FOLLOWTHROUGH 5 - COMMUNITY/GENERAL PRACTITIONER

Initial Management of Mild Head Injury in Adults (following discharge from emergency/urgent care - GBS 13/1/2015)

OVERALL RECOMMENDATIONS FOR THE MANAGEMENT OF MTB

1. In the management of MTB patients, the clinician should consider the biopsychosocial and neurological aspects of treatment.
2. Consider red and yellow flags and reassessment that symptoms are likely to be resolved should be provided to all MTB patients in connection with acute care.
3. Education should be provided as soon as possible following injury and definitely within one week after injury. Patient advice sheet should be provided with verbal explanation and real assessor.

SPECIFIC RECOMMENDATIONS FOR MANAGEMENT BY GENERAL PRACTITIONERS

GP's should refer to the Clinical Practice Guidelines for the Care of People Living with Traumatic Brain Injury in the Community (2006) for information about common long-term sequelae, care management, clinical concerns, behaviour, and medication.

3. Management of Health Concerns

- Headaches, dizziness and sleep
- Fatigue – consider strategies such as increasing rest breaks at work (e.g., increasing the frequency and duration of breaks), reducing work demands, or alternative work schedules.
- Mental health – consider the risk of depression or other mental health disorders and that the emergence and maintenance of symptoms may be influenced by maladaptive psychological responses to the injury.

4. Driving – a person who sustains a minor head injury should

- Not drive for at least 24 hours and may require medical advice post injury.
- An extension of the recommended period is advisable for those with other concurrent medical or psychological problems which result in a loss of good judgment, concentration, drive or capacity (including slowed thinking, post traumatic sleep, visual impairment, and loss of motor skills). If these are complications, medical assessment is required for driving.

5. Return to work/study. Management of a patient's return to work/study, should include consideration of the physical, psychological, social and occupational aspects associated with traumatic brain injury. The GPs should consider

- a. Contact with the employer
- b. Variables associated with the work task (e.g., patient, the workplace and transport or driving issues)
- c. Ideally, graduated return to work may involve short term changes to hours, tasks, workload, transport, and driving issues
- d. Return to Sports - All sports related concussions should be evaluated by a medical practitioner before the patient returns to play as per SCAT.
- e. A player should not return to play the same day of injury and never play while symptomatic. “If in doubt, sit them out”.

6. Return to usual activities

- Return to usual activities including work/study, driving and sports
- The patient should be advised that they are likely to experience some or all of the following: return of moderate to severe concussion symptoms, or confusion, decreased attention, decreased ability to concentrate, fatigue, headache, sleep disturbances, irritability, anxiety, depression, memory problems, fatigue, sleep problems, and other conditions
- The research shows early diagnosis and appropriate management of MTB patients improves the outcome for individuals and their families. The GP is well placed to manage, support and guide the patient during the recovery process.

7. Return to usual activities

- Headaches, dizziness and sleep disturbances are common in patients with TBI. Avoidance of neck flexion/extension postures of the Visual Analogue Scale (VAS) and postural and visual fatigue.
- Return to usual activities should be assessed by a medical practitioner in conjunction with return to work/study, driving, and sports.
- The patient should be advised that a full recovery of usual activities may be prolonged for several months to years following injury and definitely within one week after injury. Patient advice sheet should be provided with verbal explanation and real assessor.

8. Return to usual activities

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definition of mild traumatic brain injury (MTBI) is an acute brain injury resulting from mechanical energy to the head from external forces. Criteria include:

- One or more of the following: confusion or disorientation, loss of consciousness 30 minutes or less, post traumatic amnesia <24 hours, and/or other transient neurological abnormalities such as focal signs, seizures, intracranial lesion not requiring surgery.
- GCS of 14-15 after 30 minutes post injury or later upon presentation for health care.
- GCS of 13-15 after 30 minutes post injury or later upon presentation for health care and normal CT scan.

