

POST TRAUMATIC AMNESIA- PROTOCOL FOR USE OF THE ABBREVIATED WESTMEAD POST TRAUMATIC AMNESIA SCALE (A-WPTAS)

PRACTICE GUIDELINE[®]

DOCUMENT SUMMARY/KEY POINTS

- A-WPTAS may be used within 24 hours of injury for patients 7yrs and older, with a suspected closed head injury/mild traumatic brain injury (mTBI) and a GCS of 13 to 15.
- A-WPTAS testing will primarily be undertaken in the Emergency Department (ED), but may be initiated or continued in ward settings for those who meet the inclusion criteria.
- Eligible patients must meet specific criteria as outlined within this guideline.
- The patient will have timely commencement and assessment of post traumatic amnesia as relevant to clinical indications

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

Approved by:	SCHN Policy, Procedure and Guideline Committee	
Date Effective:	1 st January 2021	Review Period: 3 years
Team Leader:	Nurse Educator	Area/Dept: Emergency Department SCH

CHANGE SUMMARY

- New document

READ ACKNOWLEDGEMENT

- Nurses, Medical Officers and Occupational Therapists caring for a patient with a closed head injury
- Training/assessment required – HETI education module
<https://www.aci.health.nsw.gov.au/networks/eci/clinical/clinical-resources/forms/awptas>
 - Education will be provided to ED nursing and medical staff regarding the indication for A-WPTAS testing.
 - ED and ward nursing staff where appropriate, will be provided with education and training on performing A-WPTAS assessment
- Emergency and Specialty teams (e.g. Neurosurgical, Trauma, Sports Medicine and Brain Injury) can use the A-WPTAS to evaluate patient length of stay and outcomes.

TABLE OF CONTENTS

1	Introduction	4
1.1	Purpose	4
1.2	Responsibilities.....	4
2	Criteria	5
3	Process	5
	Process for scoring A-WPTAS	5
3.1	Step 1: Glasgow Coma Scale (GCS) Assessment.....	5
3.2	Step 2: Picture Recognition	6
3.3	Step 3: Hourly Assessment	6
4	Scoring and Documentation	6
5	Deterioration	7
6	Further Post Traumatic Amnesia Testing	8
7	Discharge from ED	8
8	Discharge Instructions	8
9	Resources	9
10	References	10

1 Introduction

1.1 Purpose

For a significant number of children, sustaining a head injury will result in a mild Traumatic Brain Injury (mTBI). The ED is a 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 The duration of post traumatic amnesia is used as an index of severity for prognosis, medico-legal and scientific purposes. It is recommended that patients presenting to the ED following a closed head injury or mTBI complete an abbreviated version of the Westmead Post Traumatic Amnesia Scale (WPTAS), entitled A-WPTAS.^{1,2,3} A-WPTAS incorporates the routine GCS screening as part of the patients' vital signs. The addition of an amnesia score to the Glasgow Coma Scale has been shown to significantly assist in rapidly identifying adult patients with mTBI who may require further management.⁷

In addition, it has been shown that the A-WPTAS assessment is a reliable tool to assess the presence of post traumatic amnesia in children 7 years of age and older.⁶ Clinicians using the tool should be mindful of factors that may influence a child's performance including distraction and coaching from parents. Therefore clinical judgement is recommended.^{5,6}

Patients under the influence of alcohol or drugs can have A-WPTAS testing completed if they meet the inclusion criteria, are compliant with assessment and can communicate intelligibly within 24 hours from time of injury.

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 within 24 hours of injury, or used in the assessment of patients sustaining a head injury from an in-hospital fall.

Relevant clinical staff should be trained in completion of the A-WPTAS. When accurately performed, A-WPTAS assists in informing length of stay including timely, safe discharge and/or admission.

1.2 Responsibilities

Management is responsible for ensuring that registered nurses and medical officers who undertake this practice are provided with appropriate knowledge and training. The clinician undertaking the A-WPTAS score should confirm the findings with the primary clinician. Recent post-operative patients should be discussed with the relevant specialty registrar.

2 Criteria

As a general rule, the A-WPTAS assessment may be performed on any individual who meets the criteria for use, regardless of other concurrent medical issues.

