Work Instruction

Triage of Children with suspected Acute Arterial Ischaemic Stroke

<table>
<thead>
<tr>
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<th>CHQ-WI-00738</th>
<th>Version no.</th>
<th>1.0</th>
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<tbody>
<tr>
<td>Executive sponsor</td>
<td>Executive Director Medical Services</td>
<td>Effective date</td>
<td>29/07/2019</td>
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<tr>
<td>Author/custodian</td>
<td>Director, Emergency Department</td>
<td>Review date</td>
<td>29/07/2021</td>
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<td>Supercedes</td>
<td>New</td>
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<td>Applicable to</td>
<td>Emergency Department, Queensland Children’s Hospital</td>
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<tr>
<td>Authorisation</td>
<td>Executive Director Clinical Services (QCH)</td>
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**Purpose**

The purpose of this document is to provide instruction for applying the Australasian Triage Scale (ATS) to children and young people who present with symptoms consistent with Acute Arterial Ischaemic Stroke.

**Scope**

This work instruction applies to all staff that triage children and young people presenting to the Emergency Department where there is high level clinical suspicion of acute arterial ischaemic stroke.
**Instruction**

Patients presenting to the Emergency Department at Queensland Children’s Hospital (QCH) with any of the below symptoms need urgent and careful assessment for acute arterial ischaemic stroke and will be triaged as a **minimum ATS Category 2**.

**Sudden** onset within the last **24 hours** where there are **ongoing symptoms/signs** of:

a) Focal weakness
   - limb (or part of limb) weakness – not thought to be obviously secondary to pain or trauma
   - facial droop

b) Visual or speech disturbances
   - double vision
   - unequal pupils
   - loss of vision or change to normal vision – not thought to be obviously secondary to pain or infection
   - slurred speech or incomprehensible speech or inability to speak

c) Limb incoordination or ataxia
   - unsteady gait or increased frequent falling – not thought to be obviously secondary to pain or trauma

d) Altered mental status (use AVPU scoring)

e) Headache where the time to maximal symptoms occurs over seconds to minutes

f) Signs of raised intracranial pressure
   - Consider this if the child has headache that is associated with nausea/vomiting and/or confusion and/or bradycardia

g) Seizures with additional neurological symptoms (any symptoms from above list a-f)

This assessment will be documented on the triage PowerForm in FirstNet in the presenting complaint box. Specific symptoms and their time of onset should also be documented. Patients who present with symptoms consistent with possible stroke require urgent clinical assessment, followed by a decisive decision for urgent neuroimaging, to obtain an accurate diagnosis as soon as possible.
Background

Although the actual incidence of childhood stroke in Australia is unknown, it is thought to be uncommon (children over one month of age = 1.2-8/100,000 per year). However, it has a significant mortality rate of 5-10%. More than half of the survivors have long term neurological impairment and 10-20% suffer recurrent strokes. Stroke places significant demands on the health system, families and the community.

Child specific diagnostic and management regimes are necessary because the complexity in diagnosis and management of stroke in children is increased by the higher frequency of stroke mimics, variability in age of presentation, diversity of causes and of complex co-morbid conditions.

The Australian national clinical guideline The Diagnosis and Management of Childhood Stroke was developed in response to the needs of professionals and families for a consistent approach to the diagnosis and acute management of childhood stroke in Australia.

The national guideline provides clinical practice recommendations specific to diagnosis and management to inform health professionals in the emergency management of children where there is high clinical suspicion of stroke.

The goal is to present evidence and/or consensus based recommendations to:

a) Reduce variation in care across Australian paediatric centres;

b) Reduce time to diagnosis with appropriate and timely neuroimaging;

c) Facilitate access to hyper-acute treatments:
   - IV Tissue plasminogen activator needs to be administered within 4.5hrs of symptom onset.
   - Endovascular clot retrieval needs to be initiated within 6 hours of symptom onset, however attempts at retrieval may still occur in situations where onset of symptoms has occurred within the last 24hrs.

d) Allow for accurate data collection on incidence, treatment and outcomes across Australia;

e) Facilitate collaborative research to improve outcomes for childhood stroke.

Supporting documents

Procedures, Guidelines and Protocols

- CHQ-PROC-00216 – Triage – Nursing (DEM)
- CHQ-GDL-00734 – Acute Arterial Ischaemic Stroke Management in Children**
- Clinical Pathway – Emergency Management of Suspected Paediatric Acute Arterial Ischaemic Stroke**
- CHQ-PROC-00737 – Paediatric Acute Arterial Ischaemic Stroke Code Activation**
- Australian National Clinical Guideline The Diagnosis and Management of Childhood Stroke – Clinical Guideline 2017

**in development as at July 2019
Consultation

Key stakeholders who reviewed this version:

- Paediatric Emergency Specialist, Queensland Children’s Hospital
- Clinical Nurse, Emergency, Queensland Children’s Hospital
- Paediatric Neurologist, Queensland Children’s Hospital
- Associate Nurse Unit Manager (acting), Emergency, Queensland Children’s Hospital
- Nurse Educator, Emergency, Queensland Children’s Hospital