These manifestations of MTBI must not be due to drugs, alcohol, medications, caused by other injuries or treatments for other injuries (e.g., systemic treatment, such as opioids, psychopharmacological, psychological, language barrier, or co-existing medical conditions) or caused by penetrating craniocerebral injury. Information from research evidence (1997-2007) was presented to a working party and in areas where research was limited, consensus decisions made. The working party represented them

- Ambulance NSW
- Australian College for Emergency Medicine
- Brain Injury Rehabilitation Program NSW (metropolitan and rural)
- Brain Injury Rehabilitation NSW
- Motor Accidents Authority NSW
- NSW Institute of Traumatic Brain Injury (MTBI)
- General Practitioners (metropolitan and regional) - Fellowship of the Royal Australian College of General Practitioners
- Australian College of Neurological AIDS

There was also consumer and public consultation.
**OVERALL RECOMMENDATIONS FOR ASSESSMENT AND DIAGNOSIS**

- The standardised prospective measurement of post traumatic amnesia (PTA) should be routinely performed to assist with the monitoring, diagnosis, early management and prognosis of patients with MTBI.
- Clinicians should use the recent version of the revised WPTAS - the Abbreviated Westmead Post Traumatic Amnesia Scale (A-WPTAS) for assessment of cognitive impairment to identify MTBI.
- Before attributing symptoms to MTBI, the clinician should assess and interpret the symptoms in the light of other potentially contributing bio-psychosocial factors and conditions (personal, family, injury related factors, history of environmental influences).
- A patient who experienced reduced cognitive function following the injury should first be followed up within a few days (not days or weeks) post injury and PTA should be expected, in the majority of cases, to have resolved by 2-3 days post injury and recovery of baseline function return within days up to 3 months.

**SPECIFIC RECOMMENDATIONS FOR ASSESSMENT BY GENERAL PRACTITIONERS**

1. The clinician should consider that a patient, who has sustained a MTBI, is likely to experience reduced cognitive functioning post injury which may resolve in a few days or continue for months before recovering, including problems of residual memory, information processing, concentration and attention.
2. If the patient has NOT been assessed (by the A-WPTAS) in hospital, the GP should assess the patient and re-evaluate and reassess any abnormal signs at a later stage (consider transport to hospital if this is not possible).
3. If the patient’s GCS on presentation is 13/15, immediate transport to hospital should be advised.

**FLOWCHART 4 - COMMUNITY/GENERAL PRACTITIONER**

**Initial Management of Mild Head Injury in Adults**

(No previous hospital or emergency department assessment - GCS 13-15/15)

**Notes for Flow Chart 4 – Clinical judgement required**

1. Clinical suspicion of skull fracture includes – history of local blunt assault or injury, large scale lacerations or haematoma, signs of base of skull fracture (hemotympanum/CSF leak/raison eyes/Battle’s sign).
2. Post traumatic seizure – post-ictal/post loci, or focal seizures are significant risk factors for intracranial injury; however, brief generalised seizures immediately following head injury are less concerning.
3. Assessment of PTA is an objective measure of cognition.
4. Age > 65 years – elderly patients have increased risk of significant intracranial injury and routine CT scanning is recommended unless patient is asymptomatic with no other risk factors.
5. Multi-system trauma – is important for the aware of patients with unstable vital signs or distracting injuries because significant head injuries are easily missed.
6. Dangerous mechanisms include MVA/ejection/rollover; pedestrians/cyclists hit by vehicle; falls > own height or five storeys; falls from height on construction sites.
7. Clinically obvious drug or alcohol intoxication in individuals with altered mental status is an indication for CT scanning, however, drug or alcohol ingestion in individuals with normal mental status is not.
8. Known neuropsychological impairment – conditions such as hydrocephalus with shunt, AVM or tumour, or cognitive impairment from any cause, make clinical assessment less reliable and may increase risk of intracranial injury.
9. Delays in assessment are under consideration for both structural intracranial injury and post concussion symptoms. Have a low threshold for CT scanning patients with delayed presentation and those re-presenting patients who did not have an initial normal CT scan. Clinical judgement is required for patients re-presenting following an initial CT scan.
10. Use clinical judgement for discharge for home observation if GCS ≥13/15, CT scan normal and clinical signs have improved in the WPTAS score ≥9. Consider impact of pre existing cognitive impairment, other contributing factors (e.g., a patient is non-English speaker or the patient needed to be woken up for the assessment), thus not fulfills the criteria (to the questions).
11. Discharge after 2 hours observation but 4 hours post time of injury may be considered if all discharge criteria are met.

**Abbreviations:**

- A-WPTAS, Abbreviated Westmead Post Traumatic Amnesia Scale; CT scan, computed tomography scan; GCS, Glasgow Coma Scale; PTA, post traumatic amnesia.