# Clinical Practice Procedures: Other/Suspected large vessel occlusion stroke referral

| Policy code | CPP_OT_SLVR_0522 |
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| Date | May, 2022 |
| Purpose | To ensure a consistent procedural approach to suspected large vessel occlusion stroke referral. |
| Scope | Applies to Queensland Ambulance Service (QAS) clinical staff. |
| Health care setting | Pre-hospital assessment and treatment. |
| Population | Applies to all ages unless stated otherwise. |
| Source of funding | Internal – 100% |
| Author | Clinical Quality & Patient Safety Unit, QAS |
| Review date | May, 2025 |
| Information security | UNCLASSIFIED – Queensland Government Information Security Classification Framework. |
| URL | https://ambulance.qld.gov.au/clinical.html |

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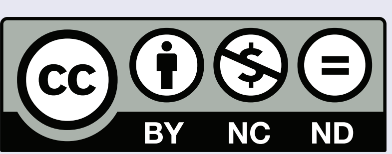


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# Suspected large vessel occlusion stroke referral



Endovascular clot retrieval (ECR) or thrombectomy is the removal of an embolus or thrombus by a retractable mechanical device. It is currently indicated for patients with acute ischaemic stroke due to a large vessel occlusion in the anterior circulation (representing approximately 30% of all ischaemic strokes).[1]

## Indications

Suspected large vessel occlusion (LVO) stroke referral is mandatory for all patients with symptoms suggestive of stroke who meet the following criteria:

- Onset of stroke symptoms is less than 24 hours;
- NIHSS-8 of eight or greater (≥ 8);
- Pre-morbid mRS of zero to three (0–3); AND
- The patient is located less than 60 minutes transport time (from time of QAS stroke assessment) to an ECR hospital.

## Contraindications

- Advanced terminal cancer with a life expectancy of less than 6 months
- Seizure/s at onset of symptoms

## Complications

- Nil

Outside of these indications special circumstances may exist. For these cases, early discussion with the *QAS Clinical Consultation and Advice Line* must occur.

### Approved ECR hospitals (accepting QAS ambulance clinician referrals)

| REGION | HOSPITAL |
|---|---|
| *Far Northern* | |
| *Northern* | **The Townsville University Hospital** *(Mon–Fri 0800–2000 hrs)* |
| *Central* | |
| *Darling Downs & South West* | |
| *Sunshine Coast & Wide Bay* | |
| *Metro North* | **Royal Brisbane & Women's Hospital** *(24/7)* |
| *Metro South* | **Princess Alexandra Hospital** *(24/7)* |
| *Gold Coast* | **Gold Coast University Hospital *** *(24/7)* |

**Note:** ** Identifies hospitals facilitating direct QAS to Stroke Team referral during business hours.*

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1. Manage the patient in accordance with *CPG: Neurological / Stroke & Transient Ischaemic Attack.*

2. Confirm suitability for suspected LVO stroke referral:
   - Onset of symptoms is less than 24 hours;
   - NIHSS-8 of eight or greater (≥ 8);
   - Pre-morbid mRS score of zero to three (0–3); AND
   - The patient is located less than 60 minutes transport time (from time of QAS stroke assessment) to an ECR hospital.

3. Contact the appropriate ECR facility using the dedicated **QAS Acute Stroke Referral Line** ( ). The following narrative is suggested:

   *"Can I please confirm I have contacted [hospital]? I am a paramedic with the QAS and would like to make an acute stroke referral. I have a [XX] year old [gender] who has symptoms suggestive of acute [findings of pre-hospital stroke assessment].*

   *The symptoms began at [time]. The VSS is as follows [GCS, BP, HR, RR SpO2, T & BGL].*

   *The patient has a NIHSS-8 (National Institute of Health Stroke Scale) score of [X] and a pre-morbid mRS (Modified Rankin Scale score of [X].*

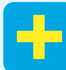
   *The patient's past medical history includes [elaborate as required] and they're prescribed the following medications [elaborate as required].*

   *Accompanying the patient to hospital is [wife / husband / nil].*

   *Our estimated time of arrival to your facility is [HH:MM]".*

4. Transport the patient 'Code 1' to hospital.

5. Complete an eARF in accordance with existing policy – ensure the words 'suspected large vessel occlusion stroke referral' are entered in the eARF.



## Additional information

- The QAS works collaboratively with the State-wide Stroke Clinical Network to enhance the provision of evidence based stroke care across Queensland.
- For the consideration of ECR therapy, the timing of the onset of symptoms needs to be clearly defined. In particular, if a patient wakes from sleep with symptoms, the timing of onset must be taken as when they were last well – that is, the time they went to sleep.
- If clinically appropriate, ECR referral patients should have an 18 Gauge intravenous cannula inserted in the ACF.
- The patient's next of kin should ideally be transported with the patient. If this is not possible, the patient's next of kin contact details must be recorded on the e-ARF.
- Calls made to an ECR centre via the ASR may occasionally be diverted to either a message bank, or back to the hospital switchboard operator, if the receiving facility is temporarily unable to take the call at that point in time.

  If the call is diverted to a message bank:

  1. Ambulance clinicians are required to leave a brief message regarding an urgent stroke referral and a return contact number.
  2. If a referral call is not answered and a return call is not received after 5 minutes, ambulance clinicians are required to make a second call attempt and if unsuccessful, make a direct call to the relevant hospital's emergency department.

  If the call is diverted back to the hospital's switch: ask the operator to connect you directly to the emergency department triage nurse.

## Additional information *(cont.)*

- In some instances, paramedics may be requested by hospital clinicians to transfer the patient directly to the CT scanner to facilitate and expedite imaging. QAS staff should comply whenever possible, provided the CT scanner is ready and immediately available. A hospital staff member should accompany the patient and paramedics to the scanner to avoid any possible delays. Once the patient is transferred to the scanner, paramedics should remove all QAS equipment and provide a patient handover.

### *Faults*

- All faults/difficulties associated with the *QAS Acute Stroke Referral Line* must be reported via the [redacted].

### *Audit*

- All calls to the *QAS Acute Stroke Referral Line* are recorded for quality assurance and training purposes.

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