

Designated Doctor Case-Based Webinar Module 6

Non – MSK

Maximum Medical Improvement and
Impairment Rating (MMI & IR)

Central Nervous System (Ch4)

Mental and Behavioral (Ch14)

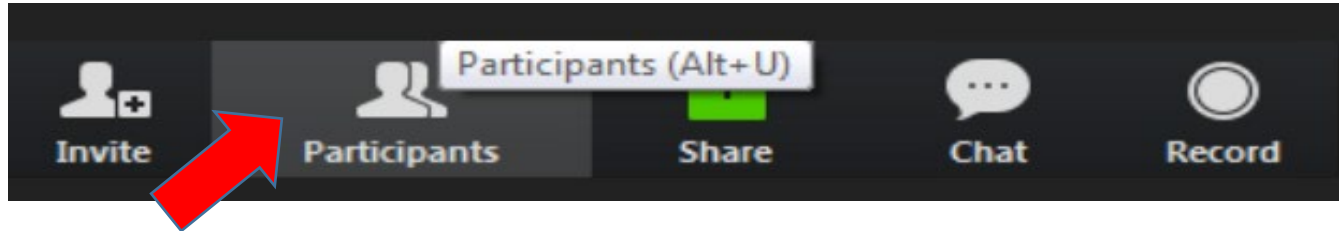
Disclaimer

The material presented in this workshop is made available by the Texas Department of Insurance - Division of Workers' Compensation (TDI-DWC) for educational purposes only. The material is not intended to represent the only method or procedure appropriate for the medical situations discussed. Rather, it is intended to present an approach, view, statement, or opinion of the faculty, which may be helpful to others who face similar situations.



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Ensure your name (not phone # or initials) is shown on the Participant List for CME and attendance purposes. If not, do the following to rename:

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Asking questions

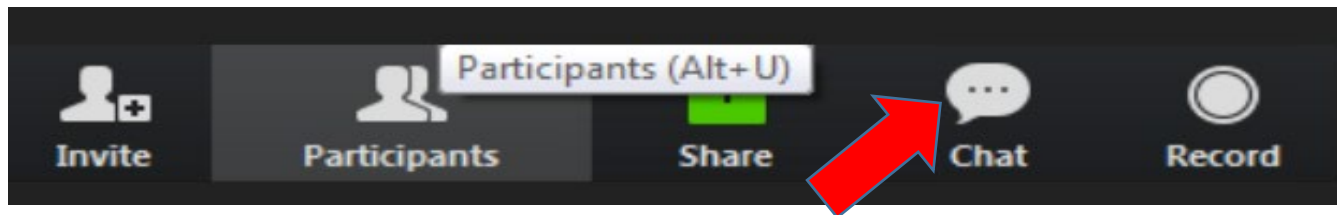
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Non-Musculoskeletal MMI/IR

Cases

Traumatic Brain Injury (TBI)

Post Traumatic Stress Disorder (PTSD)

Pearls related to Chapter 4 and 14



TBI & Mental and Behavioral

What makes these cases difficult is that there is a heavy emphasis on SYMPTOMS.

- Symptoms of concussion forms of TBI can overlap with symptoms present in the healthy population, those with other forms of trauma and those with mental and behavioral disorders. *
- Many post-traumatic claims of mental and behavioral dysfunction are based on "*no symptoms before DOI and now symptoms after DOI*" – even when there are clear indicators otherwise.



TBI & Mental and Behavioral

Applicable to all MSK claims, but also those we will be discussing today:

- AMA Guides, Chapter 14, page 298 states that, ***"Certain symptoms, such as headache, low back pain, peripheral neuralgia, and vertigo are notoriously difficult to assess."***
- Additionally, ***"malingered or exaggeration of symptoms may be suspected when the individual's symptoms are vague, ill-defined, overdramatized, inconsistent or not in conformity with signs and symptoms known to occur."***



TBI & Mental and Behavioral

What makes these cases difficult is that there is a heavy emphasis on SYMPTOMS.

- These cases require high clinical acumen.
- You do not have to be a TBI specialist or psychiatrist to know what to look for in a claimant's medical history or the record chronology – **AND be willing to look for and document.**
- **YOU MUST** have some basic knowledge of the evidence based medicine
- You may obtain additional information from Neuropsychologic assessment*



TBI & Mental and Behavioral

The FIVE most common types of mental disorders presenting in medical populations (without injury):

- Depressive Disorders,
- Anxiety Disorders,
- Somatoform Disorders,
- Alcohol (intoxication, withdrawal or other) related Disorders
- Eating disorders

*Spitzer RL, Williams JBW, Kroenke K, Linzer M, DeGruy FV, Hahn SR, Brody D, Johnson JG. **Utility of a new procedure for diagnosing mental disorders in primary care: The PRIME-MD 1000 study.** JAMA 1994;272:1749-1756.*



TBI & Mental and Behavioral

Major depression is one of the most common mental disorders in the United States. In 2020

- An estimated 21.0 million adults in the United States had at least one major depressive episode.
- 8.4% of all U.S. adults - adult females (10.5%) and adult males (6.2%).



TBI & Mental and Behavioral

Generalized Anxiety Disorder (GAD)

- Affects 6.8 million adults or 3.1% of the U.S. population (with only 43.2% are receiving treatment).
- Women are twice as likely to be affected as men.
- GAD often co-occurs with major depression.

An estimated 19.1% of U.S. adults had any anxiety disorder in the past year.

