

Impact of Cognitive Deficits on Community Reintegration

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Presentation Objectives

- Identify (2) *cultural* characteristics unique to the polytrauma population.
- Identify (3) *cognitive deficits* found in the TBI population.
- Identify (3) *possible behavioral manifestations* of these *deficits* as observed *in the community setting*.



Community Reintegration

- Living Skills – ADLs and Instrumental ADLs
- Life/Family roles – Parent, Child, Student, Teacher, Employee etc.
- Social Participation
- Leisure/Wellness/Spirituality - Meaningful Activities
- Work/Volunteerism
- Education



Polytrauma Community Re-Entry Characteristics

- 60-70% will not return to full-time employment
- High divorce rate in post-acute care
- Difficulty from transition from Military Community to Civilian Community.
- Emphasis attitudinal shift from Community “Independence” to Community “Interdependency”
- Importance of developing BIRU peer support



Community treatment approach

- Emotionally lenient but clinically disciplined
- Community safety contract

(S. P. A. R. - “Stop, Seek Safety, Peer Support, Ask for Help, Return Home”)

- Discharge planning begins at point of admission



Cultural characteristics of the polytrauma population

- BI-MODAL Distribution
- Habilitation vs. Rehabilitation??
- Military Culture-VERY Important!
(Sensitivity Training for Staff)



Cognitive Deficits after Brain Injury

- Impaired Attention/Concentration
- Memory Problems and Difficulty with New Learning
- Executive Control Dysfunction
- Communication Problems



Attention/Concentration

- Selective attention (ability to focus & sustain attention on one thing)
- Alternating attention (ability to shift attention between two things)
- Divided attention (ability to attend to more than one thing at a time)



Example of Difficulty with Attention

Let's buy Doritos.
Wow! How many
different types are
available???

So many choices!
It is mind-boggling!
It's easy to get distracted.



Memory and New Learning

- “**Sensory Memory**” is the initial processing of incoming information through sensory modalities (i.e. visual, auditory, tactile, olfactory, or kinesthetic).
- “**Short Term Memory**” or working memory as it is also called, has a very limited storage capacity for incoming information. You are likely to lose any recently received information to incoming new information very quickly, unless it is stored adequately. Therefore we use strategies such as using PDAs, IPAQs etc. to encode and store the information, which can be retrieved later as needed.
- “**Long Term Memory**” or permanent memory is where the encoded and stored information from our Short Term Memory becomes a permanent record of our experience.



Impact of Memory Deficits

- Impacts inability to integrate newly learned information
- Impacts lifestyle routines, roles and relationships



Executive Skills include:

- Initiation/Goal selection
- Planning/Sequencing
- Executing
- Time management
- Problem solving
- Self-Awareness
- Self-monitoring & Error correction



Executive Control Dysfunction

- Impaired insight/judgement
- Poor self awareness
- Poor self monitoring and error correction
- Poor time management



PEAT

- **Planning and Execution Assistant and Trainer**

Artificial intelligence developed for **NASA robots** compensates for **executive function impairments** including **initiation, planning, and error correction.**



Communication/Pragmatics

- **Communication/Language Skills**
 - Verbal skills/ Speaking abilities
 - Understanding written and verbal instructions .
- **Social Skills/Pragmatics**
 - *Sending Skills* how we communicate verbally & non-verbally to others around us.
 - *Receiving Skills* how we interpret verbal/non verbal communication from others and understand it in the context of our current social situation.



Impaired Communication/Pragmatic Skills

– Examples of communication/Language Deficits

- Expressive and Receptive aphasia
- Dysarthria
- Agraphia
- Acalculia

– Examples of Poor Pragmatic Skills

- Interrupting
- Getting up and leaving a discussion before it has ended
- Talking on the cell phone while sitting in group lectures



CONCLUSION

- Skimmed the surface
- “THAT” Nurse - anecdote



QUESTIONS



References

- (Traumatic Brain Injury Independent Study Course, (2004). Sponsored by VA EES; “Post-Acute/Chronic Sequelae: Cognitive Problems, 5, 73-82.)
- Social Skills After Brain Injury “Tip Card’ written by H. E. Jacobs, PhD. Defense and Veterans Brain Injury Center www.dvbic.org
- www.brainaid.com

