North Bristol NHS Trust

Post Traumatic Amnesia and Cognitive Communication Difficulties following TBI in the acute hospital environment

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What we will cover

Post traumatic amnesia (PTA)
-Clinical signs of PTA
-How to assess
-Implications for assessment and planning further rehab / discharge

Cognitive communication difficulties (CCD)
-Characteristics
-Assessment
-Strategies

Southmead Hospital

- Major trauma centre
- 2 neurosurgical / neurology wards – 64 beds
- SLT service - assessment and advice service as not resourced / funded to provide therapy
- OT assessment and therapy service

TBI Epidemiology

- In England & Wales it is estimated **1.4 million people** per year attend hospital following head injury *(NICE, 2014).*
- Around **162,500** of those people are then admitted to hospital *(Headway, 2018).*
- Most common cause of **death** under the age of 40 years *(NICE, 2014).*
- Across the UK there are an estimated **500,000 people** (aged 16 - 74) living with long term disabilities as a result of TBI *(Headway, 2018).*
- Approximately **85%** of TBI are classified as **minor**, **10%** as **moderate** and **5%** as **severe** *(Headway, 2018).*
- **Life expectancy** for TBI survivors is **normal** - what may seem like a low volume problem becomes a high volume one *(Headway, 2018).*

Case study – Simon

- **Assaulted**- hit over the head with a metal bar
- Attended local hospital. **CTH**– normal and discharged
- **Headaches, blurred vision** and **photophobia** - admitted to Southmead 2 weeks later
- **CTH**– left acute SDH with midline shift
- Seizure and fall
- Repeat **CTH** - left frontal & temporal lobe contusions, bilateral occipital lobe contusions with oedema, small right SAH, undisplaced # left parietal and temporal bones
- Left **craniotomy** and **evacuation** of left acute SDH
- ICU – ward
- Nursing staff report **agitation**, **confusion** and **word finding difficulties**
- Referred to OT and SLT

OT – POST TRAUMATIC AMNESIA (PTA)

What is PTA?

- "PTA is the **interval** from injury until the patient is **orientated**, and can **form and later recall new memories**" *(Nakase-Richardson, 2011).*

- "**Transient stage** of recovery after TBI characterised by **disruption of behaviour** and **cognition**, including impairment of **language** and **cognitive communication**" *(Tate et al 2006).*

- 2 types of amnesia;

- **Retrograde amnesia** 'partial or total loss of the ability to recall events that have occurred during the period immediately preceding the brain injury'.
- **Anterograde amnesia** 'a deficit in forming new memory after the accident, which may lead to decreased attention and inaccurate perception' *(Tate et al, 2006).*

- Also referred to as **'post traumatic confusional state'** in literature.

Who do we assess for PTA?

- OT complete formal ax – MDT also make observations
- OT aim to see **every patient admitted with recent head injury** - screen notes for those suspicious of PTA and identify via board round / liaison with MDT
- OT prioritise these referrals! “Early assessment and management is key to a more favourable outcome” (Headway, 2018)
- Reported **amnesia** or difficulties recalling events
- Changes in **behaviour**
- **Loss of consciousness** at the scene
- GCS **<15** at scene
- Evidence of head injury on **cerebral CT and those without**!
- Delayed onset / admission e.g. chronic SDH – use clinical reasoning to make decision regarding PTA ax (discuss with family presentation etc.)

Why do we assess PTA?

- **Duration of PTA and GCS score** on admission strongly **correlated** with **outcome** *(Bishara et al, 1992).*
- **Length of PTA** is the **best indicator of TBI severity** and **predicted outcome** *(Hart et al, 2016).*
- PTA duration correlates with **length of stay** and **level of function** on discharge *(Kosch et al, 2010).*
- Affects **clinical decision making** and readiness for **discharge**
- Helps **MDT manage patient** appropriately e.g. identify safety concerns, appropriate strategies, orientation charts, reduce stimulation etc.

Classification of severity of TBI

- Different systems to classify TBI by severity (clinical indexes at time of presentation), type of injury (e.g. DAI, haemorrhage).
- **Historically** classified mild-moderate-severe using **GCS score** (eye opening, verbal and motor responses).

Glasgow Coma Scale		
Score	Degree of injury	
13-15	Minor	Person remains alert, can answer questions and move the body in response to instructions. Might include loss of consciousness (passing out) but only for a short period.
9-12	Moderate	Confusion, difficulty with speaking clearly or following instructions. Loss of consciousness for a longer period.
8 or lower	Severe	Low or no response, little control over speech or movement. Prolonged loss of consciousness.