TBI & Mental and Behavioral

Somatoform disorders are a group of psychiatric disorders that result in unexplained physical symptoms.

- Prevalence rates for somatoform disorders in the general population range from 11 to 21% in younger, 10 to 20% in the middle-aged, and 1.5 to 13% in those > 65 years age groups.
- This class of disorders is characterologic. It is not a condition that develops as a result of a life event.



TBI & Mental and Behavioral

Somatoform disorders (continued)

- Rather, the life event is perceived and expressed differently than those without these disorders.
- Individuals that have real injuries can still have a somatoform disorder
- Those that do not meet the strict psychiatric diagnostic criteria (DSM-5) for a somatoform disorder, can be said to have “*somatic preoccupation*”.



TBI & Mental and Behavioral

Somatoform disorders (continued)

“symptoms of somatoform disorders often lead to general health anxiety; frequent or recurrent and excessive preoccupation with unexplained physical symptoms; inaccurate or exaggerated beliefs about somatic symptoms; difficult encounters with the health care system; ...



TBI & Mental and Behavioral

Somatoform disorders (continued)

...disproportionate disability; displays of strong, often negative emotions toward the physician or office staff; unrealistic expectations; and, occasionally, resistance to or noncompliance with diagnostic or treatment efforts”.

Oyama O, Paltoo C, Greengold J. **Somatoform disorders.** Am Fam Physician. 2007 Nov 1;76(9):1333-8.



TBI and Mental & Behavioral

In determining mental and behavioral disorders or traumatic brain injury, it is important to consider that depression and anxiety disorders and somatoform disorders are common in the general population.

A. True

B. False

TBI and Mental & Behavioral

Be aware of **Functional Somatic Syndrome (FSS)**

- This term applied to several related syndromes characterized *"more symptoms, suffering, and disability than by consistently demonstrable tissue abnormality."*
- Individuals with FSS ***"have explicit and highly elaborated self-diagnoses, and their symptoms are often refractory to reassurance, explanation, and standard treatment of symptoms"***.
- Higher-than-expected prevalence of psychiatric comorbidity.

Barsky AJ, Borus JF. **Functional somatic syndromes.** June 1999. *Annals of Internal Medicine.* 130(11):910-921.]



TBI and Mental & Behavioral

- SYMPTOM MAGNIFICATION and Non-Organic signs can be caused by subconscious factors or conscious deception.
- Be aware of these psychological terms:
 - Secondary Gain
 - Tertiary Gain
 - Malingering
- **YOU CANNOT TELL** from the behavior whether it is subconscious or conscious deception.



TBI and Mental & Behavioral

Secondary Gain (subconscious)

- *"An interpersonal or social advantage attained by the patient as a consequence of the illness".*
[Freud]
- *"Acceptable or legitimate interpersonal advantages that result when one has the symptom of a physical disease."* [Barsky]
 - The advantage may be increased attention, disability benefits, or release from unpleasant responsibilities, obtained as a result of having an "illness" / injury.*
- **Such gains are secondary in that they are derived from others' reactions to the behavior instead of from causal factors.** [Fishbain]



TBI and Mental & Behavioral

Tertiary Gain

- Tertiary gain was first described and defined by Dansak.
- May be conscious or subconscious.
- Gains sought or attained from a patient's illness by someone other than the patient; a family member, treating doctors, claimant attorneys
 - Family enjoys the changes in roles
 - Family sympathy from social network
 - Family access to medication
 - Financial gain for the family
 - Doctor (and at times attorney) can be the "hero"
- [Dansak D: On the tertiary gain of illness. Compr Psychiatry 14:523-534, 1973](#) 12. [Eisendrath S J: Factitious illness](#)



TBI and Mental & Behavioral

Malingering (conscious deception):

- Malingering is not considered a psychiatric diagnosis, but the DSM-5 manual does state it is a condition that may be a focus of clinical attention.
- It is the **intentional production of false or grossly exaggerated physical or psychological problems.**
- Motivation for malingering is usually external
 - Avoiding military duty, prison or work,
 - Obtaining financial compensation,
 - Evading criminal prosecution
 - Obtaining drugs



TBI and Mental & Behavioral

Individuals that demonstrate symptom magnification and non-organic signs are all malingerers.

- A. True
- B. False



TBI and Mental & Behavioral

Individuals that demonstrate symptoms magnification and non-organic signs are less likely to respond to appropriate treatment the same as those without such signs.

- A. True
- B. False



TBI and Mental & Behavioral

Considering these facts, critical thinking is required to determine work-relatedness of cognitive or psychological symptoms.

- Are they part of the compensable injury?
- Are there alternate explanations of pre-existing conditions that are resulting in failure to improve functionally?
- If these were caused by a work related event, do these symptoms rise to a specific diagnosis, and are expected to be permanent and result in impairment?

Neuropsychological Testing

- **It is not enough to rely upon subjective paper/pen tests. Examples:**
 - Mini-Mental Status Evaluation (MMSE)
 - Montreal Cognitive Assessment (MoCA)
 - Beck Depression Inventory (BDI)
 - Beck Anxiety Index (BAI)
 - Generalized Anxiety Disorder 7-item (GAD-7)
 - Patient Health Questionnaire 9 (PHQ-9)
 - PCL – 5 – for PTSD
- **These are useful screening tools for clinicians, but do not have any validity criteria for the purpose of litigated claims.**

Neuropsychological Testing

- AMA Guides in section 4.1a and 4.1c, state, the GOAL of testing is to ***"objectively assess any change in / loss of functioning due to brain injury in order to have an accurate rating"***
- Chapter 14 also notes, ***"neuropsychological assessment . . . may be useful in determining deficiencies in brain functioning, particularly in individuals with subtle signs such as those that may be seen in traumatic brain injuries."***



Neuropsychological Testing

Neuropsychological Testing is performed to **OBJECTIVELY** assess:

- **Validity of the diagnosis**
 - Concussion? PTSD? Chronic Depression? Somatoform Disorder?
 - Alternate Explanation for collection of symptoms / complaints
- **Current level of function**
 - Help to assess if at MMI
 - Help to determine IR.



