POST TRAUMATIC AMNESIA SCALE (A-WPTAS) TESTING IN THE EMERGENCY DEPARTMENT – PROTOCOL FOR ABREVIATED WESTMEAD

1. Purpose	The purpose of this business rule is to provide evidence based guidelines for the testing of patients with a closed head injury within the Emergency Department (ED) in SGH-TSH and the trauma ward (5A) at SGH.
2. Risk Rating	Medium
3. National Standards	1 – Clinical Governance 8 – Recognising and Responding to Acute Deterioration
4. Employees it Applies to	All nursing, medical and occupational therapy staff caring for a patient with a closed head injury.

5. PROCESS

5.1 OVERVIEW

- Mild Traumatic Brain Injury (MTBI) accounts for 70-90% of all head injured patients.[2] The Emergency department (ED) is the primary point of medical contact for these patients. Post traumatic amnesia (PTA) 'is the period of time during which a person is disorientated or confused and unable to recall new information following a head injury'.[5] It is recommended that patients presenting to the emergency department, following a mild closed head injury, complete an abbreviated version of the PTA scale entitled the A-WPTAS.[1,2,5]
- The A-WPTAS is endorsed by the college of emergency medicine and the use of A-WPTAS in the emergency department and initial ward setting provides support for clinical decision making, further evidence in the consideration for CT scanning, and reduced length of stay for patients post MTBI.
- A GCS of 15/15 does not always signify normal cognitive function. Using the A-WPTAS tool will help identify patients at risk of acute cognitive impairment (Meares et al. 2015). Patients fitting the criteria for MTBI will have an A-WPTAS commenced which also incorporates the routine GCS screening as part of their normal vital signs. The A-WPTAS is to be documented on the NSW Health A-WPTAS form (SMR060.950).
- Note: The patient must be able to communicate via either speech, writing, pointing to printed answers or by indicating "yes" or "no" when prompted. An interpreter can be used in accordance with SESLHD policy and procedure.
- A-WPTAS testing will primarily be undertaken in the ED. It can also be undertaken in the ward environment for continuing assessment of patients admitted from the ED or used in the assessment of patients sustaining a head injury from an in-hospital fall.
- A flowchart for ED management of patients with mild head injury is provided in the appendix.

5.2 INCLUSION CRITERIA FOR A-WPTAS TESTING:

Eligible patients are those with a history of a closed head injury within 24 hours of presentation and must meet the following criteria:

- Glasgow Coma Scale (GCS) of 13-15 at the time of injury
- Opening eyes spontaneously (GCS eyes score 4)
- Obeying commands (GCS motor score 6)

Signs of blunt head injury may include, but are not limited to:

- Patchy recall of events, anterograde or retrograde amnesia
- Loss of consciousness at the scene
- Persistent abnormal alertness/behaviour/cognition
- Dangerous mechanisms, eg. high speed MVAs
- Mild nausea or single episode of vomiting
- Mild headache

5.3 EXCLUSION CRITERIA

- Age < 8 years or > 70 years*
- Known intracranial injury or neurological impairment eg. dementia, subdural haemorrhage
- Presentations >24hrs post traumatic head injury with ongoing symptoms^
- Patients with GCS <13
- Open head injury

*AWPTAS has been validated for those aged 18-61yrs and clinical judgement recommended for use outside this age range.

^Patients that present greater than 24hrs post closed head injury with persistent neurological signs (including headache, nausea and vomiting) or cognitive deficit (amnesia, disorientation), should be admitted for review and initiation of formal PTA testing as required. These patients should have neurological observations attended on the emergency department standard observation chart.

Patients under the influence of drugs and/or alcohol are not automatically excluded from having an A-WPTAS conducted if they otherwise meet the inclusion criteria and are compliant with the assessment.

5.4 A-WPTAS TESTING PROCESS

Provide a quiet environment to conduct the assessment with minimal distractions eg. Ask family members to wait outside and pull the curtains.

Ensure possible visual clues, such as electronic devices, are placed away during testing.

Instructions for completing A-WPTAS testing are provided below, guidance is also provided on page 3 of the A-WPTAS form.

