HIV Positive : Management of the Woman and her Neonate

Contents

HIV Positive : Management of the Woman and her Neonate .......... 1
Quick reference Guide: Management of the HIV Positive woman ..... 2
  Key Points ............................................................................................................... 2
Antenatal ................................................................................................................. 2
Intrapartum Management .................................................................................... 2
  Vaginal Birth ............................................................................................................ 2
  Elective caesarean Section ..................................................................................... 2
Zidovudine (AZT) regime .................................................................................... 3
Postnatal Maternal Management ......................................................................... 3
Quick Reference Guide: Management of the Neonate at birth ................ 3
  Anti-retroviral Therapy for the Neonate ............................................................... 3
  Investigations for the neonate ................................................................................. 4
    In order of priority ............................................................................................... 4
  Other Measures .................................................................................................... 5
HIV Positive Woman and Her Neonate ............................................................ 5
  Antenatal Management ....................................................................................... 6
    Screening ............................................................................................................ 6
    Management ...................................................................................................... 6
  Intrapartum Management .................................................................................... 7
    Admission ......................................................................................................... 7
    Maternal Zidovudine (aZT) Regimen ................................................................. 7
  Medications compatible with Zidovudine (AZT) at Y site ......................... 8
    At Birth ............................................................................................................. 8
  References ......................................................................................................... 9
Quick reference Guide: Management of the HIV Positive woman

Key Points

- Antiretroviral therapy (ART) is indicated in pregnancy for all HIV positive women.
- The majority (70%) of perinatal transmissions of HIV appear to occur during labour.
- Strategies to reduce the risk of maternal – child transmission
  - Maternal antiretroviral therapy.
  - Shortened duration of membrane rupture.
  - Avoidance of invasive fetal interventions
  - Elective caesarean section – mode of delivery is an individualised decision.

- Zidovudine (AZT) is compatible with Oxytocin, Magnesium Sulphate, Ranitidine, Morphine and many antibiotics. See full guidelines for a complete list of drug compatibilities.

Antenatal

- The HIV physician shall create an individualised ART regimen for all HIV positive women.

Intrapartum Management

Vaginal Birth

- For women on antiretroviral therapy and no concerns regarding adherence to the regimen with an undetectable viral load, IV Zidovudine is no longer required during labour.
- Avoid Artificial Rupture of Membranes (ARM) unless obstetrically indicated.
- Avoid fetal scalp electrode placement and fetal blood sampling.
- Cabergoline 1mg for suppression of lactation should be prescribed on admission to the Labour and Birth Suite and administered soon after birth. Contact the Clinical Midwifery Consultant (KEMH Breastfeeding Centre) for support with lactation suppression

Elective caesarean Section

- For women on antiretroviral therapy and no concerns regarding adherence to the regimen with an undetectable viral load, IV Zidovudine (AZT) is no longer required.
- For women with a detectable viral load, regardless of their medications, IV Zidovudine will be commenced 4 hours prior to the planned time of surgery (See Regimen below). The requirement for Zidovudine must be clearly documented in the woman’s medical chart.
- Continue the infusion until the birth of the baby and cord clamping.
- Cabergoline 1mg for suppression of lactation should be prescribed on admission and administered on return to the postnatal ward. Contact the Clinical Midwifery Consultant (KEMH Breastfeeding Centre) for support with lactation suppression
Zidovudine (AZT) regime

- 1000mg of Zidovudine (AZT) (5 vials of AZT 200mg / 20 mL) is added to 900mL 5% Glucose or Hartmann’s solution (Total volume = 1000mL).
- **Loading dose** – 2 mg/kg maternal body weight IV for 1 hour followed by the maintenance dose.
- **Maintenance dose** – 1mg / kg maternal body weight until the birth of the baby and cord clamping.

Zidovudine (AZT) is compatible with oxytocin, magnesium sulphate, ranitidine, morphine and many antibiotics.

**Postnatal Maternal Management**

- Complete avoidance of breast feeding or mixed breast / formula feeding.
- Administer Cabergoline 1mg for lactation suppression. Contact the Clinical Midwifery Consultant (KEMH Breastfeeding Centre) for support with lactation suppression.
- Antiretroviral Therapy (ART) will be prescribed by the HIV physician.
- Expert contraceptive advice is essential prior to discharge.