Classification of severity of TBI

- GCS **underestimates** true severity of TBI (Shores et al, 2008)
- GCS **doesn't measure ability to lay down new memories** – new learning is one of the best predictors of outcome (Shores et al,2008)
- Hart et al 2016 found that patients with a **GCS 13-15** on admission;

- **Half** had PTA duration **greater than 7 days**

- **Quarter** PTA duration **1-7 days**

- Also found if in PTA for more than 1 week – may be at risk of **residual moderate disability** (Glasgow Outcome Scale Extended (GOSE) of 6 or less) at **6** months.

- Meares et al 2015 found out of 45 patients who were **scoring a GCS of 15 - 31 failed** 'Abbreviated Westmead PTA scale'.

PTA duration and severity of TBI *(Russell & Smith, 1961)*

PTA Duration	Severity of BI
< 5 minutes	Very mild
5-60 minutes	Mild
1-24 hours	Moderate
1-7 days	Severe
1-4 weeks	Very severe
> 4 weeks	Extremely severe

PTA duration and severity of TBI

- Current consensus is that PTA of **less than a day** is accepted as a **mild TBI**, PTA of **>24 hours** is **at least** a **moderate** TBI.

- There is a body of evidence to suggest that the majority of patients with PTA of **less than 24 hours** make good recovery of cognitive function within **three months** of injury *(Turner-Stokes et al 2005, Iverson et al 2011).*

PTA duration

- Controversial regarding when PTA ends! Varied evidence in the literature.
- Early stages of PTA are easily recognised *(Tate et al, 2006).*
- It **can be difficult to identify end point** – particularly in severe HI and ongoing cognitive impairment *(Tate et al, 2006).*
- It is agreed that a person has emerged from PTA if they can;

- provide a **clear**, **consecutive account** of what is happening around them
- return of **reliable** day to day **episodic** memory
- **resolution** of typically observed **neuro-behavioural** deficits

(Friedland & Swash 2016)

Don’t underestimate mild TBI!

- Study by McMahon et al in 2014 reviewed outcomes of 375 patients with **mild TBI** (GCS 13-15, PTA less than or equal to 24 hours):
- **1/3** patients could **not** return to **full functional status** (measured using score on GOSE) at **3** and **6 months** post injury.

- **22%** of patients had **impaired functional status** (GOSE 6 or less) at **1 year** post injury.

- **30%** of patients identified **dissatisfaction** with their overall **well-being** at **1 year** post injury.

*Above findings independent of intracranial pathology at time of injury.

Prior to OT assessment of Simon;

- Thorough review of **medical notes/ drug chart**;
- **GCS** at the **scene** and **current** recorded GCS
- **LOC** and **duration**
- **Opiates?** McLellan et al 2017 found **anterograde amnesia** and **disorientation** in patients **without TBI** taking **opioids**. **80%** of patients on orthopaedic ward **failed PTA ax**. Supported by McCarter et al 2007.
- **History of drug/alcohol dependence?** May have cognitive changes - more detailed history from family. Impact on results of formal ax. Alcohol withdrawal medication.
- **Psychiatric illness?**
- **Area** of **brain injury** – recent CT/MRI scan results? What do we anticipate?
- **Left/right** handed?
- **Pre-existing medical conditions?** i.e. neurodegenerative conditions – anything affecting cognition
- Information from **MDT** regarding presentation
- **Behavioural charts**
- Speak with **family**

Case study - Simon

- **Social history;**
- Lives with family
- Works as a Security Guard
- Large network of family/ friends

- **Family reported history of;**
- ETOH
- Drug use

General principles…how OT's assess for PTA

- **Formal PTA** assessment
- **Informal** and **functional assessment** very important *(Weir et al, 2006).*
- **Behavioural** observations
- Assess on **daily basis** is the ideal (prospective measure)
- **Consistency** in assessor
- Resource challenges!
- **Formal cognitive assessment** should be completed once someone has **emerged** from PTA

Formal PTA assessment

Examples of formal assessment

- (Modified) Oxford PTA Scale (MOPTAS)
- Julia Farr Centre PTA Scale
- Galveston Orientation and Amnesia Test (GOAT)
- Westmead PTA Scale (WPTAS)

Westmead PTA Scale (WPTAS)

- **7 orientation questions** – time, place and person
- Designed to assess patients ability to **lay down new memories** over 24 hour period and remote memory
- **5 memory questions**
- **Daily basis** (prospective assessment)
- Criterion for emergence is **perfect score 12/12** over **3 consecutive days**
- Duration is calculated from **date of injury** to the **first day of 3 consecutive 12/12 scores.**
- Tate et al 2006 'PTA may be deemed to be over on the **first day** a person scores 12/12 if been in PTA for **less than 4 weeks**'.