Neuropsychological Testing

Elements of Neuropsychological Testing:

- MMPI – 2 – RF or PAI (Personality Testing):
 - Assess mood / emotions,
 - Coping strategies,
 - Somatization,
 - Behavioral and interpersonal functioning,
 - Substance abuse,
 - Exaggeration
 - Minimization - "Good Old Days" Bias
 - Diagnosis threat
 - Malingering



Neuropsychological Testing

Minnesota Multifactorial Personality Inventory (MMPI – 2 – RF or the newest MMPI – 3)

- The X-axis has 14 scales.
 - The first four **content scales** judge the validity of the test attempt
 - The 10 remaining scales known as **clinical scales** are designed to measure for the presence of psychiatric syndromes
- The Y-axis statistically standardizes the grading received on each scale in a range of T-scores from 0 to 120.
 - A T-score greater than 70 indicates psychopathy in that category.

The Personality Assessment Inventory (PAI)

- A multiscale, self-administered questionnaire designed to provide a comprehensive assessment of personality and psychopathology



Neuropsychological Testing

Elements of Neuropsychological Testing (cont):

- Specific tests with embedded validity criteria.
 - Victoria Symptom Validity Test (VSVT)
 - Dot Counting Test (DCT)
 - Portland Digit Recognition Test (PDRT)
 - Rey 15 Item Test
 - Test of Memory Malingering (TOMM)
 - Structured Inventory of Malingered Symptomatology
 - Word Memory Test (WMT)

Neuropsychological Testing

Sweet JJ, Heilbronner RL, Morgan JE, Larrabee GJ, Rohling ML, Boone KB, Kirkwood MW, Schroeder RW, Suhr JA & Conference Participants (2021).

American Academy of Clinical Neuropsychology (AACN) 2021 consensus statement on validity assessment: Update of the 2009 AACN consensus conference statement on neuropsychological assessment of effort, response bias, and malingering.

The Clinical Neuropsychologist, 2021, Vol 35, No 6, 1053-1106.



Neuropsychological Testing

- **Consider whether Neuropsychological Testing is appropriate.**
- ***MAKE SURE THIS INFORMATION IS IN YOUR REPORT:***
 - *WHY testing was ordered*
 - *WHAT were the results of testing*
 - *HOW the results impacted your decision – medical decision making (MDM)*



Neuropsychological Testing

When results are obtained:

- YOU must still be aware of how to interpret and apply the guidelines for MMI and IR
- Neuropsychologists that are not MDs / DOs are not trained and certified in assessing MMI / IR

Neuropsychological Testing

When results are obtained

- **Your opinion must be based on:**
 - Evidence in the records
 - Certifying Exam
 - Testing Results
 - Evidence Based Medicine #



Neuropsychological Testing

For a case where you order neuropsychologic testing, it is sufficient to attach a copy of the report and document the MMI date and IR assigned by the neuropsychologist.

A. True

B. False



Designated Doctor Neuropsychological Assessment

Elements of Medical History for TBI / Mental & Behavioral Disorder:

- **Expanded Medical History**
 - BMI and historical BMI
 - Any other medical issues that could produce symptoms that can overlap with TBI symptoms or with psychological disorders
- **Complete medication list for WC AND non-WC**



Neuropsychological Testing

Elements of Medical History for TBI / Mental & Behavioral Disorder:

- **Psychological History:**
 - Prior psychological Treatment (counseling, meds, hospitalizations)
 - History of abuse (physical, mental, or sexual)
 - Social Habits (Smoking, Alcohol – quantity, frequency and length of time)
 - Recreational Drugs (THC or other street drugs)



Case 1 - *Traumatic Brain Injury*

History of Injury

Injured employee fell 20 feet from scaffolding

Injuries sustained were:

- Traumatic brain injury with GCS 7/15
- Initial CT imaging of the head demonstrated
 - Small left temporal epidural hematoma with acute depressed (4 mm) skull fracture
 - Right frontal / temporal lobe hemorrhagic contusion (contra coup lesion)
 - No diffuse swelling or midline shift



Case 1 - *Traumatic Brain Injury*

History of Injury

- Initial GCS was 7/15
- Intubated and treated in ICU for 14 days
- Increased intracranial pressure (ICP) treated with mannitol.
- Craniotomy to elevate skull fracture.
- After 36 hours of LOC, was confused and intermittently combative, so he remained sedated
- On prophylactic Keppra x 14 days
- Initiated PT, OT, and Speech / Language Therapy as level of responsiveness improved



Case 1 - *Traumatic Brain Injury*

History of Injury

- Transitioned from NICU to the floor, inpatient rehabilitation for 4 weeks, then CARF accredited out-patient cognitive behavioral therapy for 6 months – completed 9 months post injury
- Over the year of formal treatment, confusion / orientation, impulsivity and safety awareness improved, but with some residual cognitive difficulties and mood lability.



