Zidovudine

200mg/20mL injection (SAS)
10mg/mL oral mixture

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

Synonyms

Azidothymidine, AZT, ZDV

Dose and Indications

To be used only on Infectious Diseases Team recommendation

Prevention of vertical transmission of HIV

Oral

Round dose to the nearest 0.5mg

Gestational age	Dose (mg/kg)	Frequency and Duration
<30 weeks	2	12 hourly for 4 weeks
30 to 34^{+6} weeks	2	12 hourly for 2 weeks followed by 8 hourly for 2 weeks
≥ 35 weeks	4	12 hourly for 4 weeks

Commence therapy as soon as possible after birth and within 6 to 12 hours of age

Additional antiretroviral prophylaxis in the form of nevirapine and lamivudine may be necessary for some HIV exposed infants. See practice points for further details.

Intravenous

To be used only if neonate unable to tolerate oral feeds.

1.5mg/kg/dose;

- Term neonate – every 6 hours
- Preterm neonate – every 12 hours

This product is not registered in Australia and is accessed under the Special Access Scheme.

Zidovudine

200mg/20mL injection (SAS), 10mg/mL oral mixture

Preparation and Administration

Intravenous

Dilute 1mL(10mg) of the 10mg/mL zidovudine injection with 4mL of 5% glucose (total volume 5mL). The resulting solution contains 2mg/mL zidovudine.

Dose	1mg	2mg	3mg	4mg	5mg	6mg
Volume	0.5mL	1mL	1.5mL	2mL	2.5mL	3mL

Administer over 30 to 60 minutes. Rapid infusion or bolus should be avoided

Oral

The oral mixture contains 10mg/mL zidovudine

Dose	1mg	2mg	3mg	4mg	5mg	6mg	8mg
Volume	0.1mL	0.2mL	0.3mL	0.4mL	0.5mL	0.6mL	0.8mL

Can be given without regard to food

Compatible Fluids

Glucose 5%, sodium chloride 0.9%

Adverse Effects

Common

Anaemia, neutropenia, leucopenia

Rare

Nail and skin pigmentation, cardiomyopathy, pancytopenia, red cell aplasia, aplastic anaemia, myopathy, hepatic disorders, lactic acidosis (extremely rare for a 4 week prophylaxis course)

Monitoring

- Full blood counts at baseline, 2 and 4 weeks, more frequently if clinically indicated

Practice Points

- Infectious Diseases consultation is essential for maternal HIV infection
- **If Mother-to-Child-Transmission (MTCT) risk is low** (<2%), i.e., if maternal viral load is undetectable - zidovudine monotherapy is recommended, even if the mother has a previous history of zidovudine resistance.
- **If MTCT risk is high** (>2%), i.e. if maternal viral load is detectable at ≥ 36weeks, or late presentation and viral load is unknown - additional Antiretroviral Prophylaxis in the form of nevirapine and lamivudine should be added. Follow the drug monographs for each drug.

- If infant vomits within 15 minutes of a dose, give another dose if possible. If neonate vomits more than 15 minutes after dose, give next dose at next scheduled time.
- Avoid in infants exhibiting abnormally low neutrophil counts (less than 0.75 x 10^9/L) or abnormally low haemoglobin levels (less than 75g/L)
- Zidovudine is associated with drug interactions. Consult with pharmacist for advice.
- Lactic acidosis associated with hepatomegaly and hepatic steatosis has been reported with zidovudine. Infectious Diseases consultation is recommended regarding continuation of zidovudine when infants have evidence of hyperlactataemia, lactic acidosis or liver disease (cholestasis, abnormal coagulation studies, or transaminase levels above 5 times the upper limit of normal).
- Consider dose adjustment in patients with severe renal dysfunction. Consult with Infectious Diseases

References

- Palasanthiran P, et al, Management of Perinatal Infections, 2014, Australasian Society for Infectious Diseases, Australian Society for Infectious Diseases (ASID) Inc., Sydney, NSW.
- Guidelines for the Use of Antiretroviral Agents in Paediatric HIV Infection, Panel on Antiretroviral Therapy and Medical Management of Children Living with HIV, AIDsInfo 2021
- South Australian Perinatal Practice Guideline, Clinical Guideline, HIV in Pregnancy, 2018

Document Ownership & History

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Contact: Health.NeoMed@sa.gov.au
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29/06/2022	V3	Domain Custodian, Clinical Governance, Safety and Quality	Reviewed in line with 5 year review schedule
24/05/2018	V2.1	SA Health Safety and Quality Strategic Governance Committee	New template
05/2015	V2	SA Health Safety and Quality Strategic Governance Committee	Update on dosing regimen based on new guidelines
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