Inclusion Criteria:

- 7 years and older
- Acute, blunt head injury with or without a history of loss of consciousness (LOC), amnesia or confusion/disorientation or as clinically indicated.
- Within 24hours of injury
- Initial GCS of 13-15
- Opening eyes spontaneously (GCS eyes score 4)
- Obeying commands (GCS motor score 6)

Exclusion Criteria:

- Age less than 7 years
- Presentations greater than 24 hours post head injury
- GCS less than 13
- Acute cognitive impairment or significant intoxication from drugs or alcohol
- Inability to communicate via speech, writing, pointing to printed answers or by indicating “yes” or “no” when prompted.

3 Process

Process for scoring A-WPTAS

Provide a quiet environment in which to conduct the assessment with minimal distractions e.g. reduce congestion around the bed, pull 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.⁸

3.1 Step 1: Glasgow Coma Scale (GCS) Assessment

- Assess patient eye opening and motor response. The patient must open their eyes spontaneously (GCS 4) and obey commands (GCS 6) to be suitable for commencement of A-WPTAS testing.
- Assess verbal response (orientation questions): Each component of “Oriented” (Person, Place, Reason for coming to hospital, Month, Year) must be scored individually with a **tick** or **cross** . Questions and appropriate response guidelines are provided on page 3 of the A-WPTAS form.
- Assess limb strength and pupil response and document.

3.2 Step 2: Picture Recognition

- Show the patient 3 x picture cards (Page 1) of the A-WPTAS form and 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.



3.3 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 recall, they can be prompted by showing the 9 pictures on Page 4 of the A-WPTAS form) and ask them to identify the three pictures they were asked to remember. If able to recall the 3 pictures from the 9 options on page 4 then testing may cease.
- If the patient fails to recall pictures after prompting, repeat Step 2.
- Once the total A-WPTAS score is 18/18, the patient is considered to be out of PTA and the A-WPTAS testing is ceased

4 Scoring and Documentation

- First assessment, calculate GCS out of 15 (**A**), patient must achieve 5/5 for orientation questions to score 5.
- Subsequent assessments calculate GCS (**A**) and score for the 3 picture cards (**B**) to obtain score out of **18**.
- For orientation questions, tick for each correct answer and for incorrect answer. All 5 responses must be correct to score 5 on 'orientation'
- For picture recognition, numerical digits **1** or **0** are required to calculate the score. **Do not use ticks or crosses** in this section.

- If the patient required prompts from the 9 options, mark a 1* with asterisk in the score section.
- See example below:

		Date							Date
		Time							Time
EYES OPEN	Must be (4) to use A-WPTAS	Spontaneously	4	4	4	4	4		4
		To speech	3						3
		To pain	2						2
		None	1						1
GLASGOW COMA SCALE • BEST VERBAL RESPONSE	Must be (3) or more to use A-WPTAS	Orientated (must achieve all)	5			5	5		5
		Person		✓	✓	✓	✓		
		Place		✓	✓	✓	✓		
		Reason for admission		X	X	✓	✓		
		Month		✓	✓	✓	✓		
		Year		✓	✓	✓	✓		
		Confused	4	4	4				4
		Inappropriate words	3						3
		Incomprehensible sounds	2						2
None	1						1		
BEST MOTOR RESPONSE	Must be (6) to use A-WPTAS	Obeys commands	6	6	6	6		6	
		Localises to pain	5					5	
		Withdraws to pain	4					4	
		Flexion to pain	3					3	
		Extension to pain	2					2	
		None	1					1	
TOTAL GCS SCORE (A)			14	14	15	15			
Picture Recognition	Picture 1 - Cup	Show 3 pics		1	1	1		Cup	
	Picture 2 - Keys		0	1*	1		Keys		
	Picture 3 - Bird		1	0	1		Bird		
TOTAL PICTURE RECOGNITION SCORE (B)			2	2	3				
TOTAL A-WPTAS SCORE (A+B)			16	17	18				

Repeat steps 1 and 3 until the patient has recorded 18/18 or until 4 consecutive hours of testing have been completed.

Once the total A-WPTAS score is 18/18, the patient is considered to be out of PTA and the A-WPTAS testing is ceased.

Clinical judgement and consideration of pre-existing conditions should be used where the picture recall component of A-WPTAS is abnormal but the GCS is normal (15/15).⁸

The A-WPTAS is to be documented on the NSW Health A-WPTAS form (SMR060.950) or in the eMR.