Case 1 - *Traumatic Brain Injury*

History of Injury

- At ~ 6 months after the DOI, the claimant had a witnessed Grand Mal seizure while in therapy. He subsequently suffered intermittent minor focal motor seizures in the right upper extremity
- EEG confirmed abnormal seizure activity in the left temporal lobe
- Neurologist started the claimant on different anti-seizure medications, modifying over the following six to eight months.



Case 1 - *Traumatic Brain Injury*

History of Injury

- There were no recurrences of Grand Mal seizures
- After titration of meds, there were intermittent, brief, mild focal motor seizures.
- At 12 months post injury, is PM&R doctor switched to every 6 month follow up.
- At 18 months post injury, the neurologist switched to every 6 month follow up.



Case 1 - *Traumatic Brain Injury*

DD Evaluation – 18 months post-DOI

- The IE has returned to work with some changes in duties; keeps a notebook and uses his phone as a memory aid.
- He reports he functions at work, as the things he does are based on prior / old memory
- He has more difficulties in new situations or social situations, and can make him anxious.
- He reported to the DD that by returning to work and figuring out how to compensate, he believes he has improved; he was promoted a few weeks prior to the exam.



Case 1 - *Traumatic Brain Injury*

DD Evaluation - EXAM

- Alert and oriented x 4
- Mood / affect within normal limits, but appears anxious
- Speech is without dysarthria.
- Minimal difficulty following multi-step commands
- Mild difficulty naming objects, and remembering spans of numbers.
- No other obvious receptive or expressive aphasia



Case 1 - *Traumatic Brain Injury*

DD Evaluation - EXAM

- Cranial nerve function intact
- Gait and Cerebellar Exam remarkably normal
- No sensory / motor deficits
- No spasticity, hyperreflexia, clonus, and negative Hoffman's / Babinski test
- No evidence of a movement disorder



Case 1 - *Traumatic Brain Injury*

DD Evaluation

- **DD considered the medical evidence in the records, the certifying exam and the EBM.**
- **Ordered Neuropsychological evaluation**
 - Results were a valid representation with good effort, consistent with imaging and the records.
 - Results consistent with residual **mild cognitive deficit** and **minimal anxiety in social situations.**



Case 1 - *Traumatic Brain Injury*

DD Evaluation - EXAM

Ordered MRI with contrast including IAC

- Imaging was compared to the CT of the head at acute care hospital
- There were no acute / subacute findings
- There was encephalomalacia seen at the inferior lateral **right** temporal area
- The skull fracture was healed and aligned
- No residual abnormalities in the brain on the left.

Case 1 - *Traumatic Brain Injury*

**What should the
DD consider as the
compensable injury?**



Case 1 - *Traumatic Brain Injury*

Let's look at the facts of the case and the evidenced-based medicine





Traumatic Brain Injury

Traumatic Brain Injury (TBI):

- The current, specific terminology for a head injury event that results in dysfunction of the brain.
- **Traumatic brain injuries can be caused by:**
 - Direct trauma
 - An acceleration / deceleration (A/D) force to the head

***Not EVERY DIRECT TRAUMA or A/D
EVENT CAUSES a TBI!***



Traumatic Brain Injury

The American Congress of Rehabilitation Medicine (ACRM) provided a **Position Statement for Traumatic Brain Injury** (Menon et al 2010).

- This is defined as “*an alteration of brain function or other evidence of brain pathology caused by an external force*”.
- There are specific associated clinical findings of alteration of brain function.

Menon DK, Schwab K, Wright DW, Maas AI; Demographics and Clinical Assessment Working Group of the International and Interagency Initiative toward Common Data Elements for Research on Traumatic Brain Injury and Psychological Health. Position statement: definition of traumatic brain injury. Arch Phys Med Rehabil. 2010 Nov;91(11):1637-40.



Traumatic Brain Injury

ACRM Position Statement for TBI (2010)

The clinical findings of alteration of brain function entail:

1. Any period of loss of, or decreased loss of consciousness
2. Any loss of memory for events immediately before (retrograde amnesia) or after the injury (**anterograde amnesia**)
3. Any alteration in mental state at the time of the injury (confusion, disorientation, slow thinking etc.)
4. Neurologic deficits (weakness, loss of balance, change in vision, dyspraxia, paresis / plegia, sensory loss, aphasia etc.)

Traumatic Brain Injury

CLINICAL CRITERIA for TBI

Criteria	MILD	MODERATE	SEVERE
Structural imaging	Definition Dependent ^{**} _—	Normal or abnormal	Normal or abnormal
Loss of consciousness (LOC)	0-30 minutes	> 30 min and < 24 hrs	> 24hrs
Alteration of consciousness (AOC) ^{**} _—	A moment up to 24 hours ^{**}	> 24 hours. Severity based on other criteria	
Post Traumatic amnesia (PTA)	0-1 day	> 1 and < 7 days	> 7 days
GCS (BEST score in first 24 hours)	13-15	9-12	< 9

