Clinical Guideline
South Australian Neonatal Practice Guidelines – Diazepam 5mg/mL (2mL) injection, 1mg/mL oral mixture

Policy developed by: SA Maternal & Neonatal Clinical Network
Approved SA Health Safety & Quality Strategic Governance Committee on: 15 May 2015
Next review due: 30 April 2018

Summary
Clinical practice guideline for the administration of diazepam

Keywords
Diazepam, drowsiness, over sedation, hypersalivation, arrhythmia, leucopenia, jaundice, benzodiazepine, anticonvulsant, apnoea, clinical guideline

Policy history
Is this a new policy? Y
Does this policy amend or update an existing policy? N
Does this policy replace an existing policy? N
If so, which policies?

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
CG209

Version control and change history

<table>
<thead>
<tr>
<th>Version</th>
<th>Date from</th>
<th>Date to</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>May 2015</td>
<td>Current</td>
<td>Original version</td>
</tr>
</tbody>
</table>

© Department for Health and Ageing, Government of South Australia. All rights reserved.
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.

SA Health does not accept responsibility for the quality or accuracy of material on websites linked from this site and does not sponsor, approve or endorse materials on such links.

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

This is a High Risk Medication

An overdose can be fatal.
Dose and Indication

Seizures/Status Epilepticus

**Intravenous**
0.1mg to 0.3mg/kg/dose, repeated every 15 to 30 minutes if necessary until seizures are controlled.

**Oral/Rectal**
0.3mg to 0.5mg/kg/dose.

Muscle Spasm due to tetanus

**Intravenous**
0.1mg to 0.3mg/kg/dose, repeated every 1 to 4 hours as required up to a maximum of 0.6mg/kg within 8 hours.

**Oral/Rectal**
0.05 to 0.3mg/kg/dose every 8 to 12 hours

Preparation and Administration

**Intravenous**
Dilute 0.4mL of the 5mg/mL diazepam injection with 9.6mL 5% glucose injection to a total volume of 10mL. The resultant solution will contain diazepam 0.2mg/mL

<table>
<thead>
<tr>
<th>Dose</th>
<th>0.1mg</th>
<th>0.2mg</th>
<th>0.5mg</th>
<th>0.7mg</th>
<th>1mg</th>
<th>1.5mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>0.5mL</td>
<td>1mL</td>
<td>2.5mL</td>
<td>3.5mL</td>
<td>5mL</td>
<td>7.5mL</td>
</tr>
</tbody>
</table>

Give immediately over 2 to 3 minutes at a rate less than 1 to 2mg/minute. Discard remaining solution.

**Oral**
The oral solution contain diazepam 1mg/mL

<table>
<thead>
<tr>
<th>Dose</th>
<th>0.1mg</th>
<th>0.2mg</th>
<th>0.5mg</th>
<th>0.7mg</th>
<th>1mg</th>
<th>1.5mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume</td>
<td>0.1mL</td>
<td>0.2mL</td>
<td>0.5mL</td>
<td>0.7mL</td>
<td>1mL</td>
<td>1.5mL</td>
</tr>
</tbody>
</table>

**Rectal**
Both intravenous and oral solutions can be administered rectally if required.

Compatible Fluids
5% glucose, 10% glucose, 0.9% sodium chloride (for rectal administration)

Adverse Effects

**Common**
Drowsiness, oversedation, hypersalivation
Infrequent
Paradoxical excitation, anxiety, respiratory depression, hypotension.
With IV injection: pain and thrombophlebitis, severe hypotension, arrhythmia, respiratory arrest.

Rare
Blood disorders including leucopenia and leucocytosis, jaundice and transient elevated liver function tests.

Monitoring
Blood pressure

Practice Points
- The antidote to all benzodiazepines is flumazenil
- Diazepam is incompatible with many drugs. Do not mix with other medications.
- Diazepam is adsorbed onto PVC bags and infusion sets. Polyethylene giving sets must be used.
- May cause respiratory depression. This response may be delayed following rectal administration
- IV formulation contains benzyl alcohol and propylene glycol – respiratory depression and hypotension may occur.
- Use cautiously in patients with concurrent use of other anticonvulsants due to additive sedation and respiratory depression.
- Use with caution in patients with renal and hepatic impairment.
- Rapid administration has been associated with hypotension and apnoea.
- Long term use of benzodiazepines may result in tolerance and dependence. Due to its long half-life, symptoms of withdrawal may not appear for several days.
- Due to its slow metabolism in neonates diazepam may accumulate with repeated dosing.

Version control and change history

PDS reference: OCE use only

<table>
<thead>
<tr>
<th>Version</th>
<th>Date from</th>
<th>Date to</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>May 2015</td>
<td>current</td>
<td>Original version</td>
</tr>
</tbody>
</table>