### Assessment and management of neonatal seizures

## Baby with suspected seizure activity:

- Resuscitate and treat cardiorespiratory compromise
- Consider advice from neonatologist via RSQ as required

#### Observe and monitor:

- · Seizure activity
- Temperature, heart rate, respiratory rate & effort, BP, SpO<sub>2</sub>, BGL

# Treat cardiorespiratory compromise

#### Assessment:

- Review history (maternal, perinatal, family)
- Physical examination
- Neurological examination (prior to ASM)
- Investigate for underlying cause as required
  - Refer to flowchart: Investigations
- Consider video recording of seizure events

#### Management:

- Treat underlying cause
  - Refer to other QCG guidelines
- Commence ASM if seizures:
  - Duration > 5 minutes
  - o More than 2 brief episodes
  - Detected on EEG (if available)
- Initiate ongoing communication with parent(s)
- Involve parents in telehealth communications if relevant

### Seizure activity Treat underlying cause(s) as indicated: Hypoglycaemia—Refer to QCG Newborn Have underlying No hypoglycaemia causes been treated? • Infection- Refer to QCG **EOGBSD** • HIE-Refer to QCG HIE Other Yes Loading dose of phenobarbital • Refer to QCG NeoMedQ

Seizure activity Yes ceased?

#### Treatment:

- Consider additional doses of phenobarbital
- Contact RSQ to consult with neonatologist/paediatric neurologist
- Second line medications (as advised):
  - o Levetiracetam
  - o Midazolam
  - o Topiramate
  - O Clonazepam
  - o Lidocaine
  - o Phenytoin
- If seizures intractable within hours of birth & resistant to ASMs, <u>pyridoxine</u> may be indicated as advised by specialist
- Refer to QCG NeoMedQ for regimens

#### Maintenance therapy:

 For difficult to control or prolonged seizures or abnormal EEG

#### Consider ceasing ASMs if:

- Only one ASM required
- Seizures have ceased for 72 hours and
- Normal neurological examination **or**
- Normal EEG

**ASM:** anti-seizure medication(s); **BGL:** blood glucose level; **BP:** blood pressure; **EEG:** electroencephalogram; **EOGBSD:** early onset Group B Streptococcal disease; **HIE:** hypoxic ischaemic encephalopathy; **IV:** intravenous; **QCG:** Queensland Clinical Guidelines, **RSQ:** Retrieval Services Queensland, **SpO<sub>2</sub>** peripheral oxygen saturation; >: greater than

Queensland Clinical Guideline. Neonatal seizures. Flowchart: F22.23-1-V2-R27