** and ** on next slide*



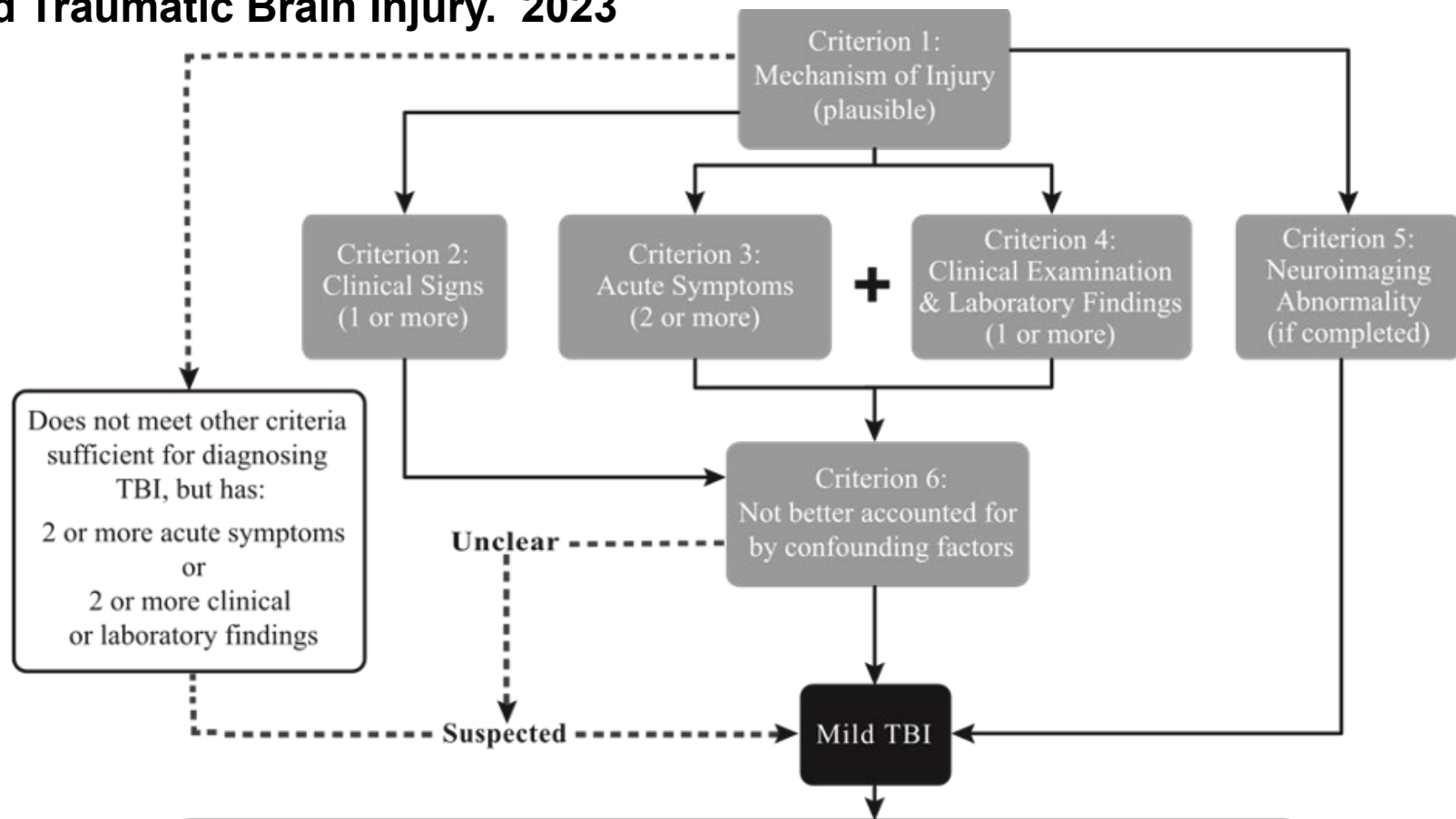
Traumatic Brain Injury

Updated in 2023!

Silverberg ND, Iverson GL. ACRM Brain Injury Special Interest Group Mild TBI Task Force members: Zafonte R, Zasler ND, Zemek R, et al. **The American Congress of Rehabilitation Medicine Diagnostic Criteria for Mild Traumatic Brain Injury.** *Archives of Physical Medicine and Rehabilitation.* Volume 104 Issue 8 Pages 1343-1355 (August 2023) DOI: [10.1016/j.apmr.2023.03.036](https://doi.org/10.1016/j.apmr.2023.03.036)

Traumatic Brain Injury

The American Congress of Rehabilitation Medicine Diagnostic Criteria for Mild Traumatic Brain Injury. 2023



The 'Mild' qualifier is not used if any of the injury severity indicators listed below are present.

- Loss of consciousness duration greater than 30 minutes.
- After 30 minutes, a Glasgow Coma Scale (GCS) score of less than 13.
- Post traumatic amnesia greater than 24 hours.

Traumatic Brain Injury

- **Mild traumatic brain injury (TBI) is diagnosed when, (Criterion 1) there is a biomechanically plausible mechanism of injury AND the criteria (i-iii) listed below are met:**
 - i. (Criterion 2) One or more **clinical signs** attributable to brain injury.
 - ii. (Criterion 3) At least 2 **acute symptoms** AND (Criterion 4) At least one **clinical** or **laboratory finding** attributable to brain injury.
 - iii. (Criterion 5) **Neuroimaging** evidence of TBI...



Traumatic Brain Injury

Neuroimaging Qualifier:

- If neuroimaging is abnormal (Criterion 5), the qualifier mild TBI '*with neuroimaging evidence of structural intracranial injury*' may be used.
- When neuroimaging is completed and found to be normal, the qualifier mild TBI '*without neuroimaging evidence of structural intracranial injury*' may be used.

CONCUSSION: The diagnostic label "concussion" may be used *interchangeably* with "mild TBI" when neuroimaging is normal or not clinically indicated.