Patient Label

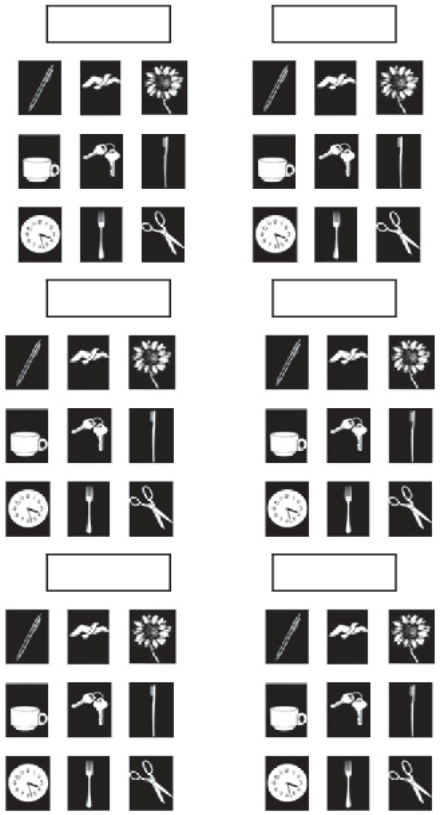
Westmead Post Traumatic Amnesia (P.T.A.) Scale

P.T.A. may be deemed to be over on the first of 3 consecutive days of a recall of 12
When a patient scores 12/12, the picture cards must be changed and the date of change noted.
P.T.A. may be deemed to be over on first day of a recall of 12 for those who have been in PTA for > 4weeks (Tate, R.L. et al. 2006)

Date of Onset: _____

Initial Examiner: _____ Alternate face cards used in examiners absence: _____

		Date:													
1. How old are you?	A														
	S														
2. What is your date of birth?	A														
	S														
3. What month are we in?	A														
	S														
4. What time of the day is it? (Morning / Afternoon / Night)	A														
	S														
5. What day of the week is it?	A														
	S														
6. What year are we in?	A														
	S														
7. What is the name of this place?	A														
	S														
8. Face	A														
	S														
9. Name	A														
	S														
10. Picture I	A														
	S														
11. Picture II	A														
	S														
12. Picture III	A														
	S														
Orientation:	7														
Recall:	5														
Total:	12														



A = Patient's Answer
S = Patient's Score (1 or 0)
* answers if three options given

Adapted by S.Swan, Queensland Health Occupational Therapy Gold Coast Hospital and Royal Brisbane & Women's Hospital, 2009; from Shores, E.A., Marosszeky, J.E., Sandanam, J. & Batchelor, J. (1986). Preliminary validation of a clinical scale for measuring the duration of post-traumatic amnesia. Medical Journal of Australia, 144, 569-572.

Westmead PTA Scale (WPTAS)

