Clinical Practice Guidelines:
Toxicology and toxinology/Tricyclic antidepressants

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<tr>
<th>Date</th>
<th>March, 2017</th>
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<td>Purpose</td>
<td>To ensure a consistent approach to the management of Tricyclic antidepressants poisoning.</td>
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<td>Scope</td>
<td>Applies to all QAS clinical staff.</td>
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<tr>
<td>Review date</td>
<td>March, 2019</td>
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<td>Information security</td>
<td>This document has been security classified using the Queensland Government Information Security Classification Framework (QGISCF) as UNCLASSIFIED and will be managed according to the requirements of the QGISF.</td>
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**Tricyclic antidepressants (TCAs)** are potentially lethal in overdose. TCA agents act on multiple receptor sites. Their principal antidepressant action is mediated by serotonin and noradrenaline re-uptake inhibition. Myocardial toxicity is via sodium channel blockade. Other toxicity is mediated by the inhibitory action at the muscarinic, histamine and adrenergic receptors.[1]

Tricyclic antidepressants are most commonly prescribed for depression, however also may be used in the treatment of chronic pain and migraine.

**Tricyclic antidepressants include:**
- Amitriptyline (ENDEP)
- Clomidparamine (Anafranil, Placil)
- Dothiepin (Dothep, Porthiaden)
- Doxepin (Depran, Sinequan)
- Imipramine (Trofranil, Tolerade)
- Nortriptyline (Allegron)
- Trimipramine (Surmontil)

**Clinical features**

**Anticholinergic effects**
- Agitation, delirium
- Dilated pupils
- Dry, warm, flushed skin, hyperthermia
- Tachycardia
- Urinary retention

**Neurotoxicity**
- Sedation
- Seizures
- Coma

**Cardiotoxicity**
- Tachycardia
- Hypotension
- Broad complex arrhythmias
- Bradycardia (late)

**ECG changes**
- Prolonged PR, QRS and QT interval
- Large terminal R wave in aVR
Risk assessment

- Ingestions of > 10 mg/kg are potentially toxic, with severe toxicity expected with ingestions > 30 mg/kg.[1]
- Severe toxicity is usually evident within six hours of ingestion, with rapid development[2] of coma, seizures or cardiac arrhythmia.
- All ingestions need review at medical facility.

CPG: Paramedic Safety
CPG: Standard Cares

Arrest/shock/respiratory distress?

If imminent risk of harm, consider:
- EEA

Consider:
- Oxygen
- IPPV
- IV access
- IV fluid
- 12-Lead ECG
- Sodium bicarbonate 8.4%
- Midazolam if severe agitation

Transport to hospital
Pre-notify as appropriate

Manage as per CPG:
- Relevant resuscitation

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