Traumatic Brain Injury

MILD Qualifier:

- The 'mild' qualifier is NOT used if ANY of the injury severity indicators listed below are present.
- Instead, traumatic brain injury (TBI) is diagnosed (without the 'mild' qualifier).
 - i. Loss of consciousness duration greater than 30 minutes.
 - ii. After 30 minutes, a Glasgow Coma Scale (GCS) of less than 13.
 - iii. Post-traumatic amnesia greater than 24 hours.
- ***This is very similar to the Table on Slide 54***



Traumatic Brain Injury

Criterion 2: Clinical Signs (Initial)

The injury event causes an acute physiological disruption of brain function, as manifested by one or more of the **clinical signs** listed below.

- i. Loss of consciousness immediately following injury
- ii. Alteration of mental status immediately following the injury (or upon regaining consciousness),
- iii. Complete or partial amnesia for events immediately following the injury (or after regaining consciousness).
- iv. Other acute neurologic sign(s)



Traumatic Brain Injury

Criterion 3: Acute Symptoms

The physiological disruption of brain function is manifested by 2 or more new or worsened symptoms from the list below.

- i. **Acute subjective alteration in mental status:** feeling confused, feeling disoriented, and/or feeling dazed.
- ii. **Physical symptoms:** headache, nausea, dizziness, balance problems, vision problems, sensitivity to light, and/or sensitivity to noise.
- iii. **Cognitive symptoms:** feeling slowed down, “mental fog,” difficulty concentrating, and/or memory problems.



Traumatic Brain Injury

Criterion 3: Acute Symptoms

iv. **Emotional symptoms:** uncharacteristic emotional lability and/or irritability.

- The symptoms may be from one or more categories (*but experiencing 2 symptoms within a single category is sufficient*).
- Other symptoms may be present, but they should not be counted toward Criterion 3.
- **The onset of acute subjective alteration in mental status occurs immediately following the impact or after regaining consciousness.**



Traumatic Brain Injury

Criterion 3: Acute Symptoms

The onset of other symptoms (physical, cognitive, and emotional) may be delayed by a few hours, but they nearly always appear less than 72 hours from injury.

Notes: Criterion 3 can be met by (1) review of acute care documentation of the injured person's acute symptoms, (2) interviewing the injured person about the first few days following injury; (3) having the injured person complete a self-report rating scale documenting symptoms during the first few days following injury; or



Traumatic Brain Injury

Criterion 4: Clinical Examination and Laboratory Findings

The assessment findings listed below can also provide supportive evidence of brain injury.

- i. Cognitive impairment on acute clinical examination.
- ii. Balance impairment on acute clinical examination.
- iii. Oculomotor impairment or symptom provocation in response to vestibular-oculomotor challenge on acute clinical examination.
- iv. Elevated blood biomarker(s) indicative of intracranial injury (*These would not be available in the typical WC mild TBI claim.*)



Traumatic Brain Injury

Criterion 5: Neuroimaging

Trauma-related intracranial abnormalities on computed tomography or structural magnetic resonance imaging.

Notes:

- **Neuroimaging is not necessary to diagnose mild TBI. [Especially if other criteria are met.]**
- Imaging's primary clinical role is to rule out head and brain injuries that might require neurosurgical or other medical intervention in an acute care setting.



Traumatic Brain Injury

Criterion 6: Not better accounted for by confounding factors

Confounding factors, including pre-existing and co-occurring health conditions, have been considered and determined to not fully account for the clinical signs, acute symptoms, and clinical examination and laboratory findings that are necessary for the diagnosis.

Case 1 - *Traumatic Brain Injury*

Considering the EBM and the facts of the case, what is the compensable Injury?

**Traumatic Brain Injury
Severe**

How does that affect decision making?

What might be expected as residuals?





Case 1 - *Traumatic Brain Injury*

A Severe > Moderate TBI is more likely to meet these Chapter 4, IR criteria:

- Permanent Disturbances of Consciousness
- Aphasia or Communication issues
- Major Motor or Sensory
- Movement Disorder
- Episodic Neurologic issues
- Sleep and Arousal Issues (Central Sleep Apnea)

Case 1 - *Traumatic Brain Injury*

Considering the compensable diagnosis and the evidence based medicine, what is the date of MMI for this case?





Case 1 - *Traumatic Brain Injury*

What is the date of MMI?

- A. 9 months**
- B. 12 months**
- C. 18 months**

Case 1 - *Traumatic Brain Injury*

Considering the compensable diagnosis and the evidence based medicine, what is the impairment rating for this case?



Case 1 - Traumatic Brain Injury

4.1 Central Nervous System - Cerebrum or Forebrain

(AMA Guides, Page 140)

9 Categories of Impairment

- Pick **most severe** of first five categories
 1. Disturbances of consciousness and awareness
 2. Aphasia or communication disturbances
 - 3. Mental status and integrative functioning abnormalities**
 4. Emotional/behavioral disturbances
 5. Special types of preoccupation or obsession





Case 1

Traumatic Brain Injury



Case 1- Traumatic Brain Injury

4.1 Central Nervous System

Cerebrum or Forebrain

(AMA Guides, page 140)