**Quick Reference Guide: Management of the Neonate at birth**

- Notify the on call Consultant Paediatrician / Senior Registrar (KEMH) at delivery.
- Notify the on-call Paediatric Infectious Diseases Consultant (PMH) via PMH switchboard at delivery.
- Bath the baby in the Labour and Birth Suite room.
- Refer to the neonate’s anti-retroviral Regime and Management plan for Neonate form (MR409) which is in the neonates shadow file in the mother’s chart.
- All injections must be given after the bath.
- If any injection is required, thoroughly clean the site before administration.

**Important:** If a woman with HIV infection presents for delivery, and has not had any involvement with the Paediatric HIV Team; contact the on-call Paediatric Infectious Diseases Consultant via switchboard immediately. If a woman has unknown HIV status but is thought to be at increased risk for HIV, contact both the Clinical Microbiologist and Paediatric Infectious Diseases on call from Princess Margaret Hospital.

**Anti-retroviral Therapy for the Neonate**

- Antiretroviral therapy must be started as soon as possible after birth and always within 4 hours of birth. Antiretroviral therapy is continued for 4 weeks.
- The neonate is usually given Zidovudine (AZT). However, the antiretroviral regimen is decided on a case-by-case basis and in certain circumstances other anti-retroviral medications are given in addition to AZT. Refer to the neonate’s “Antiretroviral Regime and Management Plan” (MR 409), located in
the neonatal shadow file in the mother’s medical record, for their individualised antiretroviral regime.

- The infant’s Antiretroviral Regime and Management Plan Form (MR 409) must be transferred from the Mother’s medical record to the infant’s medical record once the baby is born.

- For doses of antiretroviral medications and for infants who cannot tolerate oral Zidovudine
  Ref to Clinical Guideline PMH (CAHS) guideline on Management of Infants born to HIV Positive Women

- Zidovudine (AZT) is kept in the Labour and Birth Suite drug imprest under the name Retrovir (10mg/mL).

- Transfer the Zidovudine (AZT) medication to Special Care Nursery or the ward with the baby.

  **Important: if the infant vomits within 30 minutes of receiving an oral dose of their antiretroviral medication, repeat the dose.**

**Investigations for the neonate**

Within 24 hours of birth, take bloods from the neonate for (Not cord blood):

  **Refer to the infant’s “Antiretroviral Regime & Management Plan” (form MR 409) to confirm which HIV test (Proviral DNA or Viral load) should be ordered for the neonate.**

**In order of priority**

1. HIV testing
   - HIV proviral DNA (0.5 mL EDTA – purple top tube)
     Or
   - HIV Viral Load (3mL EDTA purple top)
     **A minimum of 3mL EDTA must be collected for an HIV Viral Load. If less than 3mL is collected the neonate will need to be re-bled.**

   **If taking blood via venous access:** collect in 1 x 4mL EDTA purple top tube.

   **If collecting via a heel prick:** collect the blood in 6 X 0.5mL EDTA micro container tubes (must have 0.5mL of blood collected in each tube).

   **Additional tests are only to be requested if there is sufficient blood in addition to that used specifically for HIV testing.**

2. Full Blood Count (0.5mL EDTA purple top tube).

3. LFTs (0.5mL lithium heparinised – green top tube).

  If outside of normal working hours, send the blood samples immediately to the Women and Newborn Health Service Pathology 24 hour laboratory at KEMH.
During normal working hours, send it as soon as possible to the Central Specimen reception.

Other Measures

- **No breastfeeding with exclusive formula feeding from birth is always recommended.** Although exclusive formula feeding is always recommended, in rare circumstances a woman may choose to breast feed. In these cases, exclusive breast feeding must occur (mixed feeding increases the risk of HIV transmission to the neonate). Refer to the ‘Antiretroviral regimen and management plan for Neonate’ to check the planned mode of feeding of the neonate. Discussions about breastfeeding must involve the Gold Team Consultant and Paediatrician.

- Naso/orogastric tubes should only be used if absolutely indicated and **should be inserted by experienced staff.**

- Other medications and immunisations are to be given as indicated or required.

- The infant can be vaccinated as per the WA Vaccination Schedule

HIV Positive Woman and Her Neonate

**Key Points**

1. HIV testing is offered to all women attending antenatal care and must be accompanied by appropriate counselling.

2. Antiretroviral therapy (ART) is indicated in pregnancy for HIV positive women. The majority of perinatal transmissions of HIV appear to occur during labour.

