Functional Treatment for Active-Duty Service Members and Veterans with Mild Traumatic Brain Injury

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Disclosure

Financial: None. I have not received any compensation from test, treatment or application developers or publishers. These recommendations are based off my clinical experience.

Non-Financial: I currently serve as Vice-Chair on the Board of Brain Injury Services, a non-profit serving brain injury survivors in DC, MD, and VA. I also serve on the Board of Directors for This is My Brave, a non-profit organization focused on sharing stories of mental illness and addiction.

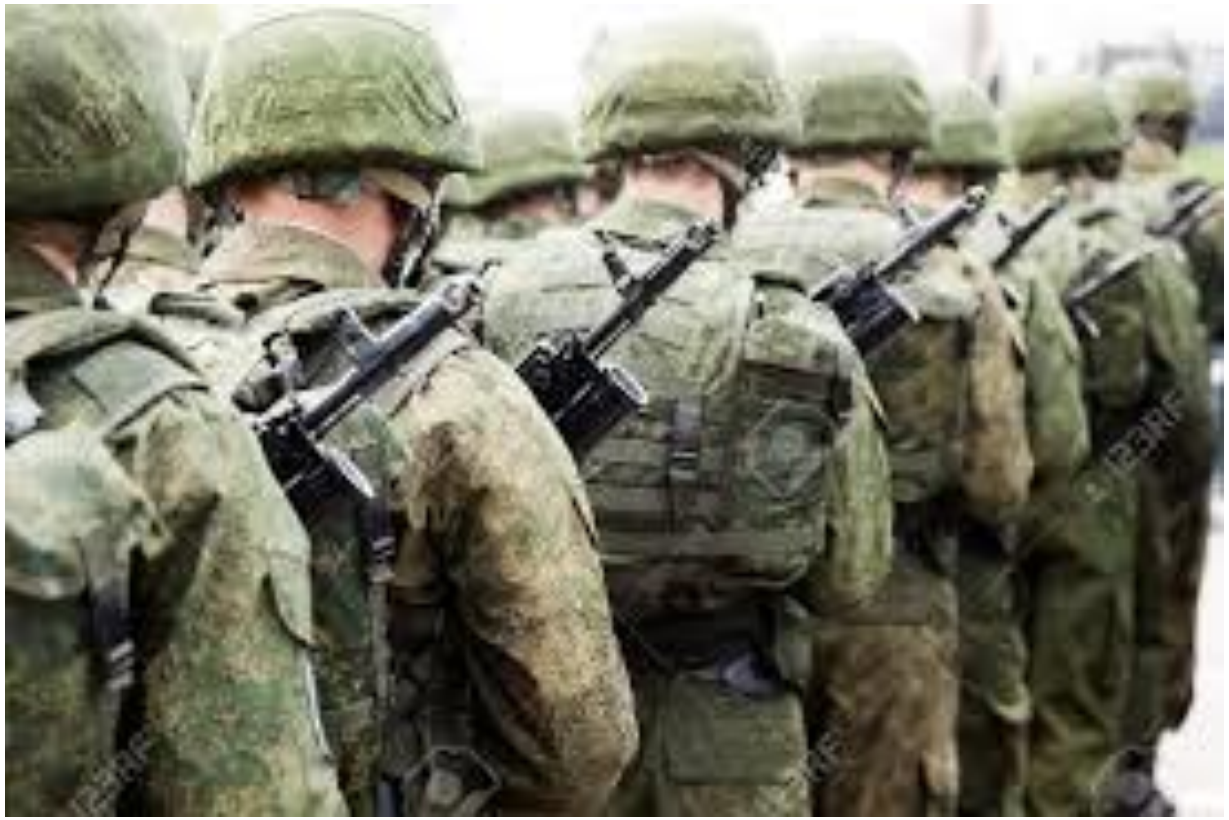
Objectives

After this course, participants will be able to:

- Identify what makes Service Members (SMs) and Veterans unique patients.
- Identify typical symptoms of mTBI.
- Identify the key elements to a thorough interview of a patient with military history.
- Identify possible concomitant symptoms and diagnoses in Service Members and Veterans with mTBI.
- List three functional treatment recommendations for Service Members and Veterans with mTBI.