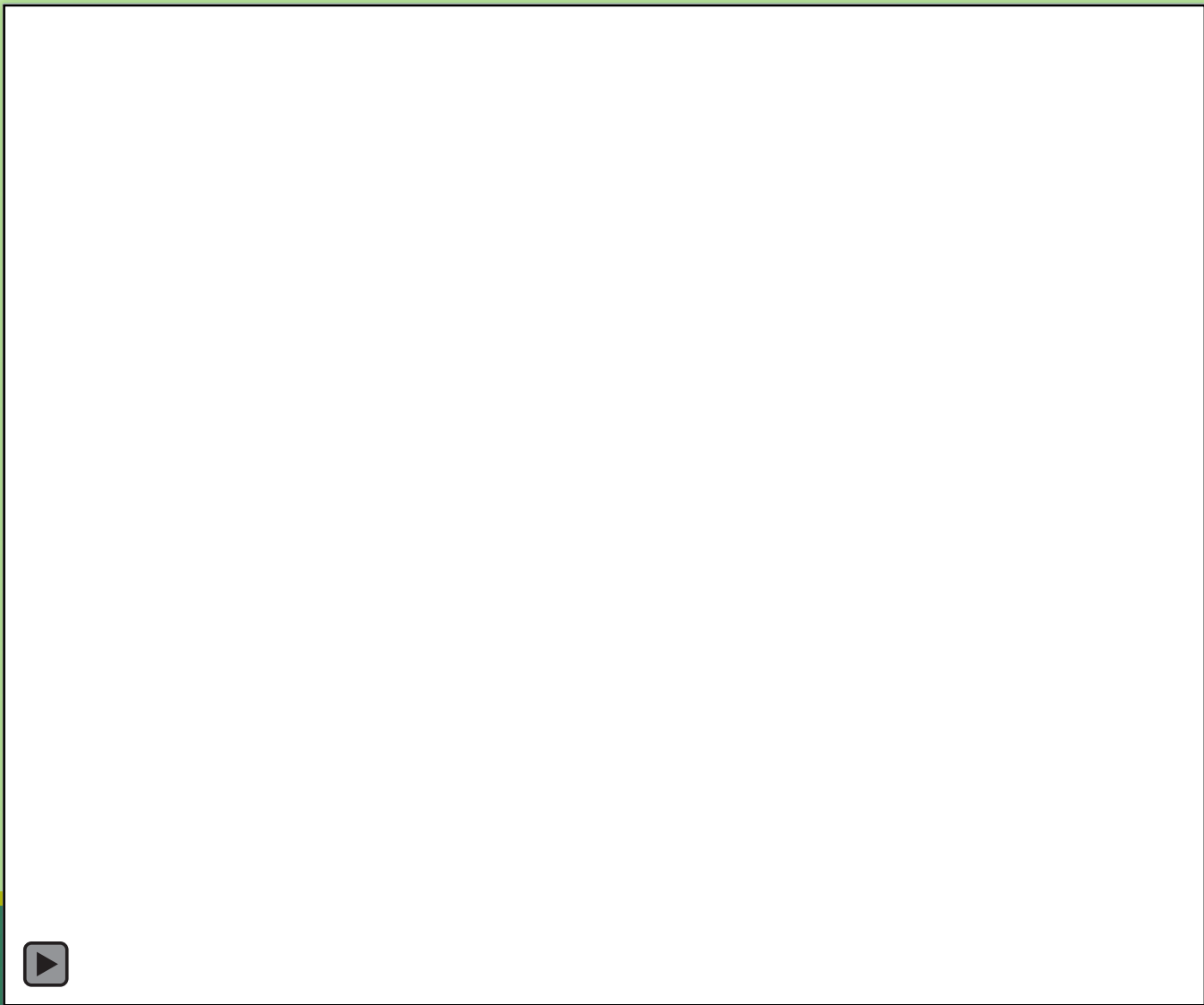
9 Categories of Impairment

- **Combine most severe of first five categories with any of last four categories**
 6. Major motor or sensory abnormalities
 7. Movement disorders
 - 8. Episodic neurologic disorders**
 9. Sleep and arousal disorders





Case 1-*Traumatic Brain Injury*



Case 1 - Traumatic Brain Injury

Mental Status Impairment

1% - 14% (Table 2) cw

Epilepsy / Seizures

0% -14% (Table 5)

= 1% WP - 26% WP

Select the IR percentage within the range that best fits clinical condition of the IE.

**EXPLAIN HOW & WHY YOU
CHOSE THE NUMBER IN THE
RANGE!**



Questions about Case 1?





Case 2 - PTSD

History of Injury


- Convenience store clerk robbed and assaulted at gunpoint
- Diagnosed and treated for PTSD
- Treatment included focused cognitive behavioral therapy and Lexapro SSRI
- Psychological evaluation at MMI 12 months post injury:
 - Complains of disrupted sleep due to nightmares about the robbery
 - Met criteria B - E for DSM-V diagnosis of PTSD



Case 2 - PTSD

DD Evaluation:

- Currently reports that therapy and medication have been somewhat helpful, but feels hopeless about future and disinterested in activities previously found enjoyable
- Wife reports he is "jumpy" and startles easily.
- Obsessively ensures that doors are locked and hypervigilant about knowing where wife is / that she is safe
- Mood highly irritable and fighting much more than normal with wife



Case 2 - PTSD

History of Injury

- Not spending as much time with friends, including weekly "guys night out"
- Wife also reports he has begun to drink 5-6 alcoholic beverages most evenings, when he previously abstained
- Able to perform most basic ADLs independently, but requires reminders ~ 25 % of the time
- Has returned to work in a different capacity, but is reported to have difficulty getting to work on time (different than prior job performance)



Case 2 - *PTSD*

History of Injury

DD refers for Psychological Testing. WHY?

