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Title: <b>Aciclovir for neonates</b>			Effective date: <b>10 February 2020</b>	
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## BRIEF ADMINISTRATION GUIDE

For detailed information refer to [The Australasian Neonatal Medicines Formulary aciclovir monograph](#)

- Indications:**
- Treatment of herpes simplex virus (HSV) infections
  - Treatment of varicella zoster virus (VZV) infections

**Route:** **Intravenous**, preferably via central venous access device (CVAD).  
Supplied as aciclovir 250 mg/10 mL vial. pH approx. 11

**Oral**, supplied as aciclovir 200mg tablet (to be dispersed in water for injection)

*Note: Intravenous administration is preferred. Oral uptake is limited and delayed and, at high doses, progressively less complete (bioavailability 10– 20%).*

- Dose:**
- **20mg/kg every 8 hours**
  - Consider 12 hourly dosing if <30 weeks CGA and infection not confirmed
  - Adjust dose and frequency interval in renal impairment as per the table below:

Serum Creatinine	Dose / Interval Adjustment
70 – 100 micromol/L	20 mg/kg every 12 hours
101 – 130 micromol/L	20 mg/kg every 24 hours
> 130 micromol/L	10 mg/kg every 24 hours

- Duration:**
- Treat localized herpes simplex virus for 10 to 14 days
  - Treat disseminated or CNS herpes simplex virus for 21 days
  - Treat varicella zoster virus for 7 to 10 days

### Preparation and administration:

#### Intravenous Infusion

- If vial contains powder (instead of solution) reconstitute with 10 mL water for injection. Resulting concentration is 25 mg/mL.
- Dilute 4 mL (100 mg) of aciclovir with 16 mL of compatible fluid e.g. sodium chloride 0.9%, to make 20 mL of a **5 mg/mL** solution.  
Note: maximum concentration of 25 mg/mL (undiluted) if fluid restricted and has a CVAD.
- Draw up required dose and administer by intravenous infusion **over 1 hour**, using Guardrails.
- Discard any unused vial contents remaining.

#### Oral

- Disperse the 200 mg tablet in 10 mL of water for injection. Resulting concentration is 20 mg/mL.
- Stir or shake to ensure mixture is a uniform suspension then draw up the required dose.
- Give dose immediately and discard remaining solution.

### Monitoring:

- Observe for adverse effects and injection site reactions. Avoid extravasation (aciclovir is alkalotic / irritant)
- Monitor renal function at baseline and daily during therapy. Maintain adequate hydration to minimise the risk of renal dysfunction
- Monitor full blood count, electrolytes and liver function tests periodically during therapy

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### Competency for administration:

This procedure is carried out by, or under, the direct supervision of a registered nurse/registered midwife who holds current Waikato DHB Generic Medicine Management and IV certification. For CVAD administration Neonatal specific competency NCV/NAC is also required.

### Guardrails:

Aciclovir is Guardrail profiled on the CC pump for NICU. Following are the guardrail limits:

Guardrails Drug Name Pump	Aciclovir CC
<b>Concentration (mg/mL)</b>	
Minimum	5
Maximum	25
<b>Dose rate (mg/kg/h)</b>	
Default	20
Soft minimum	10
Soft maximum	20
Hard max	21

### References:

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- The Royal Children's Hospital Melbourne. Paediatric Injectable Guidelines. Accessed 31<sup>st</sup> August 2018. Available from: <https://pig.rch.org.au>.
- Waikato DHB Guardrails Database 2018.

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