

TBI Assessment Tools

Westmead Post Traumatic Amnesia (PTA) Scale (WPTAS) (Marosszeky, et al. 1998)

A brief bedside standardised test measures length of post-traumatic amnesia (PTA) in patients with traumatic brain injury. It consists of twelve questions that assess orientation and ability to consistently retain new information from one day to another. It is administered once a day and every day, until the patient achieves a perfect score across three consecutive days, after which the individual is deemed to have emerged from post-traumatic amnesia.

It is designed for patients with a closed head injury including acceleration/deceleration and rotational injury. It is *not* indicated for patients who suffered from penetrating injury, hypoxic brain injury or stroke.

The scale is first administered once a patient is conscious and able to communicate (either verbally or non-verbally).

Indications for WPTAS are as follows:

- Clinical history that demonstrates mechanism of injury consistent with a TBI
- Reported or actual loss of consciousness
- Reduced GCS at scene of injury
- Injury with fractured skull, significant bruising to the head or presence of intracranial abnormality in CT head scan
- Vague or no recollection of events pre or post injury

NB: The daily Westmead PTA Scale should be used where the patient:

- Does not achieve 18/18 in the A-WPTAS within 4 hours
- Is admitted to hospital for ongoing assessment of TBI

Abbreviated-Westmead Post Traumatic Scale (A-WPTAS) (Shores and Fitzgerald 2004; Meares, et al. 2011)

It is a tool used to measure length of PTA during the acute management of mild traumatic brain injury i.e. PTA < 24hrs. Patients are tested at **hourly intervals** instead of daily intervals

The score is used in conjunction with the “half hourly neuro obs for 4hrs” that is the nursing standard in a head injury patient. It combines the standard GCS assessment with detailed questions in the verbal section including hourly 3 picture recall.

Indications for A-WPTAS are as follows:

- Injury <24 hrs old
- Current GCS 13-15
- Clinical history that demonstrate mechanism of injury consistent with TBI
- Reported, actual or no loss of consciousness
- Reduced GCS at scene of injury

- Staff/family reporting patient is not acting normally
- Active symptoms of concussion
- Vague or no recollection of events pre or post injury

NB: This is a screening tool, so exercise clinical judgement. In cases where doubt exists, more thorough screening or admission to hospital may be necessary. If 24 hours passed and patient scores less than 18/18, then WPTAS should be completed in the ward.

Rivermead Post Concussion Symptoms Questionnaires (King et al, 1995)

It is a standardised self-report measure of symptom frequency, intensity and duration following concussion or mild TBI. For all symptoms (set of somatic, cognitive, and emotional symptoms), indicate presence of symptoms as experienced within the past 24 hours. Since symptoms can be present pre-morbidly/at baseline, it is important to assess change from their usual presentation. It is recommended to complete the RPCSQ on admission and discharge to compare severity of concussion symptoms.

The Wessex Head Injury Matrix (WHIM) (Horn et al. 1992, 1993; Wilson et al. 1994; Shiel et al. 2000)

The WHIM is designed to assess and monitor all stages of recovery from coma to emerging post-traumatic amnesia, to monitor subtle changes in patients in a minimally conscious state and to reflect performance in everyday life by observing the behaviours that occurred spontaneously or in response to stimulation.

Rancho Los Amigos Scale (RLAS)

The Rancho Los Amigos Scale is an easy way to describe a brain-injured person's level of activity.

It is a scale used to track individuals through traumatic brain injury recovery and emergence from coma, based on cognitive and behavioural presentations as they emerge from coma. It measures the levels of awareness, cognition, behaviour and interaction with the environment.