3. Strategies to reduce risk of perinatal transmission include antenatal maternal antiviral therapy, shortened duration of membrane rupture, and avoidance of intrapartum invasive fetal interventions.

4. Zidovudine (AZT) is compatible with oxytocin, Magnesium Sulphate, Ranitidine, Morphine and many antibiotics.

5. Zidovudine is no longer recommended for women delivering with an undetectable viral load and who are established on an antiviral regimen with no concerns regarding adherence to the regimen. This is regardless of the mode of delivery. For women delivering with a detectable viral load or who have not been adherent to an antiretroviral regimen, IV Zidovudine should be commenced as soon as a diagnosis of labour is made, or 4 hours prior to an elective caesarean birth.

6. Antiretroviral therapy **for the infant** is commenced as soon as possible after birth and always with 4 hours.

7. Exclusive formula feeding is always recommended, in rare circumstances a woman may choose to breast feed. In these cases, exclusive breast feeding must occur (mixed feeding increases the risk of HIV transmission to the neonate). Refer to the ‘Antiretroviral regimen and management plan for Neonate’ to check the planned mode of feeding of the neonate.

8. The neonate should be tested for HIV within 24 hours of birth.
Antenatal Management

Screening

All antenatal women should be given the opportunity to be tested for HIV. If a woman chooses to have testing pre and post testing counselling should be done regardless of the result.

Screening for HIV is conducted by an initial ELISA for HIV antibody and if positive, the result is confirmed by a Western Blot.

Notification to the Health Department for newly diagnosed HIV positive women

Complete the ‘Notification of HIV infection or AIDS or death in a person with HIV infection' Government of Western Australia Department of Health form found at: http://www.public.health.wa.gov.au/3/309/3/hiv_human_immunodeficiency_virus.pm

Management

1. All women diagnosed HIV positive are referred to the GOLD OBSTETRIC TEAM for management.

2. A written referral from the Consultant shall be sent to the Immunology Combined Immunodeficiency Clinic at PMH via the Immunology Clinical Nurse Specialist (CNS) available on page 8311/ext. 7406.
   - The PMH Immunology CNS will liaise with the obstetrician, adult physician, paediatrician, neonatologist, social workers and other multidisciplinary staff to discuss issues including obstetric history, maternal health (e.g. high viral load), maternal antiretroviral medication, maternal compliance and social environment, and provide feedback to the HIV paediatric team.
   - A Paediatrician will be assigned to manage the newborn. The Immunology CNS will arrange a meeting with the parents and the assigned Paediatrician. Discussion will include issues regarding infant management, medications, HIV testing, feeding, immunisations, and follow-up.
   - An infant anti-retroviral regimen is formulated and documented on an “MR409 Antiretroviral Regimen and Management Plan for the Neonate form” and circulated to the Multidisciplinary Pregnancy Team one month prior to the expected date of delivery. The KEMH CMS for the Gold Team will insert the completed form in the shadow file which is located in the mother’s KEMH medical record with the protocol for management of infants born to HIV positive women.

3. As HIV Proviral DNA is the preferred test in neonates, a sample of HIV Proviral DNA (0.5mL EDTA) should be collected from the mother to ensure a maternal sample can be amplified.
   - If the mother returns a negative HIV Proviral DNA, the infant will require HIV viral load testing for the presence of HIV.

4. Accurate pregnancy dating should be confirmed as soon as possible.

5. Antiretroviral therapy (ART) is indicated for all HIV positive women. The HIV physician will create the ART regimen for each woman, tailored to her viral resistance studies and lifestyle. If the woman is not on ART prior to
conception, this will be commenced by the HIV physician at the end of the first trimester. There is still limited data on the long-term effects of ART on the fetus and neonate.

6. Prenatal diagnostic tests such as CVS/amniocentesis may be offered as appropriate, however such procedures do appear to increase risk of perinatal transmission viral rate and their conduct should be performed only after full discussion with the woman.

Intrapartum Management

Admission

1. A booked women with HIV  
   Inform:  
   • the Labour and Birth Suite Co-ordinator  
   • Registrar/Senior registrar who will liaise with the Gold Obstetric Registrar/Consultant.

2. An Unbooked women presenting with HIV, and no involvement of the Paediatric HIV team or the Multidisciplinary pregnancy group
   1. Inform the Co-ordinator of the labour and birth suite.  
   2. Inform the Team Consultant on duty for labour and birth suite.  
   3. Contact the On-Call Paediatric Immunology Consultant via PMH switchboard immediately.

