### Policy

# Clinical Guideline

HIV in Pregnancy

Policy developed by: SA Maternal & Neonatal Clinical Network

Approved SA Health Safety & Quality Strategic Governance Committee on:

24 June 2015

Next review due: 30 June 2018

**Summary** Clinical practice guideline on HIV in pregnancy.

Keywords HIV, human immunodeficiency virus, ELISA, HPV, Western blot,

viral load, resistance testing, ART, Antiretroviral treatment,

Zidovudine, AZT, HIV in Pregnancy clinical guideline

Policy history Is this a new policy? N

Does this policy amend or update an existing policy? Y v2.0

Does this policy replace an existing policy? Y

Applies to All Health Networks

CALHN, SALHN, NALHN, CHSALHN, WCHN, SAAS

**Staff impact** All Staff, Management, Admin, Students, Volunteers

All Clinical, Medical, Nursing, Allied Health, Emergency, Dental,

Mental Health, Pathology

PDS reference CG216

### Version control and change history

Version	Date from	Date to	Amendment
1.0	15 Apr 2004	26 Jul 2011	Original version
2.0	26 Jul 2011	24 Jun 2015	Reviewed
3.0	24 Jun 2015	Current	



#### South Australian Perinatal Practice Guidelines

# HIV in pregnancy

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#### Note

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

The 'Management of Perinatal Infections' guideline for Human Immunodeficiency Virus by the Australasian Society for Infectious Diseases 2014 has been used to inform this practice guideline.

Available at URL: http://www.asid.net.au/resources/clinical-guidelines

#### Explanation of the aboriginal artwork

The aboriginal artwork used symbolises the connection to country and the circle shape shows the strong relationships amongst families and the aboriginal culture. The horse shoe shape design shown in front of the generic statement symbolises a woman and those enclosing a smaller horse shoe shape depicts a pregnant women. The smaller horse shoe shape in this instance represents the unborn child. The artwork shown before the specific statements within the document symbolises a footprint and demonstrates the need to move forward together in unison



Australian Aboriginal Culture is the oldest living culture in the world yet we experience the worst health outcomes in comparison. Our Aboriginal women are 2-5 times more likely to die in childbirth and our babies are 2-3 times more likely to be low birth weight. Despite these unacceptable statistics the birth of an Aboriginal baby is an important Cultural event and diverse protocols during the birthing journey may apply.



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### Management of HIV in pregnancy

Offer HIV pregnancy screening to all women at the first antenatal visit in every pregnancy

#### **Pre-existing HIV**

**Newly diagnosed HIV** 

## Multidisciplinary team management in a tertiary hospital

> Referral to Maternal Fetal Medicine/High risk management obstetrician, infectious diseases consultant

#### **Investigations**

- > Routine booking bloods (if not already done)
- > Baseline bloods LFTs , electrolytes, urea, creatinine, amylase, lactate, HLA 85701
- > FBC, CD4 cell count and lymphocyte subsets
- > HIV viral load
- > HIV resistance testing (unless already done
- > Consider low vaginal swab for genital and other STDs (e.g. gonorrhoea, chlamydia, bacterial vaginosis) and first void urine for chlamydia, gonorrhoea
- > Cervical smear: (high risk of intraepithelial neoplasia secondary to HPV)

## Strategies to reduce Mother to Child transmission (MTCT) of HIV

- > Formula feeding only NO breastfeeding
- > Anti-Retroviral Therapy (ART): If not already taking, commence as soon as possible (see further details in guideline below)

#### Mode of birth:

- > Viral load <50 copies/mL and ≥36 weeks and no other obstetric complications, for vaginal birth
- > Viral load 50-399 ≥36 weeks: Consider caesarean section, give intrapartum zidovudine
- > Viral load >400 copies/mL ≥36 weeks: Plan caesarean section, give intrapartum zidovudine

#### Postpartum care

- > Actively discourage breastfeeding
- > Consider lactation suppression with cabergoline (Dostinex®)
- > ART should be prescribed in consultation with an infectious diseases consultant
- > Contraception advice before discharge