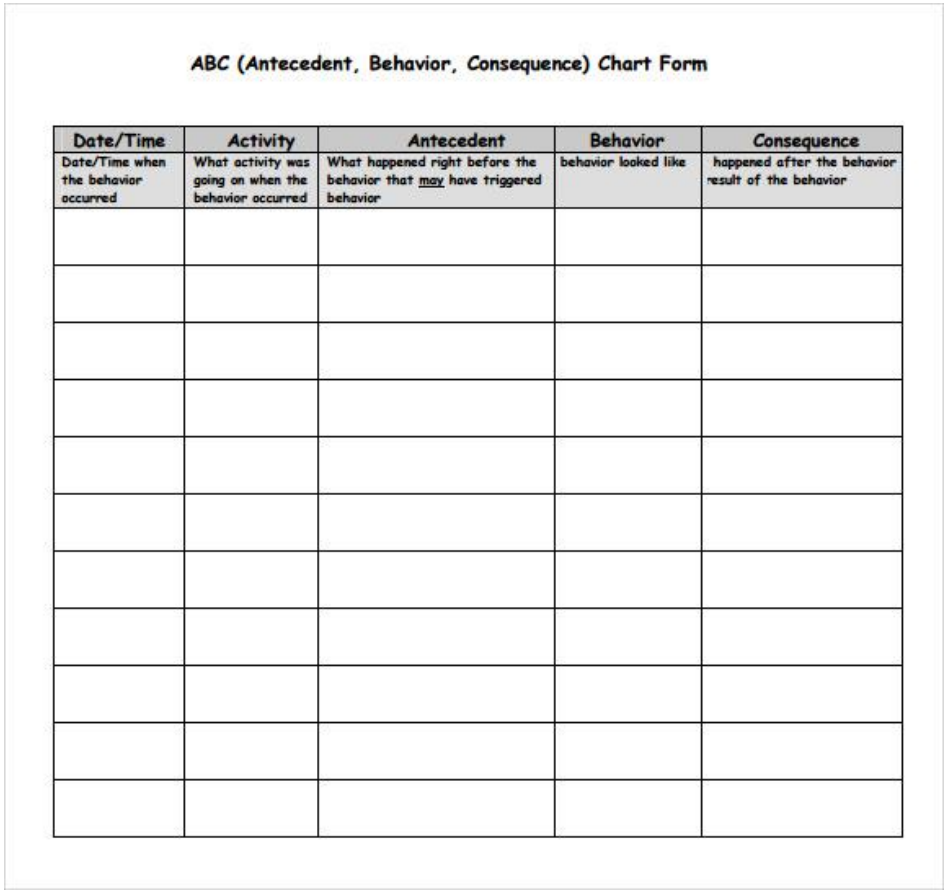
Pros	Cons
Prospective	Don't observe behaviours
Standardised	Is 12/12 on 3 consecutive days is excessive? *(Marshman et al 2017)* – at Southmead may not always assess on 3 consecutive days once scores 12/12
Easy to use	3 picture memory test less sensitive to PTA than 3 word memory test *(Schwartz et al 1998)*
Anterograde memory	

Functional assessment of PTA

Examples of functional assessment

- **Behavioural observations** on the ward
- mood, engagement with activities, sleep/rest periods, levels of agitation, interactions with family/staff
- Behaviour of concern ABC (antecedent, behaviour, consequence)
- Observe **interactions** with family/ friends
- **Conversation** which incorporates **short term memory** questions e.g. what have you had for lunch? have you had visitors? Events that day etc.

Behaviour chart



ABC (Antecedent, Behavior, Consequence) Chart Form

Date/Time	Activity	Antecedent	Behavior	Consequence
Date/Time when the behavior occurred	What activity was going on when the behavior occurred	What happened right before the behavior that may have triggered behavior	behavior looked like	happened after the behavior result of the behavior

PTA characteristics - how did Simon present?

Memory loss

Disorientation

Disinhibition

Distressed

Reduced processing speed

Language difficulties

Restless

Confusion

Impaired acquisition of new information

Agitation

Anxious

Variable!

Violence/ aggression (physical & verbal)

Disrupted sleep/wake cycle

Reduced attention

Functional assessment of Simon

- Formal PTA assessment impossible!
- Behavioural charts and 1:1 observations very valuable
- Family observations
- Conversations whilst Simon was having a cigarette

SLT – COGNITIVE COMMUNICATION DISORDER (CCD)

Cognitive Communication Disorder (CCD)

- "Difficulties that stem from the **relationship** between **cognitive difficulties** and their **effect on language processing, language use and communication behaviour"** *(RCSLT, 2006)*
- "Complex **interplay** of **cognitive, linguistic, physical, behavioural** and organic **psychosocial** factors" *(McDonald et al 1999)*
- Historically debate regarding terminology used to describe communication difficulties following TBI.
- **CCD** became **most common** descriptor in the **1990s** *(McDonald et al 1999)*
- Associated with damage to **parietal** & **occipital lobes** (left and right), **right hemisphere** injuries, **fronto-temporal** injuries

Prevalence of CCD

- CCD incidence rates following **ABI** range from **75-100%** (*Ferre et al 2016, Halper et al 1991)*

- **80-100%** of those with TBI will have some form of **communication impairment** *(Halpern et al, 1973, Sarno et al, 1980)*

- Even **mild TBI** should be screened - can be very mild/ high level or very obvious

Cognitive Communication Disorder (CCD)

Primary cognitive communication disorder

- Communication difficulties that stem from generalised cognitive disruption e.g. attention, memory, executive function which as a result impact on all communicative functions. Do not have straight forward link to a single cognitive function.
- Underlying cause in a cognitive deficit rather than primary language or speech deficits.
- E.g. verbose – due to attention deficits, reduced monitoring, disinhibited, reduced reasoning/ problem solving

Vs

Primary cognitive deficit

- Primary cognitive difficulties that impact on communication when other areas may be intact.
- E.g. specific memory difficulty that means a person forgets conversation – doesn't have such a big impact in terms of communication.