5 Deterioration

If GCS/ A-WPTAS drops by 2 or more points consult senior medical staff immediately. Clinical judgement in conjunction with scoring will inform Clinical Emergency Response (CERS), investigations, referral, ongoing observation/monitoring and/or admission.

6 Further Post Traumatic Amnesia Testing

Failure to score 18/18 within 4 hours may require a longer period of general and neurological observation or admission. For patients who do not achieve a score of 18/18 after 4 hours, consider repeating A-WPTAS within the 24 hour period from the time of injury.

Beyond 24 hours post injury, consider a joint referral to the Brain Injury Rehabilitation Program and Occupational Therapy for continued PTA testing using the WPTAS.

7 Discharge from ED

Patients who have achieved an A-WPTAS score of 18/18, can be considered for discharge if otherwise clinically appropriate.

Patients who have not achieved a score of 18/18 following a period of observation may be considered for discharge home if clinically improving and have appropriate supervision.

8 Discharge Instructions

- Provide both verbal and written patient head injury discharge advice
- Provide a **Concussion Action Plan (CAP)** where relevant
- Provide a GP letter / discharge summary
- All patients should be advised to see their GP if they have not recovered within 2-3 days

Advise patients/families to return to ED if the child experiences a sudden deterioration.

Referral to a specialist service is recommended where there is:-

- Documented post traumatic amnesia (A-WPTAS <18/18)
- Prolonged amnesia
- Persistent amnesia but well enough to go home
- Transient amnesia followed by other clinical concern e.g. headache
- Parental concern despite normalisation of amnesia and clinical state where the “patient just not right”

Patients with repeated concussion injuries or significant symptoms should also be considered for referral.

This may be to:-

- Children's Hospital Institute of Sports Medicine (CHISM), particularly if there is a return to sport component. Referral can be made via 'Orders' in Firstnet or faxed to (02) 9845 0432
- A private specialist (such as Sports Medicine, Neurologist, Paediatrician).

Patients with Persistent Post Concussive Symptoms (PPCS) at 3-4 weeks post injury should be discussed with the Brain Injury Rehabilitation Program at one of the children's hospitals.

9 Resources

- Kids Health Concussion Resources
<https://kidshealth.schn.health.nsw.gov.au/concussion>
- Head Injury – Acute Management guideline
<http://webapps.schn.health.nsw.gov.au/epolicy/policy/3581>

10 References

1. 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](#)
2. Meares et al. (2015) [Identifying Posttraumatic Amnesia in Individuals With a Glasgow Coma Scale of 15 After Mild Traumatic Brain Injury](#)
3. 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. <https://www.ncbi.nlm.nih.gov/pubmed/18223020>
4. Tesson et al. (2016) [Reliability of the Abbreviated Westmead Post-traumatic Amnesia Scale in children: Impact of age on test results](#)
5. <https://www.aci.health.nsw.gov.au/networks/eci/clinical/clinical-resources/forms/awptas>
6. https://www.aci.health.nsw.gov.au/data/assets/pdf_file/0005/371066/A-WPTAS-Frequently-Asked-Questions-updated-July-2017.pdf
7. Meares S¹, Shores EA², Smyth T³, Batchelor J², Murphy M⁴, Vukasovic M⁴. Identifying posttraumatic amnesia in individuals with a Glasgow Coma Scale of 15 after mild traumatic brain injury. *Arch Phys Med Rehabil*. 2015 May;96(5):956-9. doi: 10.1016/j.apmr.2014.12.014. Epub 2015 Jan 7. <https://www.ncbi.nlm.nih.gov/pubmed/25576643>
8. NSW Health A-WPTAS form (SMR060950)

Copyright notice and disclaimer:

The use of this document outside Sydney Children's Hospitals Network (SCHN), or its reproduction in whole or in part, is subject to acknowledgement that it is the property of SCHN. SCHN has done everything practicable to make this document accurate, up-to-date and in accordance with accepted legislation and standards at the date of publication. SCHN is not responsible for consequences arising from the use of this document outside SCHN. A current version of this document is only available electronically from the Hospitals. If this document is printed, it is only valid to the date of printing.