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### Care of the newborn (maternal HIV)

#### At birth

- > Standard precautions (protective gown, gloves and eyewear)
- > Notify paediatrician of impending birth
- > Routine cord bloods

#### Immediate care after birth

- > Baby to remain in birthing room with mother until transfer to ward (unless transfer to nursery is required)
- > Wash all visible maternal blood from hair or skin of baby
- > Actively discourage breastfeeding
- > Ensure skin at injection site is clean (soap and water or use an alcohol swab) before administering any injection including Vitamin K, hepatitis B vaccine, hepatitis B immunoglobulin

## Prevention of mother to child transmission (MTCT)

Undetectable maternal viral load AND optimal HIV suppression strategies in place AND bottle fed baby

- > Commence zidovudine prophylaxis as soon as possible after birth (within 6-12 hours) and continue for 4 weeks
- > Pneumocystis jiroveci pneumonia (PJP) prophylaxis not needed

Unknown or detectable viral load OR no optimal suppression strategies in place OR breastfed baby OR mother found to be HIV positive after delivery

- > Commence lamivudine and nevirapine as well as zidovudine prophylaxis as soon as possible after birth (within 6-12 hours). Use a tapering regimen to cover the long half-life of nevirapine and continue lamivudine and zidovudine for 4 weeks (see dosage in text)
- > PJP prophylaxis required

	TEST					
Time of	PCR - Proviral HIV					
testing	DNA or HIV RNA	antibody				
Week 1	Yes	No				
Week 6	Yes	No				
3 Months	Yes	No				
6 months	No	No				
12 months	No (Clinical visit only)	NO				
18 months		Yes				

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#### Introduction

- > The care of the pregnant HIV infected women is complex and requires a multidisciplinary approach by health care providers who have current knowledge and expertise in this area
- > Specialist advice should always be sought for each woman with HIV, especially when recommendations may be inconsistent and / or evidence is lacking

### Pre-existing HIV before pregnancy

- > All women with known HIV should be referred to an HIV physician, sexual health physician and an obstetric consultant with specialist knowledge of the pregnant HIV infected woman to discuss the following:
  - > Preconception counselling
  - > Fertility management
  - > Sexual health assessment
  - > Social assessment
  - > The need for optimal suppression of the woman's viral load before pregnancy
  - > Education about the side effects of anti-retroviral therapy, including hyperglycaemia, anaemia and hepatic toxicity
- > Pre-pregnancy screening should include:
  - > Sexual health screen for and treat any infectious or sexually transmitted diseases (e.g. rubella, hepatitis B, hepatitis C, syphilis, varicella, toxoplasmosis, cytomegalovirus, herpes simplex virus)
  - > Cervical cytology (unless a recorded negative result within the last 12 months). HIV is associated with increased risk of Human Papilloma Virus (HPV) related cervical squamous intraepithelial lesions. These are precursor lesions for cervix cancer
  - > Social assessment screen for maternal psychological issues and substance abuse and refer as appropriate

### Pregnancy HIV screening and notification

- > HIV screening is offered to all women at their first antenatal visit with the option to decline. Screening must be:
  - > Voluntary and confidential
- > Accompanied by adequate pre-test discussion, including how the result will be communicated. A positive screen with ELISA is confirmed with Western blot (WB)
- > HIV is a notifiable disease
- > The medical officer should telephone CDCB on 1300 232 272, Monday to Friday (8.30 am to 5.00 pm). The notification form is sent out to the medical officer upon receipt of a positive laboratory result. The responsible medical officer then completes the medical notification form. Fax to (08) 8226 7187 or post to the Communicable Disease Control Branch (CDCB) PO Box 6 Rundle Mall, 5000
- > This form is not to be sent by email for reasons of confidentiality