Characteristics of CCD

- **Verbosity:** extremely long and overly detailed responses.
- **Attention difficulties:** difficulties attending to conversation, may miss information/ miss interpret.
- **Poor insight:** unable to recognise difficulties, self-monitor, utilise strategies
- **Tangential:** does not respond directly to questions. Frequently introduces new topics with no clear link.
- **Egocentric:** reports things only from their perspective and does not mention the impact of events on others. Unaware of the feelings/ knowledge of the listener.
- **Slow information processing:** pauses for excessively long periods when responding to questions. Responds to questions that had been asked previously. Difficulties keeping up with complex processing of social situations e.g. facial expressions
- **Repetitive:** frequently repeats the same information in either the same or new formulations. Repeatedly asks the same questions. Unable to move on from a particular thought.
- **Memory:** cognitive process but can impact on communication e.g. stuck on the same topic, forget conversation

Characteristics of CCD

- **Unidirectional conversation:** Conversation is led by only one participant, either listener or patient. May respond minimally to questions resulting in longer listener turns or patient may dominate the conversation making it difficult for listener to take a turn.
- **Reduced body language:** reduced eye contact or flat facial expression. Flat/ monotone voice. Patient sits too close or too distant from listener. Inappropriate body language e.g. aggressive posture, pointing, over familiar. Reduced body language to support communication.
- **Inappropriacy of topic, content or style:** person introduces topics that are too personal either to themselves or to the listener. Inappropriate language to the situation e.g. swearing. Patient misjudges level of formality in the conversation. Incongruence of style and message.
- **Passive/ reduced initiation:** responds to questions with minimal responses e.g. yes/no. Unable to initiate any conversation.
- **Literal interpretation:** miss understanding jokes/ humour/ figures of speech – abstract language
- **Reduced comprehension of complex information:** find it harder to understand more abstract information, lengthy information

Why should we assess?

What do the **guidelines** say…

- People who are in hospital with **new cognitive, communicative**, emotional, behavioural or physical difficulties that continue **72 hours after a TBI** have an **assessment** for **inpatient rehabilitation** *(NICE, 2014)*

- Access to **timely specialist assessment** and **rehab** has **positive** impacts on **outcome** *(SIGN, 2009)*

- NSF for Long Term Conditions 2005 “People with **long-term neurological conditions** who would benefit from **rehabilitation** are to receive **timely**, **ongoing**, **high quality rehabilitation** services in **hospital** or other **specialist setting** to meet their continuing and changing needs”

Why should we assess?

- **Debilitating** consequence of TBI
- **Devastating** impact of patients being **discharged** with CCD who have **not been assessed** and are not receiving appropriate support
- **'Walking wounded'** – potential to be missed!

"People with CCD can talk better than they communicate"

Impact of CCD

- Independent living
- Activities/ hobbies
- Social relationships
- Employment
- Academic success
- Family roles
- Dealing with finances
- Social isolation
- Reliance on family for support
- Social anxiety/ isolation
- Change of identity
- Depression

Psycho-social impact

McDonald et al, 1999;

- Poor **psycho-social** outcomes with severe TBI
- **50%** limited **social contact** and few leisure outlets **1 year later**
- **64%- 68%** difficulty forming **new social relationships**
- **30%** or less in **full time employment** (often not in previous capacity)
- Impact of impairment on **family/carers**

SLT role;

- **Diagnose** communication disorder
- Document **change** and **monitor** progress
- **Feedback** to team, patient, family
- **MDT** management
- Provide **strategies** and **advice**
- **Planning** - identify appropriate rehabilitation i.e. specialist vs generic
- **Prognosis**
- Support **neuroplasticity** - occurs through rehab, continuity, repetition, exposure to adequate stimuli and enriched environment

When should we assess?