Step 1: Glasgow Coma Scale (GCS) Assessment

- Assess patient eye opening and motor response. The patient must open their eyes spontaneously and obey commands to be suitable for commencement of A-WPTAS testing.
- Assess verbal response (orientation questions): Patient must correctly answer all five questions to achieve a score of 5/5 for verbal response. Questions and appropriate response guidelines are provided on page 3 of A-WPTAS form
- Assess limb strength and pupil response and document on A-WPTAS form

Step 2: Picture Recognition

- Show the patient 3 x picture cards (Page 1) of A-WPTAS form, ensure they can repeat the names of each picture (cup, keys, bird). Inform the patient that they are required to remember the pictures when asked in one hour.
- It is necessary to ensure the images are encoded in memory. To do this, provide a brief delay, engage in conversation/ complete paperwork then ask 'Do you recall the pictures that you need to remember in an hour?' If they have difficulty or cannot recall, show and revise the pictures before leaving the bed space.

Step 3: Hourly Assessment

- Return to the patient one hour post initial assessment repeat Step 1 (GCS).
- Ask the patient to recall the 3 pictures shown the previous hour. If they are unable to recall, they can be prompted by showing the 9 pictures (Page 4 of A-WPTAS form) and ask them to identify the three pictures shown.
- If patient fails to recall pictures after prompting repeat Step 2.

5.5 DOCUMENTATION

A-WPTAS assessment and results should be entered in the patient's medical record.

Scoring the results

- First assessment, calculate GCS out of **15**, patient must achieve 5/5 for orientation questions to score 5.
- Subsequent assessments calculate GCS **(A)** and score for picture cards **(B)** to obtain score out of **18**.
- Orientation questions and picture responses, score **1** for each correct answer and **0** for incorrect.
- If the patient required prompts, mark an asterisk in the score section e.g. **1*** or **0***

TOTAL GCS SCORE (A)				
Picture Recognition	Picture 1 - Cup	Show 3 pics		
	Picture 2 - Keys			
	Picture 3 - Bird			
TOTAL PICTURE RECOGNITION SCORE (B)				
TOTAL A-WPTAS SCORE (A+B)				

- Repeat steps **1 and 3** until the patient has recorded 18/18 or until 4 consecutive hours of testing have been completed.
- ED patients who fail A-WPTAS should be discussed with the senior MO responsible for the patient to facilitate referral for formal PTA testing and inpatient management.
- At SGH, if CT imaging demonstrates intracranial injury (eg. subdural haemorrhage) the patient should be referred for formal PTA testing.
- At TSH, if CT imaging demonstrates intracranial injury the patient should be referred to SGH.

5.6 DETERIORATION IN CLINICAL CONDITION - A-WPTAS TESTING

If GCS/ A-WPTAS drops by >2 or more points consult senior medical staff.

A low threshold should be taken in considering early transfer for CT scanning if:

- Persistent GCS < 15 at 2 hours post injury
- Deterioration in GCS
- Focal neurological deficit
- Clinical suspicion of skull facture
- Persistent abnormal mental status (either clinical, A-WPTAS or GCS) or persistent vomiting or severe headache at 4 hours post time of injury

5.7 ADMISSION CRITERIA

- A-WPTAS score <18 at 4 hours post time of injury
- Initial GCS 9-12
- Persistent GCS 13
- Clinical deterioration
- Clinically not improving
- Abnormal CT scan
- Multiple injuries

Early discharge after admission will be at the discretion of the Neurosurgical or Trauma Services

5.8 DISCHARGE FROM ED

Clinically safe for discharge for home observation if at 4 hours post time of injury:

- GCS score 15/15
- A-WPTAS score 18/18 once
- Normal alertness/behaviour/cognition
- Clinically improving after observation
- Normal CT scan or no indication for CT scan
- Clinical judgement required if elderly and/or known coagulopathy due to increased risk of delayed subdural haematoma
- Anyone deemed suitable for home observation should be discharged with a responsible adult

Discharge advice

- Provide both verbal and written head injury advice: Mild head Injury discharge advice card. Head injury advice for other languages is also available Languages other than English: Head Injury Advice
- Provide discharge summary for GP
- All patients should be advised to see their GP if they are not feeling back to normal within 2-3 days
- Any patient with a documented abnormal A-WPTAS score or who suffered significant clinical symptoms such as headache, nausea or dizziness should be routinely referred to their GP for follow up within 2-3 days and strongly encouraged to do so
- Advice to return to ED / Follow-up with LMO if any concerns