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### Post-test counselling

#### **HIV** positive

- > The responsible medical officer should contact the woman to arrange face to face notification of the positive HIV test result
  - > The implications of the positive HIV test result for the woman, her pregnancy, and her partner should be discussed in detail, as well as the need for implementation of transmission precautions for both her baby, partner and health care workers
- > The notifying medical officer should explicitly state their obligation to protect patient confidentiality at all times
- > Referral to high risk management in a tertiary centre with a multidisciplinary team for further counselling including:
  - > HIV physician, specialist obstetrician (Maternal Fetal Medicine or High Risk), infectious disease consultant, infection control coordinator, neonatologist / paediatrician, anaesthetist, midwife and allied health services as appropriate (e.g. social worker, perinatal substance use team, perinatal mental health team, pharmacist)
- > Ensure the woman is informed of the medical officer's obligation to notify the Communicable Disease Control Branch of the diagnosis as Partner Notification officers will interview the woman

#### **HIV** negative

- > Low risk: no further testing
- > High risk of recent exposure or re-exposure likely: Repeat HIV testing in 4 weeks

#### **Indeterminate Western blot**

- > Further testing needed
- > Discuss with HIV reference laboratory
- > Discuss with a clinical pathologist / virologist

#### Investigations

#### **Bloods**

- > Routine antenatal bloods (see in 'Normal pregnancy' guideline in the A to Z index at www.sahealth.sa.gov.au/perinatal)
  - > Additional serology for cytomegalovirus, varicella, herpes simplex virus and toxoplasmosis at the time of routine antenatal bloods (see Appendix I: HIV management summary chart)
- > Full blood count, CD4 cell count and lymphocyte subsets
- > HIV viral load
- > HIV resistance testing (unless already performed)
- > Baseline bloods including:
  - > Liver function tests, electrolytes, urea, creatinine, amylase, lactate, HLA B5701

#### Swabs and urine screening

- > Consider a low vaginal swab for genital and other sexually transmitted infections (gonorrhoea / chlamydia / bacterial vaginosis) and first void urine for chlamydia:
  - > In early pregnancy
  - > At 28 weeks

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- > If detected, Chlamydia trachomatis should be treated with a single 1 g oral dose of Azithromycin
- > If detected, treat bacterial vaginosis with:
  - > Clindamycin 300 mg orally, every 12 hours for 7 days or Metronidazole 400 mg orally, every 12 hours for 5 days (Bacterial vaginosis has been associated with preterm birth and a higher rate of mother to child HIV transfer)<sup>6</sup>
- > Cervical cytology (high risk of intra-epithelial neoplasia secondary to Human Papilloma Virus [HPV] infection)
- > Routine low vaginal swab for GBS screening at 36 weeks of gestation

### Management

- > Arrange multidisciplinary team meeting soon after diagnosis or pregnancy presentation with known HIV
- > Ensure optimal suppression of HIV viral load during pregnancy
- > Confirm mode of delivery (see below) and management plan for both mother and baby and document in case notes
- > Educate mother about the need to continue and / or commence ART throughout her pregnancy and in labour (as required) and advise woman to present to hospital as soon as contractions begin or if rupture of the membranes occurs
- > Notify pharmacy to ensure adequate supply of ART for both mother and baby

#### Education

- > Advise against breastfeeding
- > Discuss the known evidence on the benefits and risks associated with vaginal birth versus elective caesarean section in relation to the woman's individual circumstances
  - > Document discussion and agreement by the woman regarding planned mode of delivery
- > Discuss management of the baby at birth including antiretroviral prophylaxis

#### Intrapartum

#### Women who present in early labour or with ruptured membranes at term

- > If spontaneous rupture of the membranes (SROM) occurs before or early in labour, interventions to decrease the interval to delivery (e.g. administration of oxytocin) can be considered in HIV-infected women with viral suppression and no indications for caesarean section (AIDSinfo online 2015)
  - > There are too few data to advise if caesarean section will reduce the risk of perinatal transmission of HIV after the onset of labour or spontaneous rupture of the membranes (SROM). Most studies have shown a similar risk of transmission between caesarean section performed for obstetric indications after labour and SROM and for vaginal delivery (AIDSinfo online 2015)
- > In cases where women scheduled for **elective** caesarean section present with rupture of the membranes OR early labour, it is not clear how soon after the onset of labour OR rupture of the membranes the benefit of elective caesarean section is lost
  - > The decision about whether to deliver by expeditious caesarean section must be individualized, taking into account duration of rupture of the membranes or labour upon presentation, projected length of labour remaining, the most recent RNA level, and current ART drug regimen status. The ART drug regimen should be continued and IV zidovudine initiated (AIDSinfo 2015)