- **Early** on even whilst in PTA - **informal assessment** to establish a clinical picture and to be able to provide appropriate support.
- "Cognitive communication impairments observed during PTA may be dependent on symptoms of PTA and acute medical issues or **predictive of cognitive injury requiring ongoing long-term rehab**" *(Steel et al 2017)*
- Steel et al 2017 (1);
- Severe TBI patients
- assessed using **social communication ax** over the **later stages of PTA** and/or at **emergence** and then at f/up **3 months** later
- Example of ax included 'Measure of Cognitive Linguistic Abilities Family Questionnaire', 'La Trobe'
- Found it was possible to identify a **profile of social communication disorder** that persisted at f/up but with **decreased severity**

When should we assess?

- Steel et al 2017 (2);
- Assessed cognitive communication with **repeated standardised** and **non standardised** methods e.g. MCLA during PTA and at 3 months follow up after PTA emergence.
- **Improvement** occurred gradually throughout PTA.
- **No marked change** in communication function **immediately before** and **after** PTA emergence.
- Cognitive communication ability and functions measured on Westmead PTA scale (memory and orientation) **did not** recover at the same rate.
- Early assessment is very relevant to patients ongoing communicative function.

- **Formal assessment** completed **once emerged** from PTA

- Estimates indicate that **fewer** than **50%** of patients are referred for SLT input *(Blake et al 2013)*

General principles- how do we assess?

- **Formal** and **informal** assessment
- Build **rapport**…
- **Individualised** approach!
- **Consistency** in assessor
- Beware of **pre-morbid** communication style…are presenting communication and social skills appropriate
- **Real world** communication performance - consider communication demands on the individuals life
- **Hospital** environment vs **home/work**
- SLT assessments have been shown to be able to **detect subtle** but **debilitating deficits** *(Ferre et al, 2016)*

Formal assessment

Examples of formal assessment

- **Mount Wilga High Level Language Assessment**

- 22 subtests of language and cognition

- **MCLA (Measure of Cognitive Linguistic Abilities)**

- Assess linguistic abilities, identify cognitive deficits that have an impact on linguistic performance, recognize the important interrelationship between language & cognition

- **CLQT (Cognitive-Linguistic Quick Test)**

- Screening tool which assesses 5 cognitive domains (attention, memory, language, executive functions, and visuospatial skills)

- **SCATBI (Scales of Cognitive Ability for TBI) or BTHI (Brief Test of Head Injury)**

– Components of language and cognition

Examples of formal assessment

- **TASIT (The Awareness of Social Inference Test)**

- watch videos of situations and interpret what is occurring

- **FAVRES (Functional Assessment of Verbal Reasoning & Executive Strategies)**

- verbal reasoning, complex comprehension, discourse, and executive functioning during performance on a set of challenging functional tasks.

Full language screen to assess for any co-occurring language difficulties (aphasia)

Informal assessment

Examples of informal assessment

- Functional assessment
- **Conversation!** e.g. topic maintenance, pragmatic skills, ability to process information, turn-taking, listener awareness and self awareness
- Observing interactions with **different communication partners** - family/friends
- **Joint sessions** with Physiotherapy/ OT
- **Context** of assessment is important – observe in different environments, situations, people. Try to make as similar as possible to the context of their life. E.g. ordering coffee in Costa. **Presentation may vary!**
- Consider **communication partner** (e.g. relationship, age, familiarity) and **communication task demands** (environment, load on working memory, predictability) *(MacDonald et al 2017)*
- Beware of **appropriacy** of environment…try not to **overload/ stimulate**!

Examples of informal assessment

- **La Trobe (30 item questionnaire)**

- Measure of perceived communicative ability that assessed communicative ability based on information gathered from the patient and close others

- **CCCABI (Cognitive Communication Checklist for Acquired Brain Injury)** (Sheila MacDonald)

- Screening and referral tool to flag communication difficulties. SLT's can use during initial ax or MDT to identify patients who need SLT input.

Cognitive Communication

CHECKLIST

for Acquired Brain Injury (CCCABI)

Sheila MacDonald SLP (C)

SLP Cognitive-Communication CHECKLIST Checklist for Acquired Brain Injury (CCCABI)

Individual _____ Significant Other _____

Interviewer _____ Date _____

Functional Daily Communications (Activity/Participation)

Decreased amount, quality, effectiveness, speed, frequency, independence, or stamina. Changed since the injury.

1. ☐ Difficulties with Family or Social Communications
2. ☐ Difficulties with Communication in the Community (stores, services, internet, telephone, medical, financial, legal)
3. ☐ Difficulties with Workplace Communications
4. ☐ Difficulties with School Communications/Academic Performance
5. ☐ Difficulties with Communications needed for Problem Solving/Decision Making or Self Advocacy

Specific Functional Difficulties (Check all noted) **Refer to Speech-Language Pathologist/Therapist** if problems noted.

