



Queensland  
Trauma Education

**TRAUMA AND THE OLDER PERSON**

# Traumatic brain injury

## Case discussion

Participant resource kit



**CSDS**



Clinical Skills Development Service



## Queensland Trauma Education

The resources developed for Queensland Trauma Education are designed for use in any Queensland Health facility that cares for patients who have been injured as a result of trauma. Each resource can be modified by the facilitator and scaled to the learners needs as well as the environment in which the education is being delivered, from tertiary to rural and remote facilities.

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Queensland

## Queensland Trauma Education

### Trauma and the Older Person – Traumatic brain injury: Case discussion – Participant resource kit

#### Version 1.0

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## About this training resource kit

This resource kit provides healthcare workers with the knowledge regarding the assessment and management of an elderly patient with a mild traumatic brain injury who is anticoagulated.

### National Safety and Quality Health Service (NSQHS) Standards



### Learning objectives

By the end of this session the participant will be able to:

- Identify the older patient risks of injury with low velocity trauma.
- Discuss the challenges associated with using the Australasian Triage Scale (ATS) with geriatric trauma presentations.
- Understand the challenges with assessment in the older population.
- Gain confidence in the safe discharge of patients with mild traumatic brain injury.

### Facilitation guide

1. Facilitator to provide participant resource kit to participants.
2. Facilitator to present case overview to group and utilise the question-and-answer guide to promote discussion.
3. Utilise supporting documents and resources to maximise learning throughout case discussion.

## Overview of geriatric traumatic brain injury

Traumatic brain injury in the elderly has a higher rate of associated morbidity and mortality when compared to younger patients following trauma.<sup>11,12</sup> Additionally, the pre-morbid function, co-morbidities and physiology of the older brain challenge the clinical team to care for this cohort.

In the older patient, the atrophic brain will result in both initial assessment challenges but also can delay time to symptoms as there is more space in the cranial vault to allow blood to collect before symptoms occur.

CT imaging remains the primary investigation for assessment of significant injury however the timing of such in the setting of anticoagulation remains unclear.<sup>12</sup>

### Further reading

#### **Guidelines for field triage of injured patients: recommendations of the National Expert Panel on Field Triage, 2011**

Publication	MMWR Recommendations and Reports
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Link	<a href="https://pubmed.ncbi.nlm.nih.gov/22237112/">https://pubmed.ncbi.nlm.nih.gov/22237112/</a>
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#### **Undertriage of elderly trauma patients to state-designated trauma centers**

Publication	Archives of Surgery
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Link	<a href="https://doi.org/10.1001/archsurg.143.8.776">https://doi.org/10.1001/archsurg.143.8.776</a>
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#### **Intracranial pathology in elders with blunt head trauma**

Publication	Academic Emergency Medicine
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Link	<a href="https://doi.org/10.1197/j.aem.2005.10.015">https://doi.org/10.1197/j.aem.2005.10.015</a>
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#### **Mild head injury, anticoagulants, and risk of intracranial injury**

Publication	Lancet
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Link	<a href="https://doi.org/10.1016/S0140-6736(00)04163-5">https://doi.org/10.1016/S0140-6736(00)04163-5</a>
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#### **Degree of anticoagulation, but not warfarin use itself, predicts adverse outcomes after traumatic brain injury in elderly trauma patients**

Publication	The Journal of Trauma
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Link	<a href="https://doi.org/10.1097/TA.0b013e31812e5216">https://doi.org/10.1097/TA.0b013e31812e5216</a>
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**Management of minor head injury in patients receiving oral anticoagulant therapy: a prospective study of a 24-hour observation protocol**

Publication	Annals of Emergency Medicine
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Link	<a href="https://doi.org/10.1016/j.annemergmed.2011.12.003">https://doi.org/10.1016/j.annemergmed.2011.12.003</a>
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**Traumatic brain injury in older adults: do we need a different approach?**

Publication	Concussion
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Link	<a href="https://doi.org/10.2217/cnc-2018-0001">https://doi.org/10.2217/cnc-2018-0001</a>
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**A decade of geriatric traumatic brain injuries in Finland: population-based trends**

Publication	Age and Ageing
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Link	<a href="https://doi.org/10.1093/ageing/afaa037">https://doi.org/10.1093/ageing/afaa037</a>
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**Geriatric Mild Traumatic Brain Injury (mTBI)**

Publication	Current Geriatrics Reports
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Link	<a href="https://doi.org/10.1007/s13670-020-00329-3">https://doi.org/10.1007/s13670-020-00329-3</a>
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**Immediate and delayed traumatic intracranial hemorrhage in patients with head trauma and preinjury warfarin or clopidogrel use**

Publication	Annals of Emergency Medicine
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Link	<a href="https://doi.org/10.1016/j.annemergmed.2012.04.007">https://doi.org/10.1016/j.annemergmed.2012.04.007</a>
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**Mild Traumatic Brain Injury among the Geriatric Population**

Publication	Current Translational Geriatrics and Experimental Gerontology Reports
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Link	<a href="https://doi.org/10.1007/s13670-012-0019-0">https://doi.org/10.1007/s13670-012-0019-0</a>
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**Closed Head Injury (Adult) Clinical Pathway**

Organisation	Queensland Health
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Link	<a href="https://qheps.health.qld.gov.au/_data/assets/pdf_file/0026/2158307/SW214.pdf">https://qheps.health.qld.gov.au/_data/assets/pdf_file/0026/2158307/SW214.pdf</a>
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## Acronyms and abbreviations

Term	Definition
CTB	computed tomography brain
INR	international normalised ratio
GCS	Glasgow Coma Scale
UEC	urea electrolyte count
ECG	electrocardiogram
SDH	subdural haematoma
EDH	extradural haematoma

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