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- > Data regarding the potential risk of perinatal transmission of HIV associated with operative vaginal delivery using forceps or vacuum extraction and / or use of episiotomy are limited to studies in the pre-ART era. These procedures may be performed for a clear obstetric indication (AIDSinfo 2015)
  - > Medical expert opinion recommends the use of Forceps rather than Vacuum extraction in women HIV on the premise that forceps are less likely to damage the integrity of the skin

#### Preterm prelabour rupture of the membranes (PPROM)

- > Recommend immediate delivery when PPROM occurs between 34 to 37 weeks gestation with either caesarean section or vaginal delivery, according to obstetric indications and individual circumstances
  - > See 'Preterm prelabour rupture of the membranes' in the A to Z index at URL www.sahealth.sa.gov.au/perinatal for further information regarding antibiotic prophylaxis and indications for corticosteroid cover
- > Virological control should be optimised
- > In cases < 34 weeks gestation there should be multidisciplinary discussion about the timing and mode of delivery (AIDSinfo 2015)

### Strategies to minimise mother to child transmission of HIV

- > All mothers with HIV should be advised to formula feed their baby (no breastfeeding)
- > ART should be prescribed in consultation with an infectious diseases specialist to ensure that it is appropriate for the woman's situation and commensurate with the latest evidence
- > The woman should be fully informed about the known potential benefits versus risks of antiviral treatment. Obtain written consent before commencing treatment<sup>5</sup>
- > NB: If required intrapartum, ensure intravenous zidovudine is available in the hospital at the point of care
- > Highly active anti-retroviral therapy (HAART) regimens must be prescribed in accordance with pregnancy guideline recommendations by the infectious diseases or STD consultants

#### 1. Conceiving on effective HAART

#### Viral load less than 50 copies/mL (undetectable) at or after 36 weeks gestation

- > Continue current treatment
- > No need for intrapartum zidovudine
- > Vaginal delivery if no obstetric contraindications

#### 2. Naïve to HAART, needing therapy for own health

- > Commence HAART as soon as possible
- > Choice of regimens
  - > Nucleoside backbone: zidovudine + lamivudine OR tenofovir + emtricitabine OR abacavir + lamivudine
  - > Third agent: Boosted Protease inhibitor (PI), (preferred PI regimens include atazanovir / ritonavir, lopinavir / ritonavir), efavirenz (if after 8 weeks gestation) or nevirapine (if CD4 cell count < 250 cells/uL)</p>

#### Viral load less than 50 copies/mL (undetectable) at or after 36 weeks gestation

- > Continue current treatment
- > No need for intrapartum zidovudine

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> Vaginal delivery if no obstetric contraindications

#### Viral load 50-399 copies/mL at or after 36 weeks gestation

- > Give intrapartum zidovudine (see table below)
- > Consider elective caesarean section between 38 and 39 weeks gestation

#### Viral load more than 400 copies/mL at or after 36 weeks gestation

- > Give intrapartum zidovudine (see table below)
- > Plan elective caesarean section between 38 and 39 weeks gestation

#### 3. Naïve to HAART, not needing therapy for own health

- > Commence anti-retroviral therapy (ART), preferably in the second trimester but at least by week 24 of pregnancy in consultation with STD or infectious disease consultant
- > Nucleoside backbone: zidovudine + lamivudine OR tenofovir + emtricitabine OR abacavir + lamivudine
- > Third agent: boosted PI
- > Manage according to viral load (as above)