Auditory Comprehension & Information Processing Possible factors: hearing, attention, memory, receptive language; comprehension, integration, reasoning, and speed of information processing	6. ☐ Hearing what is said, sensitivity to sounds, ringing in ears – Refer to Audiologist 7. ☐ Understanding words and sentences 8. ☐ Understanding long statements (discussions, lectures, news, TV) 9. ☐ Understanding complex statements (humour, subtle, implied information) 10. ☐ Integrating information – Cannot 'glue' information together to draw a conclusion or get the gist 11. ☐ Tendency to misunderstand or misinterpret discussions 12. ☐ Focusing attention on what is said (distraction, fatigue, interest) 13. ☐ Shifting attention from one speaker to another 14. ☐ Staying on track with the conversation, staying on topic 15. ☐ Holding thoughts in mind while talking or listening 16. ☐ Remembering new conversations, events, new information
Expression, Discourse & Social Communication articulation, word finding, language, memory, attention social communication, fatigue, fluency, reasoning, executive functions, social cognition, perception, self-regulation	17. ☐ Speech sounds, muscle movements, voice, fluency, stuttering 18. ☐ Word finding, word retrieval, thinking of the word, vocabulary, word choice 19 ☐ Sentence planning, sentence construction, grammar 20. ☐ Initiating conversation 21. ☐ Generating topics of conversation, thinking of what to say, elaborating, adding 22. ☐ Vague, nonspecific, disorganized conversation 23. ☐ Overly talkative, rambling, verbose conversation 24. ☐ Socially unsuccessful comments (impulsivity, anger, swearing, joking, topic selection) 25. ☐ Nonverbal skills (eye contact, personal space, facial expression, tone of voice, mannerisms, gestures) 26. ☐ Perceiving or understanding conversation partner cues, emotions, context, views
Reading Comprehension any written materials, print or electronic	27. ☐ Physical difficulties (vision: double, blurred, field, tracking, pain, fatigue, dizziness) - Refer to Optometrist, Opthalmologist 28. ☐ Decoding letters or words, reading aloud fluently 29. ☐ Comprehending read sentences, paragraphs, text 30. ☐ Retaining read information over time, remembering, organizing 31. ☐ Attending to what is read, need to read everything twice 32. ☐ Reduced stamina for reading (Reads for ____min now; ____min prior to onset)
Written Expression any written materials, print or electronic	33. ☐ Physical aspects of writing, hand movements – refer to Occupational Therapist 34. ☐ Writing words 35. ☐ Constructing sentences, formulating ideas for writing (sentence formulation) 36. ☐ Organizing thoughts in writing (written discourse) 37. ☐ Spelling difficulties relative to pre-injury abilities
Thinking, Reasoning, Problem Solving, Executive Functions, Self-Regulation (required for communication)	38. ☐ Insight, awareness, recognizing there is a problem 39. ☐ Making & expressing decisions (getting facts, weighing facts, pros & cons, deciding) 40. ☐ Discussing without being overwhelmed, upset, withdrawn 41. ☐ Filtering out less relevant information, focusing on priorities, main points 42. ☐ Organizing, integrating, analyzing, inferring, seeing the whole picture 43. ☐ Summarizing, getting the gist or the bottom line, drawing conclusions 44. ☐ Brainstorming, generating ideas, alternatives, thinking creatively 45. ☐ Planning, prioritizing, implementing, following through, evaluating, self-monitoring of communication
Total	_____ # of Communication Concerns Identified

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SLT assessment of Simon

- Formal assessment impossible/ initially not appropriate due to PTA
- **Joint** sessions with OT
- **Conversation** whilst having a cigarette
- **Timing** of sessions
- **Observations** on ward
- **Family** liaison
- **MDT** reports

How did Simon present?

- Language difficulties – word finding difficulties and semantic errors
- Verbose and tangential
- Poor insight
- Egocentric
- Repetitive – fixated on topics
- Disinhibited

Strategies for CCD

Strategies for CCD

- Use **simple, concrete language** – avoid sarcasm/ non-literal language.
- Try not to **overload** with information in one big chunk – **break it down**.
- Support communication with **pen and paper, pictures, gestures, photos, orientation files.**
- Tangential/verbosity – try to **bring patient back to topic** with clear, simple cues, e.g. “we were talking about work Simon”, write down clear single word topic prompts on paper and remind the patient to refer to it to check they’re on topic.
- If appropriate encourage the person to **write down key information** to aid recall or write down for them.