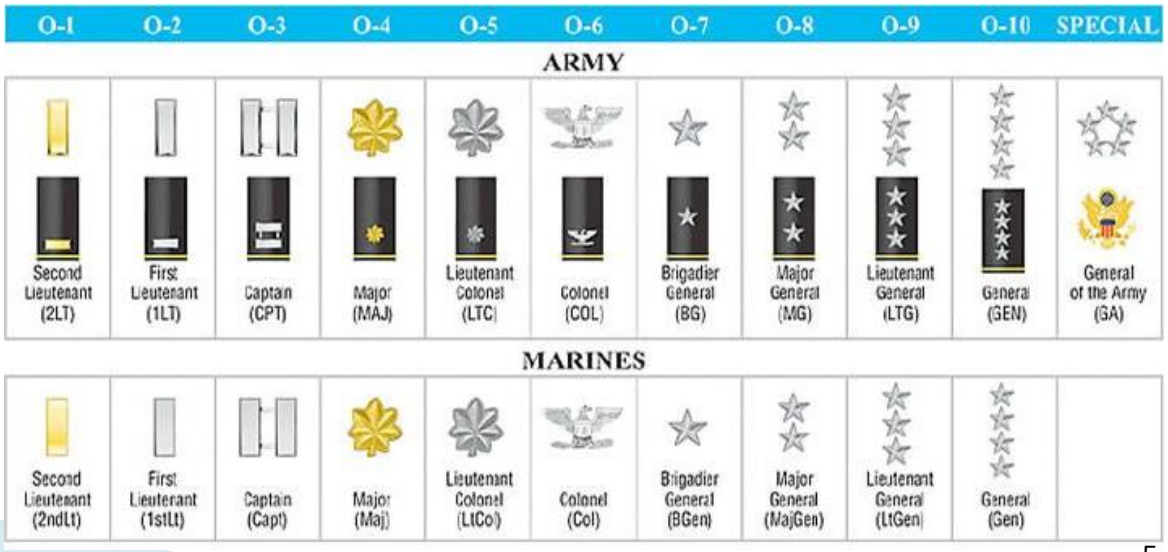
What Makes These Patients Unique?

- Military Culture



What Makes These Patients Unique?

- Just because you've seen "American Sniper" doesn't mean you understand the military and what your patient has experienced
- Get to know the rank structure
  - http://www.defense.gov/About-DoD/Insignias/Officers
  - http://www.defense.gov/About-DoD/Insignias/Enlisted



Terms of Engagement

- What is a Service Member vs. a Veteran?
  - A Service Member is currently Active Duty in the military. This applies not only to current, active duty military but also to National Guard or Reserve members who have been activated
  - A Veteran served honorably on active duty and has either been honorably and/or medically discharged or has retired

Terms of Engagement

- Soldiers
- Marines
- Wingmen/Airmen
- Sailors

Terms of Engagement

Acronyms, Acronyms, Acronyms!

- Department of Defense (DoD)
- Veterans Affairs (VA)
- Military Health System (MHS)
- Operation Iraqi Freedom (OIF)
- Operation Enduring Freedom (OEF)
- Service Member (SM)
- Improvised Explosive Device (IED)
- United States (US) Air Force (USAF)
- US Army (USA)
- US Navy (USN)
- US Marine Corps (USMC)
- Military Occupational Specialty (MOS)
  - SEAL (an acronym in itself!), 0311 (Marine Corps MOS for infantry/rifleman)

Military Patient Interview

- MOS
- Combat history
  - Blast Injuries
- Education history
- Patient's description of symptoms and functional examples
- Goals for future and treatment

“Typical” Symptoms of mTBI

- Attention
- Memory
- Executive Functioning
- Complex Problem Solving
- Verbal Fluency
- Stuttering

Concomitant Factors

- Psychological Health
  - Personality disorders
  - Depression
  - Anxiety
  - Posttraumatic stress disorder (PTSD)
- Moral Injury
- Substance Use Disorder
- Family Stressors
- Chain of Command Stressors
- Chronic Pain

mTBI and Cognitive Load

- What is cognitive load?
- Why is this important for my patients?
- Education, education, education!

Evaluation

Multiple assessments available to evaluate symptoms. Recommendations by area of deficit are:

- Executive Functioning
  - Behavioral Assessment of Dysexecutive Syndrome (BADS)
  - Functional Assessment of Verbal Reasoning and Executive Strategies (FAVRES)
- Attention
  - Test of Everyday Attention (TEA)
  - Attention Process Training Test (APT)
- Memory
  - Rivermead Behavioural Memory Test (RBMT-III)

Evaluation

- Word Finding/Language
  - Boston Naming Test
  - Subtests of the Woodcock Johnson III Tests of Cognitive Abilities
- Stuttering
  - Stuttering Severity Instrument-IV (SSI-IV)

Functional Assessment

- Ask the patient to use an internal memory strategy (or external depending on level of functioning), to recall 5 locations you provide
- Take the patient into an unfamiliar environment and ask them to find these locations, while observing attention, memory, pragmatics, etc. and any signs/symptoms of anxiety
- Increase or decrease task complexity based on patient

Treatment and Evaluation for Specific Symptom Areas

Attention

- Types of Attention
  - Focused
  - Sustained
  - Selective
  - Alternating
  - Divided

Attention Treatment Ideas

- Attention Process Training (APT) tasks
- Scavenger hunt
- Cancellation tasks
- Reading in a distracting environment
- MOS specific tasks

Memory

- What did your patient use for memory compensation prior to injury?
- Treatment goals should be dependent on functional, patient-driven future goals

- Types of memory:
  - Prospective
  - Short Term
  - Working Memory
  - Long Term (implicit, explicit, etc.)

