Clinical Practice Guidelines:
Neurological/Altered level of consciousness

<table>
<thead>
<tr>
<th>Policy code</th>
<th>CPG_NE_ALC_0215</th>
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<tr>
<td>Date</td>
<td>February, 2015</td>
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<td>Purpose</td>
<td>To ensure consistent management of patients with an altered level of consciousness.</td>
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<td>Scope</td>
<td>Applies to Queensland Ambulance Service (QAS) clinical staff.</td>
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<tr>
<td>Health care setting</td>
<td>Pre-hospital assessment and treatment.</td>
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<tr>
<td>Population</td>
<td>Applies to all ages unless stated otherwise.</td>
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<tr>
<td>Source of funding</td>
<td>Internal – 100%</td>
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<tr>
<td>Author</td>
<td>Clinical Quality &amp; Patient Safety Unit, QAS</td>
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<tr>
<td>Review date</td>
<td>February, 2018</td>
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Altered level of consciousness (ALOC) is a clinical feature associated with a broad spectrum of disease processes and often resulting from:

- inadequate delivery of substrate to the brain secondary to poor perfusion/shock; AND/OR
- lack of oxygen or metabolic substrates in the blood stream; AND/OR
- drugs or toxins in the blood stream or CNS affecting cerebral function; AND/OR
- a primary CNS disorder

The differential diagnosis for ALOC is broad. However to assist with diagnosis, it can be classified into two (2) main categories:

**Intracranial pathology (structural):**

- CVA, subarachnoid haemorrhage, intracerebral haemorrhage, diffuse axonal injury, meningitis/encephalitis, post-ictal/status epilepticus, space-occupying injury.

**Extra-cranial pathology (non-structural):**

- **Cardiovascular system:** arrhythmia
- **Metabolic:** hyper/hypoglycaemia, hepatic or renal failure, disorders of electrolytes (specifically sodium, potassium, magnesium and calcium)
- **Endocrine:** thyroid or pituitary disorders
- **Toxins:** sedative/hypnotics, ETOH, TCAs, anticonvulsants, opiates
- **Other:** hyper/hypothermia, hypoxia/hypercarbia, infection, factitious, psychiatric \[^{1,2}\]

**Clinical features**

- Unable to arouse and respond appropriately to stimuli from the environment
- Confused (e.g. disorientated, impaired thinking and response)
- Delirious (e.g. disorientated, restlessness, hallucinations, sometimes delusions)
- Somnolent (e.g. sleepy)
- Obtunded (e.g. decreased alertness; slowed psychomotor responses)
- Stuporous (e.g. sleep like state with little or no spontaneous activity)
- Comatose (e.g. unable to rouse, no response to stimuli)

**Risk assessment**

- Nil in this setting
**Additional information**

- ALOC may fluctuate with time and response to treatment.
- Consider the patient’s normal level of consciousness (e.g. patients with dementia, acquired brain injury, developmental delay).

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**Transport to hospital**

**Pre-notify as appropriate**

**Consider:**
- Oxygen
- IPPV
- Identify and treat reversible causes
  - arrhythmia
  - hypovolaemia
  - hypoxia
  - hypo/hyperglycaemia
  - overdose
  - hypo/hyperthermia

**Manage as per appropriate CPG:**
- CPG: Resuscitation – Adult
- CPG: Resuscitation – Paediatric
- CPG: Resuscitation – Newly born

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**Note:** Officers are only to perform procedures for which they have received specific training and authorisation by the QAS.