Definition of terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Source</th>
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<tbody>
<tr>
<td>Australasian Triage Scale</td>
<td>The Australasian Triage Scale (ATS) is a clinical tool used when patients present to emergency departments throughout Australia and New Zealand. It ensures that patients are seen in a timely manner, commensurate with their clinical urgency.</td>
<td>Australasian College for Emergency Medicine. Policy on the Australasian Triage Scale. July 2013. <a href="https://www.acem.org.au/getattachment/693998d7-94be-4ca7-a0e7-3d74cc9b733f/Policy-on-the-Australasian-Triage-Scale.aspx">https://www.acem.org.au/getattachment/693998d7-94be-4ca7-a0e7-3d74cc9b733f/Policy-on-the-Australasian-Triage-Scale.aspx</a></td>
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<tr>
<td>FirstNet</td>
<td>Computer system used to collect data and communicate patient details while in the emergency department.</td>
<td>Emergency, QCH.</td>
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References


Audit/evaluation strategy

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<tr>
<td>Strategy</td>
<td>Triage Auditing</td>
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<tr>
<td>Audit/review tool(s) attached</td>
<td>Appendix 1</td>
</tr>
<tr>
<td>Audit/Review date</td>
<td>Monthly random audit of % of emergency presentations</td>
</tr>
<tr>
<td>Review responsibility</td>
<td>QCH ED Triage Working Group</td>
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<tr>
<td>Key elements / Indicators / Outcomes</td>
<td>Children displaying symptoms that put them at a high risk of stroke will be triaged according to this Work Instruction</td>
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Work Instruction revision and approval history

<table>
<thead>
<tr>
<th>Version No.</th>
<th>Modified by</th>
<th>Amendments authorised by</th>
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<tr>
<td>1.0 (29/07/2019)</td>
<td>Director, Paediatric Emergency Medicine</td>
<td>Divisional Director, Critical Care</td>
<td>Executive Director Clinical Services (QCH)</td>
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Keywords

- Triage
- stroke
- suspected stroke
- Australasian Triage Scale, ATS
- emergency
- neurology
- neurological
- 00738

Accreditation references

- NSQHS Standards (1-8): 5, 6, 8
Appendix 1:

Triage Powerform ieMR.

**Audit details**
- Audit Date: [ ]
- Audit Time: [ ]
- Auditor: [ ]

**Triage Episode details**
- Triage Date: [ ]
- Triage Time: [ ]
- Patient UR Number: [ ]
- Triage Cab: [ ]

<table>
<thead>
<tr>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
<th>Category 5</th>
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<tbody>
<tr>
<td>Airway</td>
<td></td>
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</tr>
<tr>
<td>Obstructed</td>
<td>Patient airway</td>
<td>Patient airway</td>
<td>Patient airway</td>
<td>Patient airway</td>
</tr>
<tr>
<td>Partially obstructed with severe respiratory distress</td>
<td>Partially obstructed with moderate respiratory distress</td>
<td>Partially obstructed with mild respiratory distress</td>
<td></td>
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</tr>
<tr>
<td>Breathing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absent respiration or hyperventilation</td>
<td>Respiration present</td>
<td>Respiration present</td>
<td>Respiration present</td>
<td>Respiration present</td>
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<tr>
<td>Severe respiratory distress</td>
<td>Moderate Respiratory distress</td>
<td>Mid Respiratory distress</td>
<td>No respiratory distress</td>
<td>No respiratory distress</td>
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<tr>
<td>Circulation</td>
<td></td>
<td></td>
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<tr>
<td>Absent circulation or significant bradycardia</td>
<td>Circulation Present</td>
<td>Circulation Present</td>
<td>Circulation Present</td>
<td>Circulation Present</td>
</tr>
<tr>
<td>Severe haemodynamic compromise</td>
<td>Moderate haemodynamic compromise</td>
<td>Mid haemodynamic compromise</td>
<td>No haemodynamic compromise</td>
<td>No haemodynamic compromise</td>
</tr>
<tr>
<td>Uncontrolled haemorrhage</td>
<td>&gt;6 s/s dehydration</td>
<td>3 - 6 s/s dehydration</td>
<td>&lt;3 s/s dehydration</td>
<td>No s/s dehydration</td>
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<td>Disability</td>
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<tr>
<td>GCS &lt;8</td>
<td>GCS 9 - 12</td>
<td>GCS &gt; 13</td>
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<td>Normal GCS (or no acute change to usual GCS)</td>
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<tr>
<td>Severe pain</td>
<td>Moderate pain</td>
<td>Mild Pain</td>
<td>Mild Neurovascular compromise</td>
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<tr>
<td>Severe neurovascular compromise</td>
<td>Moderate neurovascular compromise</td>
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**Risk Factors**
- Mechanism of injury
- Co-morbidity
- Age
- Victim of violence
- Parental concern
- Historical variables
- Other

Was triage documentation adequate to assess appropriateness of triage? [ ]

Was triage category appropriate to the patient's physiological status? [ ]

Comments:

[ ]

OK