Strategies for CCD

- Disinhibition – don't collude – provide **clear feedback discretely** "that's not appropriate behaviour because"
- **Re-orientate** at any opportunity
- **Reduce distractions**
- Think about **environment** during interactions
- Encourage **good engagement** by giving **your full attention** – be aware of your **body language**
- **Consider neglect** – i.e. if right sided neglect – sit on left

Management in the acute environment

Management of PTA and CCD

- Maximise **function** as early as possible
- **Historically** explicit learning (intentional learning) and memory therapies **not considered effective** until PTA resolves *(Wilson et al 2018)*. Due to agitation and poor learning capacity.
- Provide MDT and family **strategies** to support CCD/ PTA– consistent approach
- Try to ensure MDT is giving patient **consistent feedback**
- Maintain **patient role** in decisions as much as possible – **consent/capacity**
- Provide **support** and **education** to family and patient regarding CCD/PTA and patterns of change
- Start **insight raising –** need **whole team** on board!
- Insight raising is one of the **most challenging therapeutically** –very important in order for change to occur
- **Verbal** and **video feedback** if possible

Should we provide therapy whilst patients are in PTA?

- Wilson et al 2018 found evidence for **effective implicit learning** following CBT with **reduced levels of agitation** and **confusion** despite not remembering intervention for patients in PTA.
- Trevena-Peters et al 2018 (1) study found **positive** change in GAS when OTs completed **ADL retraining** following **errorless** and **procedural learning principles** for patients in PTA
- Trevena-Peters et al 2018 (2) found patients in PTA **who did not** receive therapy whilst in PTA **trended toward longer LOS and PTA duration**. Improvement in **FIM scores** for those who received therapy (daily ADL retraining).
- Weir et al 2006 found it is feasible to **begin active rehabilitation** focused on **functional skills-based learning** in later stages of PTA.

How did we manage Simon?

- Daily **orientation charts**
- Family **information, support and education**
- **Signposting** e.g. Headway
- **Communication strategies**
- Behavioural 1:1
- Support for behavioural 1:1 – what to look out for
- **Managed visitors** – reduce stimulation
- Tried to establish **routine**
- **PCAT** – referred to BIRU
- Contacted **relevant teams**; Mental Health Team involved, Drug and alcohol services

Discharge

Should a patient be discharged from hospital in PTA?

- Due to **bed pressures** we are under **increasing pressure** to discharge patients.
- **Standard practice at SMH** is **not** to consider discharge until PTA has resolved.
- NICE (2014) advise return of GCS to **15 to enable discharge from ED** with TBI, however SIGN (Scottish Intercollegiate Guidelines Network) (2009) advise that **PTA should have resolved.**
- Divita et al 2017;

- compared 27 patients discharged **prior to emergence** from PTA with 20 patients **discharged within 7 days** of emergence from PTA.
- Those discharged prior to emergence **did not** experience increase in **adverse outcomes** (e.g. hospital re-admission, disengagement from follow-up services, non-compliance with discharge precautions, support system breakdown, carer strain) and showed **higher levels** of **engagement** in follow-up services.
- HOWEVER had to meet a set of criteria e.g. stable behaviour, support network, appropriate supervision, follow-up service, ability to recall discharge precautions.

- **If rapidly improving and approaching emergence from PTA should a person be discharged?**

Discharge – main points to consider;

- Access to **therapy services** upon discharge
- **Fluctuating** nature of PTA
- **Support network**
- Patients **insight**
- Family/ carers **understanding** of condition
- **Risk assessment**
- **Education**

Simon – progress and discharge from hospital

- Steadily improved
- Emerged from PTA
- Reduction in language errors
- Improvement in sleep-wake cycle
- Eating and drinking
- Started to engage!!
- Started to develop insight although not specifics
- Improved relationships with family
- Simon and family very keen to go home!!
- BIRU no longer appropriate

Simon – progress and discharge from hospital

- Referred to community neuro team & referred to HITU
- Headway
- CPM with family and MDT
- Capacity assessment
- Decision made to go home with community rehab
- Reportedly doing well and as of yet has not returned to alcohol / drugs

Key points

- Walking wounded
- Don’t underestimate mild TBI
- MDT approach
- Different types of assessment
- Start SLT assessment early on whilst a patient is in PTA
- Provide therapy if possible whilst a patient is in PTA
- Individualised approach
- Thinking down the road…

Questions…

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