Memory

Compensatory Strategies

- Internal
  - Acronyms
  - Association
  - Mnemonics
  - Visualization
  - Repetition
  - Routines
  - Chunking
- External
  - Technology (phones, apps, tablets, etc.)
  - Writing things down (white boards, chalk boards, etc.)
  - Visual cues
  - Lists
  - Voice messages

PEG Activity

1. Gun
2. Zoo
3. Tree
4. Door
5. Hive
6. Stick
7. Heaven
8. Gate
9. Wine
10. Hen

Memory Treatment Ideas

- Ask patient to email therapist three things at three separate times (e.g., date of birth at 1300, their last appointment of the day at 1800, their rank at 0800 the following morning)
- Ask patient to brainstorm and then utilize an external memory strategy to assist with medication management or appointment recall (e.g., apps, pill boxes, etc.)
- Have patient read an article in the morning and summarize the article to partner or spouse at the end of the day

Executive Functioning

- Patients present with difficulty planning and organizing tasks, initiating tasks, completing tasks
- Patient may have difficulty inhibiting responses (less filter!) and decreased insight
- Involves ability to sustain attention on a single task, working memory, as well as pragmatic skills

Executive Functioning Treatment Ideas

- Goal setting and planning
- Scavenger hunt
- Working memory functional tasks (e.g., dual communications example)
- Discuss projects in the home, involving spouse, if possible, to develop project completion plans and ways to motivate the patient to complete tasks

Verbal Fluency/ Word Finding

- Many patients report mild word finding difficulties following mTBI
  - “tip of the tongue” or “I just can’t get the word out”

- Not all standardized word finding evaluations will pick up the subtle word finding changes patients report

Verbal Fluency Treatment Strategies

- Visualization
- Alphabet scanning
- Circumlocution

- Patient brief to the treatment team (also incorporates all other areas of cognitive symptoms!)

Stuttering

- Although there is debate about the nature of stuttering following mTBI, patients can present with characteristics of stuttering

- Be sure to observe the patient's speech and language not only in the therapy room but outside to observe functional communication

Types of Stuttering

- Developmental
- Neurogenic
- Psychogenic

Stuttering Treatment

- Typical course of stuttering treatment
  - Start with education about fluency strategies (e.g., easy onset, slowed rate, etc.)
  - Encourage use of strategies at the syllable level, moving progressively through treatment hierarchy based on goals (e.g., patient 90% accurate with easy onset at the syllable level, progress to reading words, etc.)
  - Progress to spontaneous speech in various environments

Why the Overlap?

- Many of these functional treatment ideas are appropriate for any and all symptoms of mTBI (e.g., scavenger hunt or brief to staff)

- Why? Because symptoms of mTBI are more global in nature, as opposed to the focal symptoms of other types of head injury

Summary of Functional Treatment Ideas

- Scavenger hunt (attention, memory, executive functioning, fluency, etc.)
- Reading (attention, memory, language, executive functioning)
- Presentation/brief to treatment team or peers (attention, memory, executive functioning, verbal fluency)
- Establishing routines

Considerations for Treatment Planning

- Consider the patient's MOS and incorporate aspects into treatment planning
- Does your patient want to stay active duty or leave the military?
- Is your patient a Veteran who wants to enter the civilian work force?

Case Studies

Military Service Member Case Study

- 32 y/o Navy Corpsman
- Two combat deployments
- PTSD and postconcussion syndrome
- Stuttering began in 2010, following “serotonin sickness”

Military Service Member Case Study

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Chronic Traumatic Encephalopathy

CTE

“Chronic Traumatic Encephalopathy (CTE) is a progressive degenerative disease of the brain found in people with a history of repetitive brain trauma (often athletes), including symptomatic concussions as well as asymptomatic subconcussive hits to the head that do not cause symptoms.”

https://www.bu.edu/cte/about/frequently-asked-questions/

CTE

- Symptoms
  - Memory loss
  - Parkinsonianism
  - Confusion
  - Aggression
  - Depression
  - Suicidality
  - Progressive Dementia

CTE Debate

- Diagnosis and Treatment
- Treating CTE
- Education for patients and family

Contact Information

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