MCMAHONGOLDRICK
Solicitors
Suites 130-132, The Capel Building, Mary's Abbey, Dublin 7.
Telephone: 00 353 1 8898580; Fax: 00 353 1 8898584.
eMail: info@rmcm.ie; www.rmcm.ie.

Skills and functions associated with the different lobes of the brain:

Frontal Lobe Controls
~ Attention/conscious of surroundings
~ Decision making
~ Emotional, social, sexual control
~ Expressive language
~ Verbal expression/word associations
~ Judgment
~ Spontaneity
~ Problem solving
~ Motivation
~ Motor integration
~ Voluntary movement
~ Planning movements

Parietal Lobe controls
~ Academic skills/understanding
~ Awareness of body parts
~ Eye/hand co-ordination
~ Tactile perception (touch)
~ Spatial orientation
~ Object naming
~ Right/left organisation
~ Visual attention

Cerebellum Controls
~ Balance and equilibrium
~ Eye movement
~ Coordination of voluntary movement
~ Gross and fine motor coordination
~ Postural control
~ Body reflexes

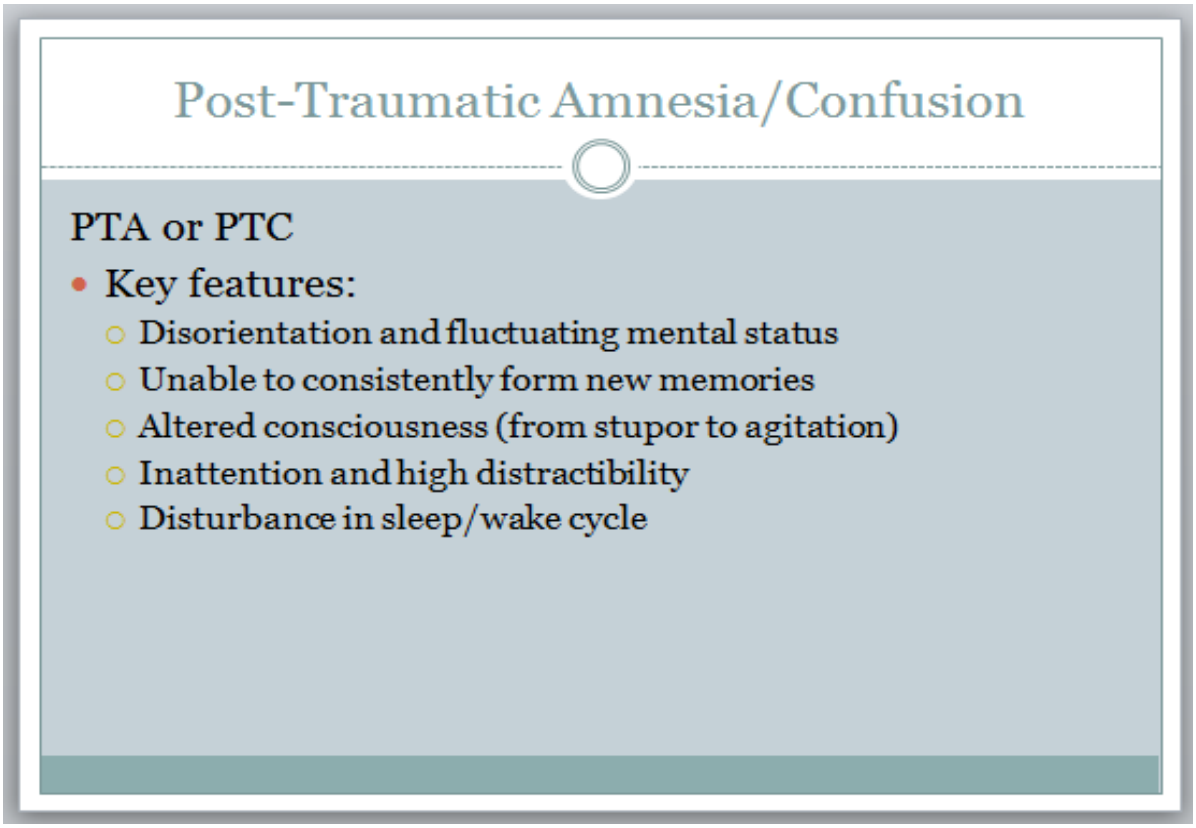
Temporal Lobe Controls
~ Behaviour (aggressive)
~ Face recognition
~ Short-term memory
~ Receptive language
~ Language comprehension
~ Musical awareness/hearing
~ Selective attention
~ Object categorization
~ Locating objects

Occipital Lobe Controls
~ Reading (the perception and recognition of printed words)
~ Visual perception
~ Visual processing

Brain Stem Controls
~ Arousal & sleep regulation
~ Balance and movement
~ Autonomic nervous system (heart rate, breathing, digestion, temperature, blood pressure)
~ Level of alertness
~ Swallowing food and fluid

Comparison of Coma, Vegetative State, and Minimally Conscious State

	Coma	Vegetative State	Minimally Conscious State
Eye Opening	No	Yes	Yes
Sleep/Wake Cycles	No	Yes	Yes
Visual Tracking	No	No	Often
Object Recognition	No	No	Inconsistent
Command Following	No	No	Inconsistent
Communication	No	No	Inconsistent
Contingent Emotion	No	No	Inconsistent



Shepherd Center

Brain Injury Rehabilitation
Assessments & Interventions

RANCHO LEVELS OF COGNITIVE FUNCTIONING

LEVEL 1 - (No Response)

Unresponsive to touch, pain, auditory or verbal stimuli.

