Zidovudine

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

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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

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

<table>
<thead>
<tr>
<th>Gestational age</th>
<th>Dose (mg/kg)</th>
<th>Frequency and Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;30 weeks</td>
<td>2</td>
<td>12 hourly for 4 weeks</td>
</tr>
<tr>
<td>30 to 34\text{+} weeks</td>
<td>2</td>
<td>12 hourly for 2 weeks followed by 8 hourly for 2 weeks</td>
</tr>
<tr>
<td>≥ 35 weeks</td>
<td>4</td>
<td>12 hourly for 4 weeks</td>
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</table>

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.
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.

<table>
<thead>
<tr>
<th>Dose</th>
<th>1mg</th>
<th>2mg</th>
<th>3mg</th>
<th>4mg</th>
<th>5mg</th>
<th>6mg</th>
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<tbody>
<tr>
<td>Volume</td>
<td>0.5mL</td>
<td>1mL</td>
<td>1.5mL</td>
<td>2mL</td>
<td>2.5mL</td>
<td>3mL</td>
</tr>
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Administer over 30 to 60 minutes. Rapid infusion or bolus should be avoided.

**Oral**

The oral mixture contains 10mg/mL zidovudine.

<table>
<thead>
<tr>
<th>Dose</th>
<th>1mg</th>
<th>2mg</th>
<th>3mg</th>
<th>4mg</th>
<th>5mg</th>
<th>6mg</th>
<th>8mg</th>
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<tbody>
<tr>
<td>Volume</td>
<td>0.1mL</td>
<td>0.2mL</td>
<td>0.3mL</td>
<td>0.4mL</td>
<td>0.5mL</td>
<td>0.6mL</td>
<td>0.8mL</td>
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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 ≥36 weeks, 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.
South Australian Neonatal Medication Guidelines

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> 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

> 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

Developed by: SA Maternal, Neonatal & Gynaecology Community of Practice
Contact: Health.NeoMed@sa.gov.au
Endorsed by: Domain Custodian, Clinical Governance, Safety and Quality
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