#### 4. Late presenter, not on HAART

#### Not in labour

- > Presentation after 28 weeks
  - > Commence HAART as soon as possible after HIV assessment
  - > Intrapartum zidovudine and planned caesarean section if viral load detectable (> 50 copies/mL)
- > Viral load unknown or >100,000 copies/mL
  - > Commence HAART as soon as possible, after HIV assessment
  - > Add raltegravir to regimen
  - > Intrapartum zidovudine and
  - > Plan caesarean section delivery

#### In labour at term

- > Stat dose of nevirapine
- > Start oral fixed dose combination zidovudine/lamivudine
- > Add raltegravir to regimen
- > Intrapartum zidovudine (see table below)
- > Plan caesarean section delivery

#### In labour preterm

- > Stat dose of nevirapine
- > Start HAART
- > Use double dose tenofovir
- > Add raltegravir to regimen
- > Intrapartum zidovudine (see table below)
- > Consider caesarean section depending on obstetric factors

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### Intrapartum zidovudine 9-12

> NB: Ensure zidovudine is available in the hospital at the point of care of intended delivery

#### Rates of transmission are increased in case of:

- > Advanced maternal illness
- > High maternal viral load (due to advanced infection or viral activity)
- > Poor maternal immune status e.g. low CD4 count (also known as T cell count)
- > Rupture of membranes > 4 hours before birth
- > Preterm birth
- > Breastfeeding
- > Procedures that may jeopardise the integrity of natural barriers (e.g. fetal scalp electrodes, vigorous suctioning, injections through unwashed skin)

#### Vaginal birth

- > If indicated, commence zidovudine infusion once labour has started (see regimen below)
- > Notify the consultant obstetrician in charge of labour ward and the infection control coordinator when the woman is admitted in labour
- > Notify the Neonatologist and Infectious Diseases physician at time of birth
- > Deliver the baby gently, with minimal aerial dispersion of vaginal secretions
- > Clean the eyes of the baby with saline at delivery of the head
- > Clamp cord as soon as possible
- > Avoid procedures that may inoculate the baby, for example:
  - > Fetal scalp monitoring
  - > Fetal blood sampling
  - > Vigorous aspiration or oral suction of baby
- > If there is an obstetric indication to expedite delivery in second stage, an instrumental delivery may be the safest mode; however, there is a small risk of traumatising the fetal skin and inoculating the baby

#### Elective caesarean section

- > If indicated, commence zidovudine infusion 4 hours before planned birth (see regimen below)
- > Notify theatre staff of woman's imminent admission for surgery
- > The team should be limited to essential members
- > The consultant obstetrician and midwife in charge of the woman must ensure there is strict adherence to ALL standard precautions and operating room infection control management guidelines
- > NB: No pre-operative shaving of the woman (clipping is acceptable if deemed necessary)

#### At birth

> Protective eyewear (goggles, mask or face shield), gown / apron, gloves and boots / overshoes should be worn by ALL persons having direct contact with the woman and baby before, during and in the early postpartum period (first hours before transfer to ward). For more information see "infection control precautions" below

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### Zidovudine infusion regimen

- > Zidovudine IV 10 mg / mL available in vial 200 mg / 20 mL
- > NB: Zidovudine is obtained via the Special Access Scheme (SAS). Supply needs to be arranged in advance. If outside normal working hours, notify on-call pharmacist for the location of SAS drug to expedite treatment
- > Give intravenously via infusion pump
- > Dilute zidovudine with 0.9 % sodium chloride to a concentration of 1 mg / mL and administer by slow intravenous infusion over a one hour period

#### Set up

> Withdraw 100 mL sodium chloride 0.9 % from a 1,000 mL sodium chloride 0.9 % bag Add 1,000 mg (100 mL zidovudine 10 mg / mL vials) to the bag to give a total dose of 1,000 mg in 1,000 mL (i.e. 1 mg / mL)

#### Vaginal birth

> Commence zidovudine 2 mg / kg IV over 60 minutes, at the onset of labour, followed by a maintenance dose of 1 mg / kg per hour IV until the umbilical cord is clamped

#### Caesarean section

> Commence zidovudine 2 mg / kg IV over 60 minutes, starting four hours before the anticipated caesarean section, followed by a maintenance dose of 1 mg / kg per hour IV until the umbilical cord is clamped

