<table>
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<th>PROCEDURE</th>
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<tr>
<td>Head injury management</td>
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<td><strong>Scope (Staff):</strong> School health</td>
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<td><strong>Scope (Area):</strong> CACH, WACHS</td>
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This document should be read in conjunction with this DISCLAIMER.

**Aim**

To assess and manage moderate and severe head injury in school aged children and adolescents.

**Background**

Between July 2010 and June 2015, 11,477 (12%) injury presentations to Princess Margaret Hospital Emergency Department (PMH ED) were for head injuries. Of these cases, 62.30% were male and the majority were caused by falls (7173: 62.5%).

Children aged 0-4 years accounted for the highest number of injury presentations to PMH ED (61.8%), followed by the 5-9 years age group (21%). By location, schools and residential institutions accounted for 887 (7.7%) of head injuries.

Medical treatment should be considered for any type of head trauma, especially if the individual displays symptoms of concussion, slurred speech, disorientation, drowsiness, headaches, vomiting or if they had loss of consciousness (LoC).

All schools need to have clearly defined procedures for managing first aid and emergency situations which are independent of community health nurse (CHN) availability.

In the case of serious injury or illness, including suspected altered consciousness or trauma, nurses have a duty to assist if they are available on site.

**Risk**

Head injuries need to be monitored and treated carefully, as their consequences can be severe. There is a risk of bleeding in the brain which can cause prolonged or irreversible neurological damage.
Head Injury to Child or Young Person at School

Child or young person presents to CHN after a hit to the head

CHN to reassure & calm child or young person

Ask child/young person and/or witness how injury occurred and if there was any loss of consciousness

CHN performs an assessment to determine severity of injury

Clean and dress any wound, if appropriate. Cool compress or ice pack can be applied to the injury site for comfort

CHN or nominated other reassesses child or young person every 15-30 mins whilst in care

If no signs of head injury or concussion and child or young person returns to class, teachers and parents should be given specific instruction on what to watch for in relation to head injury

MINOR

escort required to take child/young person home

CHN or nominated other liaises with parent/guardian and explains warning signs to watch for, following a head injury. Issue Head Injury Info for parent/carer

MODERATE

seek further medical assessment

CHN or nominated other liaises with parent/guardian and Principal to organise further medical assessment and observation

SEVERE

Call for an ambulance (000) or (112) from a mobile

CHN or Principal informs parent/guardian about what has happened and directs them to the emergency department where the child/young person has been transferred

CHN documents assessment and outcome on CHS 409 or 410 and CHS 811. Liaise with principal re critical incident reporting

CHN may monitor, provide strategies & support on return to school as appropriate

Also see Appendix One – Determining the severity of a head injury.
Key Points

- Calm and reassure the child or young person, even if they are unconscious. An unconscious child may still be able to hear.
- Do not move an unconscious child or young person as they may have a fracture of the neck or spinal cord injury.
- Observe airway, breathing and conscious state. Be prepared to assist breathing if necessary.
- If a skull fracture is suspected, do not clean and dress a wound, or use any fluid.
- Check for the presence of headache, nausea, vomiting, dizziness, coordination, LOC and mental confusion.
- Check mental orientation, ability to concentrate, memory and duration of memory loss and disorientation; which includes knowledge of date, place and person.
- Do not leave student unattended.

Indicators that warrant further evaluation

- unconsciousness
- abnormal breathing
- obvious serious wound or fracture
- bleeding or clear fluid from the nose, ear, or mouth
- disturbance of speech or vision
- pupils of unequal size and/or delayed reaction to light
- weakness or paralysis
- dizziness
- neck pain or stiffness
- seizures
- vomiting
- loss of bladder or bowel control
- irritability or other unusual behaviour
- stumbling or difficulty walking
- confusion
- unusual paleness that lasts for more than an hour

Concussion

Concussion is a form of head injury that occurs immediately after a blunt force strikes the head causing the brain to move within the confines of the skull. The signs of brain injury may include headache, visual disturbances, and loss of consciousness. Any student presenting with signs and symptoms of concussion should be referred to a general practitioner for further assessment. Should this type of injury occur outside school, it is important the school is informed so the student can be monitored in the school setting if possible.
Follow up

Give the parent/carer a copy of the *Head injury and concussion information for parents* flyer. Symptoms are common following mild head injury and medical follow up is recommended 1-2 weeks after initial injury. Headache is the most common complaint, and nearly a third of parents report personality changes in their children. The majority of symptoms resolve within 3 months following the injury. Symptoms may however cause significant psychosocial problems for both the patient and their family, and are often exacerbated by stress, depression or anxiety. Encouraging parents/carer to follow-up with their GP post head injury can prevent anxiety related to symptoms and enable provision of support or referral for specialist treatment if required.5

### Related policies, procedures and guidelines

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<tr>
<td><strong>School health service policy</strong></td>
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<tr>
<td><strong>Head Injury – PCH Emergency Department Guidelines</strong></td>
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<tr>
<td><strong>Scope of Nursing Practice</strong> – <em>Decision Making Framework</em>, Nurses Board of WA</td>
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<tr>
<td><strong>Memorandum of Understanding (MOU)</strong> between the Department of Education and the Department of Health for the Provision Of School Health Services for Students Attending Public Schools.</td>
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### Useful resources

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<tr>
<td>CACH <em>Head injury and concussion - Information for parents</em> flyer</td>
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<tr>
<td>Department of Education and Training WA <em>Guidelines for first aid in the workplace</em></td>
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<td>Kidsafe WA is the leading Australian, non-government, not-for-profit organisation dedicated to preventing unintentional childhood injuries and reducing the resulting deaths and disabilities associated with childhood &quot;accidents&quot; in children under the age of 15 years.</td>
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### References


6. Memorandum of Understanding between: The Department of Education and the Department of Health for the Provision Of School Health Services for Students Attending Public Schools During the Period 1 July 2013 to 30 June 2016

Appendix 1

Determining the severity of a head injury

The symptoms of head injuries are used to determine how serious it is. Head injuries can be classified into minor, moderate or severe.  

Severe Head Injury:
- More than a brief loss of consciousness at time of injury
- Decreased conscious state – responsive to pain only, or unresponsive
- Cerebral spinal fluid leak from nose or ears
- Localising neurological signs (unequal pupils, lateralising motor weakness)
- Signs of increased intracranial pressure:
  - Uncal herniation: Ipsilateral dilated non-reactive pupil due to compression of the oculomotor nerve
  - Central herniation: Brainstem compression causing bradycardia and hypertension
- Penetrating head injury
- Seizures (other than single brief (<2 min) convulsion occurring immediately after the impact)

An ambulance must be called immediately if a severe head injury is suspected.

Moderate Head Injury:
- Brief loss of consciousness at time of injury
- Currently alert or responds to voice. May be drowsy
- Two or more episodes of vomiting
- Persistent headache
- Up to one single brief (<2 min) convulsion occurring immediately after the impact
- May have a large scalp bruise, haematoma or laceration
- Normal examination otherwise

Minor Head Injuries:
- No loss of consciousness
- One or less episodes of vomiting
- Stable, alert conscious state
- May have scalp bruising or laceration
- Normal examination otherwise

If there is any doubt as to whether there has been loss of consciousness, assume there has been and treat as for moderate head injury.
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