Work Instruction

Triage of Children with suspected Acute Arterial Ischaemic Stroke

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Author/custodian	Director, Emergency Department			**Review date**	17/02/2024
Supersedes	1.0				
Applicable to	Emergency Department, Queensland Children's Hospital				
Authorisation	Executive Director Clinical Services				

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

Term	Definition	Source
Australasian Triage Scale (ATS)	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.	Australasian College for Emergency Medicine. Policy on the Australasian Triage Scale. July 2013. https://www.acem.org.au/getattachment/693998d7-94be-4ca7-a0e7-3d74cc9b733f/Policy-on-the-Australasian-Triage-Scale.aspx
Paediatric Physiological Discriminator Table	A tool used to identify features found to be significant predictors of serious illness and injury in children and young people. This tool supports decision-making when applying the ATS in children.	Department of Health & Ageing. Emergency Triage Education Kit. 2007. http://www.health.gov.au/internet/publications/publishing.nsf/Content/triageqrg~triageqrg-paeds~triageqrg-PPD
FirstNet	Computer system used to collect data and communicate patient details while in the emergency department.	Emergency, QCH.

References

1. Commonwealth Department of Health and Ageing. Emergency Triage Education Kit (ETEK). Canberra, Australian Government. 2007. ETEK

2. The Diagnosis and Acute Management of Childhood Stroke (Clinical Guideline 2017). https://www.mcri.edu.au/sites/default/files/media/stroke_guidelines.pdf

Audit/evaluation strategy

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

Work Instruction revision and approval history

Version No.	Modified by	Amendments authorised by	Approved by
1.0 (29/07/2019)	Director, Paediatric Emergency Medicine	Divisional Director, Critical Care	Executive Director Clinical Services (QCH)
2.0 (17/02/2023)	Director, Paediatric Emergency Medicine	Divisional Director, Critical Care	Executive Director Medical Services

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