5.9 RE-PRESENTATION

If the patient re-presents to medical services, the following should be conducted:

- Full medical re-assessment including full set of vital signs
- A-WPTAS assessment (if re-presentation is within 24 hours of injury ONLY)
- CT scan if indicated (particularly if not performed at the first presentation)
- Low threshold for admission for ongoing assessment
- Emphasis and encouragement to attend their GP for follow-up after discharge

6. Cross References	SGH-TSH CLIN155 *Post Traumatic Amnesia (PTA) Testing- Protocol for*
7. Keywords	Post Traumatic Amnesia, Closed Head Injury, A-WPTAS
8. Document Location	Trauma
9. External References	1. Meares et al (2015) Identifying post traumatic amnesia in individuals with a Glasgow coma scale of 15 after mild traumatic brain injury. Archives of physical medicine and rehabilitation, 96(1); 956 - 959. 2. Meares et al (2011) Validation of the Abbreviated Westmead Post-traumatic Amnesia Scale: A brief measure to identify acute cognitive impairment in mild traumatic brain injury. Brain Injury 25(12); 1198-1205 3. Reed, D., Adult Trauma Clinical Practice Guidelines, Initial Management of Closed Head Injury in Adults, ed. NSW Institute of Trauma Injury Management. 2007, Sydney. 4. Shores, E.A., Lammel, A., Hullick, C., Sheedy, J., Flynn, M., Levick, W., Batchelor, J., The diagnostic accuracy of the Revised Westmead PTA Scale as an adjunct to the Glasgow Coma Scale in the early identification of cognitive impairment in patients with mild traumatic brain injury. Journal of Neurology, Neurosurgery and Psychiatry, 2008. Epub ahead of print (January 25). 5. http://psy.mq.edu.au/pta/ 6. http://www.ecinsw.com.au/awptas
10. Consumer Advisory Group (CAG) approval	As per discharge advice link
11. Implementation and Evaluation Plan	**Implementation:** The document will be published on the SGH-TSH business rule webpage and distributed via the monthly SGH-TSH CGD report. • Education will be provided to Emergency nursing and medical staff regarding the indication for AWPTAS testing. • ED nursing staff will be provided with education and training on how to undertake AWPTAS testing • A-WPTAS HETI module (95267584) for staff completion **Evaluation:** • A-WPTAS records will be kept with patient's notes for review and evaluation. Trauma case managers can use the A-WPTAS to evaluate patient length of stay and outcomes in real time with this

	tool.
12. Knowledge Evaluation	**Q1** *List 3 inclusion criteria of A-WPTAS testing in patients with a closed head injury?* ○ Amnesia or patchy recall of events ○ GCS 13-15 in 24hrs post injury ○ Documented/ reported LOC on scene **Q2**. *When is a Patient considered clear from A-WPTAS?* A2: A patient is clear from A-WPTAS upon scoring 18/18 once **Q3**. *What should be given to patients discharged form ED following closed head injury?* A3: Both written and verbal closed head injury advice
13. Who is Responsible	Director of Emergency Departments – SGH/TSH Director of Trauma SGH

Approval for: POST TRAUMATIC AMNESIA SCALE (A-WPTAS) TESTING IN THE EMERGENCY DEPARTMENT – PROTOCOL FOR ABREVIATED WESTMEAD	
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Nurse Manager (SGH)	Name/position: Melanie Lax, NM Emergency SGH Date: 18.06.2021
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Revision and Approval History				
Revision Date	Revision number	Reason	Coordinator/Author (Position)	Revision Due
Sep 2011	0		CNC Trauma, SGH	Sept 2014
Oct 2014	1		CNC Trauma, SGH	Oct 2017
Jun 2021	2	Review - Major	Kelsey Langley, CNS2 Trauma, SGH	Jun 2024

General Manager's Ratification
Name: Paul Darcy (SGH) Date: 02.07.2021
Name: Vicki Weeden (TSH) Date: 06.07.2021