Clinical Practice Guidelines:
Toxicology and toxinology/Alcohol – ethanol

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<th>Date</th>
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<td>Purpose</td>
<td>To ensure a consistent approach to the management of Alcohol – ethanol.</td>
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<td>Scope</td>
<td>Applies to all QAS clinical staff.</td>
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Alcohol – ethanol

Approximately half of all Australian adults drink alcohol at levels that put them at higher risk of short-term harm, with about a quarter risking their long-term health from alcohol consumption. Alcohol is responsible for approximately 3500 deaths/year in Australia and is the second highest preventable cause of drug related death and hospitalisation after tobacco.\[1\]

Alcohol depresses the brain’s arousal, motor and sensory centres by acting as a GABA receptor agonist, in addition to antagonising NMDA receptors.\[2\] Among other effects, this impacts coordination, speech, cognition and conscious level, with acute toxicity leading to:

- Injury and trauma  
  - falls, MVA, physical and sexual assaults
- Respiratory depression, airway compromise and aspiration risk
- STIs and unplanned pregnancies
- Exacerbation of metabolic and endocrine disorders
- Alcoholic Ketoacidosis, hypoglycaemia, hypothermia

Furthermore, prolonged alcohol abuse can have chronic effects, such as:\[1\]

- Cardiovascular disease
- Cancers (e.g. oral cavity, larynx, GI, liver and breast)
- Diabetes
- Nutrition-related conditions
- Obesity
- Risks to unborn babies
- Liver disease/panreatitis/varices
- Mental health conditions (e.g. dependance and self harm)
- Neurological dysfunction  
  - Korsakoffs psychosis (impaired capacity)

Alcohol is an addictive drug that can lead to dependence. However, patients attempting to cease their consumption can also suffer alcohol withdrawal syndrome as a result of the CNS having adapted to the prolonged presence of alcohol. The resultant neurophysiologic changes within the brain predispose such patients to potentially lethal seizures and delirium tremens.\[3\]

Clinical features

Acute alcohol toxicity may involve:

- Loss of balance
- Loss of inhibition and behavioural changes
- Aggression
- Nausea and vomiting
- Dehydration
- Respiratory depression
- Loss of consciousness.

Signs and symptoms of chronic alcohol toxicity will depend on the related diseases.
Risk assessment

- Other than inducing aggression, alcohol affects the ability to resolve conflict or explain oneself verbally, with intoxicated patients often having to express themselves physically, or violently.¹
- Apparent drunken behaviour can result from causes other than alcohol, such as hypoglycaemia or head injuries. A thorough patient assessment is especially important to rule out other causes.
- Other drugs are often taken in conjunction with alcohol and their potential effects must be taken into account.⁴
- Excessive alcohol consumption is a major risk factor for self-harm and suicidal behaviour.⁵
- Deaths with very high-range alcohol concentrations extend well beyond alcohol toxicity. Traumatic death whether through accident, suicide or homicide, constitute more than 1/3 of cases of unnatural deaths involving alcohol.⁶
- The intoxicated patient who is unable to walk safely without assistance should be considered high risk and transport initiated.

CPG: Paramedic Safety
CPG: Standard Cares

- Signs of life?

Manage as per CPG:
- Relevant resuscitation

Consider:
- Verbal de-escalation
- QPS assistance
- Physical restraint
- EEA

Transport to hospital
Pre-notify as appropriate

Consider:
- Oxygen
- IPPV
- IV access
- Antiemetic
- IV fluid

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