LEVEL 2 - (Generalized)

Inconsistent, non-purposeful responses and/or reactions to painful stimuli.

LEVEL 3 - (Localized Response)

Inconsistent reaction directly related to type of stimulus presented (e.g., touch, pain, auditory or verbal).

LEVEL 4 - (Confused, Agitated)

Disoriented and unaware of present events with frequent inappropriate behavior (e.g., may yell, hit or bite); attention span is short and ability to process information is significantly impaired.

LEVEL 5 - (Confused, Inappropriate, Non-agitated)

Non-purposeful, random or fragmented responses when asked to do tasks that may be difficult; patient appears alert and responds to simple commands; performs previously learned tasks, but is unable to learn new ones.

LEVEL 6 - (Confused, Appropriate)

Behavior is goal-directed; responses are appropriate to the situation with incorrect responses because of memory difficulties.

LEVEL 7 - (Automatic, Appropriate)

Correct routine responses that are robot-like; appears oriented to setting, but insight, judgment and problem-solving are poor.

LEVEL 8 - (Purposeful, Appropriate)

Correct responses, carryover of new learning; poor tolerance for stress; some abstract reasoning difficulties. Insight, judgment and problem-solving require minimum assist to supervision.

LEVEL 9 - (Purposeful, Appropriate)

Able to shift attention and use memory aids. Insight, judgment, problem-solving and self-monitoring require standby assistance.

LEVEL 10 - (Purposeful, Appropriate)

Independently uses strategies, if needed, for memory, attention, judgment, problem-solving and self-monitoring. Aware of strengths and weaknesses.

Glasgow Coma Scale		
Response	**Scale**	**Score**
Eye Opening Response	Eyes open spontaneously	4 Points
	Eyes open to verbal command, speech, or shout	3 Points
	Eyes open to pain (not applied to face)	2 Points
	No eye opening	1 Point
Verbal Response	Oriented	5 Points
	Confused conversation, but able to answer questions	4 Points
	Inappropriate responses, words discernible	3 Points
	Incomprehensible sounds or speech	2 Points
	No verbal response	1 Point
Motor Response	Obeys commands for movement	6 Points
	Purposeful movement to painful stimulus	5 Points
	Withdraws from pain	4 Points
	Abnormal (spastic) flexion, decorticate posture	3 Points
	Extensor (rigid) response, decerebrate posture	2 Points
	No motor response	1 Point
Minor Brain Injury = 13-15 points; **Moderate Brain Injury** = 9-12 points; **Severe Brain Injury** = 3-8 points		

Assistance Levels

FIM Instrument Scoring Criteria (refer to users manual for more information)	
No Helper Required	
Score	*Description*
7	Complete independence
6	Modified independence (Patient requires use of a device, but no physical assistance)
Helper (Modified dependence)	
Score	*Description*
5	Supervision or Setup
4	Minimal Contact Assistance (patient can perform 75% or more of task)
3	Moderate Assistance (patient can perform 50% to 74% of task)
Helper (Complete dependence)	
Score	*Description*
2	Maximal Assistance (patient can perform 25% to 49% of task)
1	Total Assistance (patient can perform less than 25% of task or requires more than one person to assist)

Tips for Success

- 1. Be patient. Patients will require more time to put together thoughts and words. Allow them time to answer before you go on to your next thought.
- 2. You may need to introduce yourself when you come into the room. Sometimes short term memory is affected by the injury and if they don't recognize you right away, it may frighten them.
- 3. Speak slowly to the patient so that their mind has time to form thoughts and reactions to what you said. You do not have to necessarily speak louder, since hearing is usually not affected.
- 4. Avoid sudden movements of touching or grabbing. These actions should only be used in an emergency or if you or the patient is in danger. Move slowly and tell them that you are going to touch them.
- 5. Always treat the patient as an adult. Although the patient may seem like they can't understand you, no one can really measure the amount of comprehension they have. It is inappropriate to talk to them as though they are a child or cannot understand you.
- 6. Focus on the positive things and not just the negative things. Try to remind the patient of the progress that they may be making and not how much more they should be able to do.
- 7. Be calm around the patient. He or she can sense when those around are upset and agitated about something, which may in turn cause them to become upset.
- 8. Use some familiar things that the patient may recognize. Often pictures and stuffed animals may trigger memories that the patient may have. This will allow staff to make references to those things when family members are not around.
- 9. Explain what you are going to do. Give the patient a short explanation of the things that you may be doing with them.
- 10. Reorient the patient to where they are and what happened if they do not remember. It's okay to tell them they were in an accident and now they are in the hospital. Reassure them that there are people around to help them.
- 11. Later in recovery, bring the patient back to reality if they are speaking about things that don't make sense. Help them refocus, but in a non-threatening way. Don't approach them by accusing them of always talking about the same thing. Instead, quietly try to take their mind off of what they are presently thinking about and direct them to a different thought process.
- 12. Take some time for yourself.
- 13. Call for assistance before the patient becomes agitated.
- 14. Step away if patient becomes agitated and maintain a safe distance.