#### Maternal dose calculation guide

Maternal weight (kg)	Loading dose (over	Maintenance dose	
	60 minutes)		
50	100 mL / hr	50 mL / hr	
55	110 mL / hr	55 mL / hr	
60	120 mL / hr	60 mL / hr	
65	130 mL / hr	65 mL / hr	
70	140 mL / hr	70 mL / hr	
75	150 mL / hr	75 mL / hr	
80	160 mL / hr	80 mL / hr	
85	170 mL / hr	85 mL/ hr	
90	180 mL / hr	90 mL / hr	
95	190 mL / hr	95 mL / hr	
100	200 mL / hr	100 mL / hr	

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### Infection control precautions

- > Standard precautions
- > Staff with known broken skin or dermatitis should not assist

#### Prevention of injuries

> Maintenance of standard precautions is essential when handling needles, scalpels and other sharp instruments. The USER is responsible for their safe disposal into a designated "sharps" container

#### Operating room techniques

- > The principle of "confine and contain" should always be applied
- > Avoid passing needles, blades, or other sharp instruments from hand to hand. A dish for disposal must be placed nearby
- > Closed wound drainage systems should be used
- > Wound dressings should be of the type that will contain exudate inside an impervious outer covering
- > Suction apparatus used should be disposable

#### Reprocessing of equipment

- > Staff must wear adequate protective clothing when cleaning instruments and equipment
- > Instruments should be rinsed in cold water to remove blood, followed by thorough cleaning with detergent before being sterilised
- > Pasteurisation or chemical disinfection may be necessary for some items of equipment. Non disposable equipment, operating trolley, barouche and the floor should be cleaned thoroughly with detergent and wiped over with a hospital approved cleaning product containing sodium hypochlorite (may be a combined detergent / disinfectant)

#### Waste disposal

> All "medical" infectious waste must be put into yellow biological plastic bags and securely tied before disposal into a designated bin

#### Care of the newborn

- > A neonatologist / paediatrician must be notified of impending birth
- > Protective gown, gloves and eyewear should be worn
- > Collect routine cord bloods after the cord is carefully wiped clean to avoid contamination with maternal blood
- > The baby should remain in the birthing room until transfer to the ward unless transfer to the nursery is indicated
- > After birth, wash all maternal blood from the baby
  - > Consider washing any visible blood from hair or skin before contact with extended family
- > The skin at the injection site should be cleaned with soap and water (if not already done) OR with an alcohol swab before administering any injection including hepatitis B vaccine, immunoglobulin (if required) or Konakion® (vitamin K)
- > Breast feeding should be actively discouraged

#### Prevention of mother to child transmission (pMTCT)

> Treatment needs to be coordinated between neonatologist (paediatrician) and infectious diseases specialist

Undetectable maternal viral load (<50 copies/mL) and optimal HIV suppression strategies in place during pregnancy in a bottle fed baby

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- > In the setting of undetectable maternal viral load at or later than 36 weeks gestation with no other risk factors contributing to MTCT, the estimated transmission risk is less than 2%
- > Zidovudine monotherapy is recommended if MTCT risk is low (<2%), even if the mother has a previous history of zidovudine resistance but has an 'undetectable' viral load. Prophylaxis should start as soon as possible after birth (within 6-12 hours of delivery) for 4 weeks

#### > Zidovudine (AZT) oral concentration 10 mg/mL

Gestational age (weeks)	Dose (mg/kg)	Frequency and Duration		
<30	2	12 hourly for 4 weeks		
30 to 34 weeks	2	12 hourly for 2 weeks followed by 8 hourly for 2 weeks		
≥ 35 weeks	4	12 hourly for 4 weeks		

- > If neonates are unable to take oral zidovudine; give intravenously
- > Zidovudine IV formulation 10 mg/mL

Gestational age	Dose (mg/kg)	Frequency	
Term neonate	1.5	6 hourly	
Preterm	1.5	12 hourly	