3. Admission of a woman with an unknown HIV status, but thought to be at high risk for HIV  
   Contact the Clinical Microbiologist and Paediatric Immunologist on call from Princess Margaret Hospital.

Maternal Zidovudine (aZT) Regimen

See Pharmacy Guideline Zidovudine

<table>
<thead>
<tr>
<th>Preparation</th>
</tr>
</thead>
</table>
| Withdraw 100mL of 5% glucose or Hartman’s from a 1000mL bag of this solution.  
Add 1000mg of Zidovudine (AZT) (5 vials AZT 200mg / 20mL) to the bag.  
This equates to a total volume of 1000mL of fluid for administration, giving a concentration of 1mg per mL. |

<table>
<thead>
<tr>
<th>Administration dosage</th>
</tr>
</thead>
</table>
| A Loading dose of 2 mg/kg maternal body weight for one hour then  
 Maintenance dose of 1 mg/kg maternal body weight until birth of the baby. |
**Vaginal Birth**

Zidovudine is no longer required for women receiving ART with an undetectable viral load in whom there are no concerns regarding adherence.

**Elective Caesarean Section**

IV Zidovudine is no longer required for women receiving ART with an undetectable viral load in whom there are no concerns regarding adherence who are scheduled for an elective caesarean birth.

For women with a detectable viral load of who have not received antiretroviral therapy antenatally, Zidovudine will be required.

Commence treatment regimen four hours prior to anticipated birth. Continue the infusion until birth of the baby and clamping of the umbilical cord.

Note: the solution is stable for 24 hours at room temperature, or 48 hours if refrigerated.

<table>
<thead>
<tr>
<th>Vaginal Birth</th>
<th>Elective Caesarean Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zidovudine is no longer required for women receiving ART with an undetectable viral load in whom there are no concerns regarding adherence.</td>
<td>IV Zidovudine is no longer required for women receiving ART with an undetectable viral load in whom there are no concerns regarding adherence who are scheduled for an elective caesarean birth. For women with a detectable viral load of who have not received antiretroviral therapy antenatally, Zidovudine will be required. Commence treatment regimen four hours prior to anticipated birth. Continue the infusion until birth of the baby and clamping of the umbilical cord.</td>
</tr>
</tbody>
</table>

If the above strategies are followed, perinatal transmission rates of ≤ 2% are expected.

**Medications compatible with Zidovudine (AZT) at Y site**

Ampicillin, ceftriaxone, clindamycin, cloxacillin, dexamethasone, erythromycin, gentamycin, heparin, insulin, magnesium sulphate, metoclopramide, metronidazole, morphine, oxytocin, ranitidine, vancomycin

**At Birth**

Notify

- On-call Consultant neonatologist / Senior Registrar KEMH
- Paediatric Consultant for HIV

**During working hours:** contact the allocated Paediatric Consultant via the PMH switchboard.

**After hours and at the weekend:** Contact the on-call PMH Immunologist via the PMH switchboard (if there any concerns). Otherwise on the following day notify the allocated PMH Paediatric Consultant, or on call PMH immunologist if on the weekend.

- Refer to the neonate’s antiretroviral Regime and Management Plan for Neonate form (MR409) in the correspondence section of the mother’s medical chart regarding bloods and medications required for the infant. This form must be transferred to the neonate’s chart with the neonate’s UMRN label attached.
- The neonate must be bathed in the Labour and Birth Suite before the administration of any injections.

- If any injection is necessary prior to bathing, the site must be thoroughly cleaned beforehand.

**Recommended Medications for the Neonate**

See Clinical Guideline *Management of Infants born to HIV Positive Women (PMH)*

### References


### Keywords:
- HIV positive pregnancy
- antiretroviral
- AZT, zidovudine
- HIV in neonate
- ART

### Document owner:
OGID

### Author / Reviewer:
CMC Maternal Fetal Medicine/ Breastfeeding Centre / PMH

### Date first issued:
11/2001

### Last reviewed:
11/2016

### Next review date:
11/2019

### Endorsed by:
Obstetrics, Gynaecology and Imaging Directorate

### Date:
12/2016

### Standards Applicable:
- NSQHS Standards: 1 Clinical Care is Guided by Current Best Practice
- 4 Medication Safety

**Printed or personally saved electronic copies of this document are considered uncontrolled. Access the current version from the WNHS website.**