While the QAS has attempted to contact all copyright owners, this has not always been possible. The QAS would welcome notification from any copyright holder who has been omitted or incorrectly acknowledged.

All feedback and suggestions are welcome. Please forward to: Clinical.Guidelines@ambulance.qld.gov.au

Disclaimer

The Digital Clinical Practice Manual is expressly intended for use by QAS paramedics when performing duties and delivering ambulance services for, and on behalf of, the QAS.

The QAS disclaims, to the maximum extent permitted by law, all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs incurred for any reason associated with the use of this manual, including the materials within or referred to throughout this document being in any way inaccurate, out of context, incomplete or unavailable.


---

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives V4.0 International License

You are free to copy and communicate the work in its current form for non-commercial purposes, as long as you attribute the State of Queensland, Queensland Ambulance Service and comply with the licence terms. If you alter the work, you may not share or distribute the modified work. To view a copy of this license, visit http://creativecommons.org/licenses/by-nc-nd/4.0/deed.en

For copyright permissions beyond the scope of this license please contact: Clinical.Guidelines@ambulance.qld.gov.au
Stroke can be broadly classified as *haemorrhagic* or *non-haemorrhagic*. Intracerebral haemorrhage occurs in 8%–18% of all strokes\(^1\) and is associated with a higher risk of mortality when compared to cerebral infarction.\(^2\)

A *Transient Ischaemic Attack (TIA)* is defined as a brief episode of neurological dysfunction (traditionally < 24 hours) resulting from focal temporary cerebral ischaemia. Approximately 5% of TIA patients will progress to a stroke or a further TIA within twenty-eight days.\(^3\) TIA and stroke should be considered a continuum of the same disease process.

Stroke causes a significant disease burden in the community. One in five patients suffering their first stroke will die within a month; with one in three dying within the first year. 88% of survivors do return home, however most have some form of disability.\(^4\)

There is overwhelming evidence that managing patients in dedicated stroke units significantly reduces death and disability.\(^5\) It is preferred that patients with stroke are transported to hospitals with dedicated stroke units in the first instance if possible.\(^6\)

There is some evidence that early thrombolysis may benefit a specific cohort of patients presenting with acute stroke.\(^7,8\) Lysis is a time critical intervention which should be administered within 4.5 hours following the onset of stroke symptoms. The Australian National Stroke Foundation promotes the use of thrombolysis in the hyperacute management of ischaemic stroke.\(^4\)

Clinical features

- The clinical presentation of a stroke depends upon which part of the brain is injured and the extent of damage.

**Stroke may cause:**

- Sudden weakness or loss of movement in part of the body (hemiparesis/hemiplegia)
- Dysphasia / aphasia
- Dysphagia
- Visual disturbances
- Sudden onset headache associated with neurological symptoms and/or ALOC
- Differentiating between *haemorrhagic* and *non-haemorrhagic* stroke cannot be achieved without a CT Scan.\(^4\)

While 80% of patients suffering stroke present to hospital via ambulance, only 39% are within 4.5 hours of symptom onset. Not all hospitals have dedicated stroke units which are able to offer stroke lysis.
**Risk assessment**

**Consider conditions that mimic stroke:**
- Hypoglycaemia
- Intracerebral mass lesions (e.g. tumour, abscess)
- Seizures and post-ictal states (Todd's paralysis)
- Hemiplegic migraine
- Electrolyte abnormalities (e.g. hyponatraemia)
- Conversion disorder

**Additional information**
- For consideration of stroke lysis, the timing of the onset of symptoms needs to be very clearly defined. In particular, if a patient wakes from sleep with stroke symptoms, the timing of onset must be assumed to be when they were last well – that is, the time when they went to sleep.
- Differentiating between *haemorrhagic* and *non-haemorrhagic* stroke cannot be achieved without a CT Scan.
- Position patient 45 degrees head-up to maximise the balance between cerebral perfusion and minimising cerebral oedema.
- Ensure the patient's next of kin contact number is recorded on the eARF.

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

**CPG: Standard Cares**

- IV access
- Oxygen
- Antiemetic
- Analgesia
- IV fluid
- Stroke mimics

**Assessment consistent with stroke/TIA with a clear onset of symptoms < 24 hours?**

- **Y**
  - Acute stroke referral
  - Transport to hospital
  - Pre-notify as appropriate
- **N**