- > Please note this formulation is not marketed in Australia and is only available via the Special Access Scheme (SAS). SAS paperwork and informed parental consent should be organised before to starting treatment. For further information see 'Zidovudine' in the A to Z index at www.sahealth.sa.gov.au/neonatal
- > Maternal zidovudine resistant strain: Monotherapy with zidovudine (postnatal) is still the recommended antiretroviral therapy of choice if MTCT risk is low (<2%) i.e. where maternal viral load is undetectable at or later than 36 weeks gestation with no other risk factors contributing to MTCT

#### Unknown or detectable viral load and/or no optimal suppression strategies in place

> Antiretrovirals in addition to zidovudine are indicated: MTCT is considered significant (> 2%) if maternal viral load is detectable at ≥ 36 weeks, or late maternal presentation and viral load is unknown, or mother found to be HIV positive just after delivery. Lamivudine and nevirapine are added to zidovudine, with a tapering regimen to cover the long half-life of nevirapine. Commence together with zidovudine as soon as possible after birth within 6-12 hours of delivery

In addition to zidovudine, use

- > Lamivudine (3TC), 3TC oral solution: concentration 10 mg/mL
  - > Give 2 mg/kg/dose orally, 12 hourly for 4 weeks
- > For further information see 'lamivudine' in the A to Z index at <a href="https://www.sahealth.sa.gov.au/neonatal">www.sahealth.sa.gov.au/neonatal</a>

#### PLUS

- > Nevirapine (NVP) oral suspension: concentration 10 mg/mL
- > If mother has never taken nevirapine or was taking nevirapine for < 3 days:
  - > 2 mg/kg/dose orally, daily for 1 week
  - > Then 4 mg/kg/dose orally, daily for 1 week in the second week, then stop
- > If mother was taking nevirapine for the last 3 days or more:
  - > 4 mg/kg/dose, daily for 2 weeks, then stop
- > For further information see 'nevirapine' in the A to Z index at

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#### www.sahealth.sa.gov.au/neonatal

> Further follow-up in consultation with the infectious diseases consultant is required

#### Pneumocystis jiroveci pneumonia (PJP) prophylaxis:

> PJP prophylaxis with trimethoprim with sulfamethoxazole "co-trimoxazole" is recommended if MTCT risk is high (>2%). Commence PJP prophylaxis when ART post exposure prophylaxis is discontinued at the end of 4 weeks. Continue PJP prophylaxis until HIV infection is excluded. If HIV infected, PJP prophylaxis should be continued and managed as per following:

#### Age 1 month to 12 months

- > Use trimethoprim with sulfamethoxazole "co-trimoxazole" (1 mL of oral liquid contains 8 mg trimethoprim and 40 mg of sulfamethoxazole)
- > NOTE: Dosing is based on trimethoprim component
- > 2.5 to 5 mg / kg twice a day, on 2 or 3 days of the week (may be given on consecutive or alternate days) OR
- > 5 to 10 mg / kg as a single daily dose on every day of the week

### Suggested testing regimen for infant

	TEST				
Time of testing	PCR – Proviral	HIV antibody			
	DNA or HIV RNA				
Week 1	Yes	No			
Week 6	Yes	No			
3 Months	Yes	No			
6 months	No	No			
12 months	No (Clinical visit only)	NO			
18 months		Yes (to document clearance of maternal HIV antibodies and confirm			
		infant's HIV negative status)			

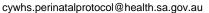
- > Testing should occur at least 2 weeks and 2 months after antiretroviral prophylaxis is ceased, hence testing at 6 weeks and 3 months
- > Whilst testing at 6 and 12 months is no longer recommended, clinical visits here provide the opportunities for clinical assessment, routine childhood immunisations and maintenance of contact with family

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### Postpartum care

- > Breast feeding (and expressed breast milk feeding) should be actively discouraged
- > Consider lactation suppression with cabergoline (Dostinex®) 1 mg oral stat dose 12
- > ART should be prescribed in consultation with an infectious diseases consultant
- > Contraception advice before discharge

