see APPENDIX 2).
• **Triple therapy (if no known resistance in mother’s HIV)**
  
  ➢ **ZIDOVUDINE (AZT or ZDV)**
  ➢ **LAMIVUDINE (3TC)**
  ➢ **NEVIRAPINE**

  **If mother is taking regular (not single dose) NEVIRAPINE for >3 days during pregnancy, give NEVIRAPINE to the baby at 4mg/kg od for 2 weeks only. If mother has had <3 days of NEVIRAPINE, give 2mg/kg od for one week, then 4mg/kg od for the second week.**

  • **ZIDOVUDINE, LAMIVUDINE & NEVIRAPINE** oral liquids are all 50 mg in 5 ml strength.

  • In special circumstances in which there is maternal drug resistance, alternative treatment for the baby may be needed. All these cases should be discussed with a paediatric HIV consultant.

  • Dr Andrew Riordan/Dr Stéphane Paulus *(Alder Hey Hospital)* or the Paediatric HIV Clinic team at St Mary’s, London should be contacted for advice. Prof Saye Khoo, Dr Mas Chaponda, Dr John Evans-Jones, Dr Marilyn Bradley and the other members of the Mersey, Cheshire and North Wales HIV network listed in the care plan are also available for advice.

  • In the sick neonate unable to tolerate enteral feeds, ZIDOVUDINE is the only IV therapy - discuss with a paediatric HIV consultant. Once the baby can tolerate oral medication, triple therapy should be commenced, as above, to complete 4 weeks total therapy.

  **F.** **CO-TRIMOXAZOLE PROPHYLAXIS**

  • Prophylaxis against Pneumocystis is not necessary for infants of mothers who fully take up interventions in pregnancy.

  • **CO-TRIMOXAZOLE** prophylaxis for Pneumocystis is only used from 4 weeks of age in very HIGH risk babies *(maternal HIV Viral Load >1000)* or if the baby is known to be HIV infected *(on PCR)*.

  • Co-trimoxazole suspension [Paediatric] contains 240mg of combined product per 5 ml & the dose is expressed as the combination.

  • The dose for infants:

    ➢ Above 2kg is 120mg once a day, 3 times a week *(Monday, Wednesday and Friday)* until proved HIV uninfected.

    ➢ Below 2kg – 60mg once a day, 3 times a week.
**G. MANAGEMENT PLAN UNDER VARIOUS SCENARIOS**

The choice of HIV drugs for the mother is outlined in **SECTION B**. Possible scenarios are outlined in more detail below and also in the British HIV Association (BHIVA) Guidelines for the Management of HIV Infection in Pregnant Women 2012.

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| **Women who do not yet need treatment for their HIV disease**            | **Mother**: Short term BOOSTED PROTEASE INHIBITOR (PI) based HAART by 24/40 (16/40 if HIV Viral Load >30,000). Discontinue after delivery (ideally after viral load becomes undetectable).  
**Baby**: Given ZIDOVUDINE monotherapy for 4 weeks if low risk, 3 drug infant PEP if considered if high risk (see **SECTION E**). |
| **Women who require treatment for their HIV disease**                   | **Mother**: HAART (EFAFIRENZ or NEVIRAPINE or BOOSTED PI as 3rd drug) continued after delivery  
**Baby**: Given ZIDOVUDINE monotherapy for 4 weeks if low risk, 3 drug infant PEP if considered if high risk (see **SECTION E**). |
| **Women who conceive on therapy**                                       | **Mother**: Maintain or optimise HAART. Women should not conceive on DIDANOSINE (DDI) or STAVUDINE (D4T)  
Continue existing regime even if it contains Efavirenz (previously there were concerns about this drug’s safety in pregnancy).  
**Baby**: routine antenatal screening. |
| **Women who present late in pregnancy (>28/40)**                        | **Mother**: Immediate 3 or 4 drug HAART including Raltegravir if HIV Viral Load > 100,000 or unknown. Continued until her clinical, virological and immunological status determined.  
**Baby**: ZIDOVUDINE monotherapy if low risk, 3 drug infant PEP if high risk (see **SECTION E**). |
| **Women who initiate HAART in pregnancy and have not achieved a plasma VL of <50 by 32/40 gestation** | **Mother**: Review adherence/concomitant medication, consider resistance genotype/Therapeutic Drug Monitoring (TDM), optimise HAART +/- intensification.  
**Baby**: May require 3 drug infant PEP if high risk. |
| **Women who present in labour (point of care HIV test reactive, unconfirmed HIV positive, treatment naive)** | **Mother**: Take baseline bloods to include CD4, viral load and genotype.  
Start ZIDOVUDINE/LAMIVUDINE/RALTEGRAVIR HAART and give single dose NEVIRAPINE 200mg orally.  
Commence IV ZIDOVUDINE  
Emergency caesarean section 2 hours post single dose NEVIRAPINE if not about to deliver  
**Baby**: Will require 3 drug infant PEP. |
| **Threatened pre-term delivery +/- rupture of membranes**               | **Mother**: High Vaginal Swab for Bacteriology, Group B strep treatment as per national guidelines.  
If <34 weeks gestation intramuscular steroids as per national guidelines.  
**IF DRUG NAIVE** - Take bloods to include CD4, viral load and genotyping if not known  
Start ZIDOVUDINE/LAMIVUDINE/RALTEGRAVIR HAART. Consider maternal double dose stat oral TENOFOVIR IV ZIDOVUDINE if HIV Viral Load >1,000 or unknown.  
(See **SECTION C** for obstetric management)  
**Baby**: May require 3 drug infant PEP if high risk. |
| **Infant presents after delivery**                                      | **Mother**: Determined by her clinical, virological and immunological status and previous treatments, if any  
**Baby**: 3 drug infant PEP for 4 weeks if <72 hours since delivery. |
| **Pregnancy in Women with HIV-2 Infection**                             | Managed in similar way to HIV-1, but refer to BHIVA guidelines on Management of HIV-2 (Non-Nucleoside Reverse Transcriptase Inhibitors ineffective). |
H. INVESTIGATION OF THE INDETERMINATE INFANT

If any infant has a positive HIV Pro-viral DNA PCR result, please contact Dr Riordan, Dr Paulus or Cathryn Benson (Paediatric Infectious Diseases, Alder Hey) as soon as possible (0151-228-4811). In their absence contact the Paediatric Infectious Diseases Consultant at St Mary’s Hospital, London (switch 0207 886 6666, or HIV coordinator 886 6349).
I. REFERENCES / SOURCES OF INFORMATION


- Merseyside, Cheshire and North Wales HIV Managed Clinical Network. Standard Operating Procedure (SOP) for Electronic Transfer and Storage of Perinatal Care Plans. 1 September 2014 - 1 September 2016.


- Guide to HIV, pregnancy and women’s health. HIV i-Base March 2013. www.i-Base.info


- British HIV Association (BHIVA) and Children’s HIV Association (CHIVA) Position Statement on Infant Feeding in the UK www.bhiva.org/PositionStatements.aspx