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- 3. AIDSinfo. Panel on treatment of HIV-infected pregnant women and prevention of perinatal transmission. Recommendations for Use of Antiretroviral drugs in Pregnant HIV-1-infected women for maternal health and interventions to reduce perinatal HIV transmission in the United States. March 2014 [cited 2015 Jan 11]; p. D7-D10. Available at URL: <a href="http://aidsinfo.nih.gov/contentfiles/lyguidelines/PerinatalGL.pdf">http://aidsinfo.nih.gov/contentfiles/lyguidelines/PerinatalGL.pdf</a>

#### Useful web sites:

You've got what? SA Health in A to Z index: Human Immunodeficiency Virus

(HIV)Australasian Society for HIV Medicine at URL: http://www.ashm.org.au/default.asp?active\_page\_id=1

AIDS info site at URL: http://www.aidsinfo.nih.gov/



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Contact:

South Australian Perinatal Practice Guidelines Workgroup at:



## Appendix I: HIV Management summary chart

	Patient la Patient l			ſ	Phone	h wk mob				
ID o	r SH specialist _					Infor	med date			
	tetrician		Tel			Infori	med date <sub>.</sub>			
	diatrician						med date			
	natologist						med date			
	ontrol macist						med date			
Phai	macist		rer			inion	med date <sub>.</sub>			
		Dat	e						Da	te
HIV	/ diagnosis				ART	to commence				
LM	P				Mul	tidisciplinary n	neeting			
ED	C	Vaginal ☐ Cae	esarean 🗆		HSV	prophylaxis				
				_'						
Test		Date	Result			Medications			Stai	rt date
Hep	RsΔh	Date	Result							
Hep					_					
Hep					_					
•	B Viral load									
-	C 1.									
	(28 weeks) 2.									
Hen	C viral load									
Syph										
ур	(28 weeks)2.				L					
EBV	(20 WCCR3)2.				Γ	HIV resistance	mutation	IS		
CMV					F	NNRTI				
Тохо					-	NRTI				
HSV					-					
HSV					L	PI				
	mydia 1.									
	(28 weeks) 2.					Allergies				
	orrhoea 1.									
	(28 weeks) 2.					A DE7				: <b>.</b> :
	CXR				=	HLA B57	negative		pos	itive 🗆
						Immunisation	ns Date	: D	ate	Date
Rube	ella					Hepatitis B				
Vario						Influenza				
Pap S	Smear				_					

ID: Infectious Disease specialist SH: Sexual Health specialist

Contact:



Last Revised: 24/06/15

South Australian Perinatal Practice Guidelines Workgroup at: cywhs.perinatalprotocol@health.sa.gov.au

Government of South Australia

### **Abbreviations**

AIDS	Acquired immune deficiency syndrome			
ART	Antiretroviral treatment			
ASHM	Australasian Society for HIV Medicine			
AZT	Zidovudine, Azidothymidine			
CD4	A type of lymphocyte			
CMV	Cytomegalovirus			
EBV	Epstein Barr virus			
EDC	Estimated date of confinement			
e.g.	For example			
et al.	And others			
GBS	Group B streptococcus			
HCV	Hepatitis C virus			
HIV	Human Immunodeficiency Virus			
HLA	Human Leukocyte Antigen			
HPV	Human Papilloma Virus			
HSV	Herpes simplex Virus			
ID	Infectious disease			
LMP	Last menstrual period			
mg	Milligram(s)			
mL	Millilitre(s)			
NNRTI	Non-Nucleoside Reverse Transcriptase Inhibitors			
PACTG 076	Paediatric AIDS Clinical Trial Group			
PCP	Pneumocystis jeroveci (previously carinii) pneumonia			
%	Percent			
PI	Protease Inhibitor			
PHSTF	Public Health Service Task Force			
RNA	Ribonucleic acid			
TB	Tuberculosis			
>	More than			

### Version control and change history

PDS reference: OCE use only

Version	Date from	Date to	Amendment
1.0	15 Apr 2004	26 Jul 2011	Original version
2.0	26 Jul 2011	24 Jun 2015	Reviewed
3.0	24 Jun 2015	Current	

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