- Validate if PTSD is the correct diagnosis.
- Criterion H of DSM-V is that there is no better – alternate explanations for the complaints
- Assess if MMI has been reached IF PTSD is correct
- Assign appropriate IR based on an OBJECTIVE assessment – claimant history alone is NOT reliable nor can be validated



Case 2 - PTSD

Psychological Testing:

- Testing was a valid representation of effort without overreporting or significant atypical symptoms.
- Results of clinical interview and testing, including MMPI-2-RF consistent with
 - DSM-5 criteria for PTSD
 - Emotional disturbance that "***impairs some, but not all***" useful functioning in the 4 spheres of:
 - ADLs,
 - Social
 - Concentration / pace
 - Adaptation



Case 2 - PTSD

UNLESS the Neuropsychologist is also a DD – do NOT defer your opinion to them

- Your opinion must be based on:
 - Evidence in the records
 - Certifying Exam
 - Testing Results
 - Evidence Based Medicine #
- ***Be FAMILIAR with the DSM-5 criterion of PTSD and other potential psychiatric diagnoses.***
- At times, the more appropriate diagnosis may be:
 - A Mood Disorder,
 - An Anxiety Disorder
 - A Somatoform Disorder



Case 2 - *PTSD*

Question for DD:

On MMI date, what is whole person IR?



How to Determine Mental and Behavioral Impairment

Apply exam findings and psychological testing findings to **four areas of functioning:**

- Activities of daily living
- Social functioning
- Concentration / persistence / pace
- Deterioration or decompensation in work or work-like settings



How to Determine Mental and Behavioral Impairment

- May assign rating globally, **or** assign to each area of functioning and **average**
 - $10\% + 10\% + 40\% + 20\% = 80/4 = 20\%$
 - **Explain method used – “Show work”**
- Determine appropriate class from “the Table” Chapter 14, page 301
- Consult Chapter 4, Table 3, page 142
- Determine appropriate percent impairment value from Chapter 4, Table 3, page 142
- Combine with other body systems using Combined Values Chart, pages 322-324



Case 2 - *PTSD*

Chapter 14, “The Table”, page 301

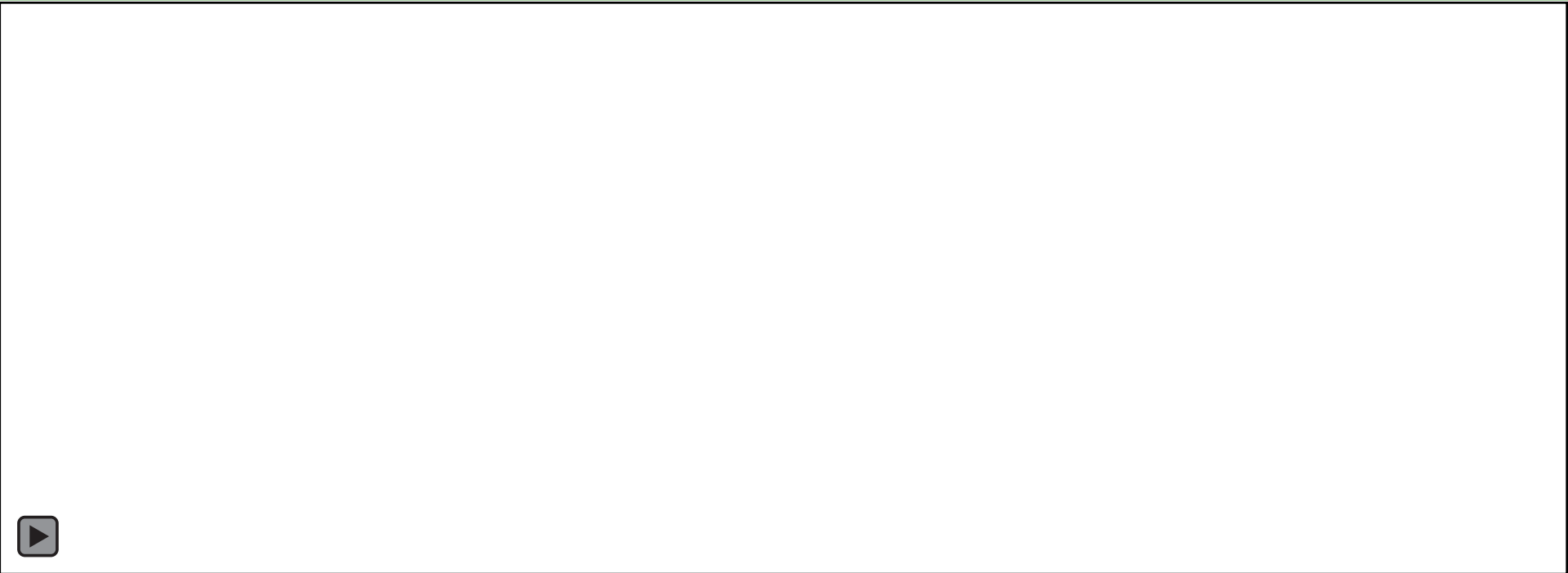
Class 3 - “Impairment levels are compatible with *some*, but not all, useful functioning”

Case 2 - *PTSD*

- Correlates with “Moderate limitation of *some* but not all social and interpersonal daily living functions”
 - Chapter 4, Emotional or Behavioral Impairments, Table 3, page 142
- 15% WP – 29% WP
 - Select single IR percentage within the range, that fits the clinical condition of the claimant



Classification of Impairments Due to Mental and Behavioral Disorders *"The Table" , Page 301*

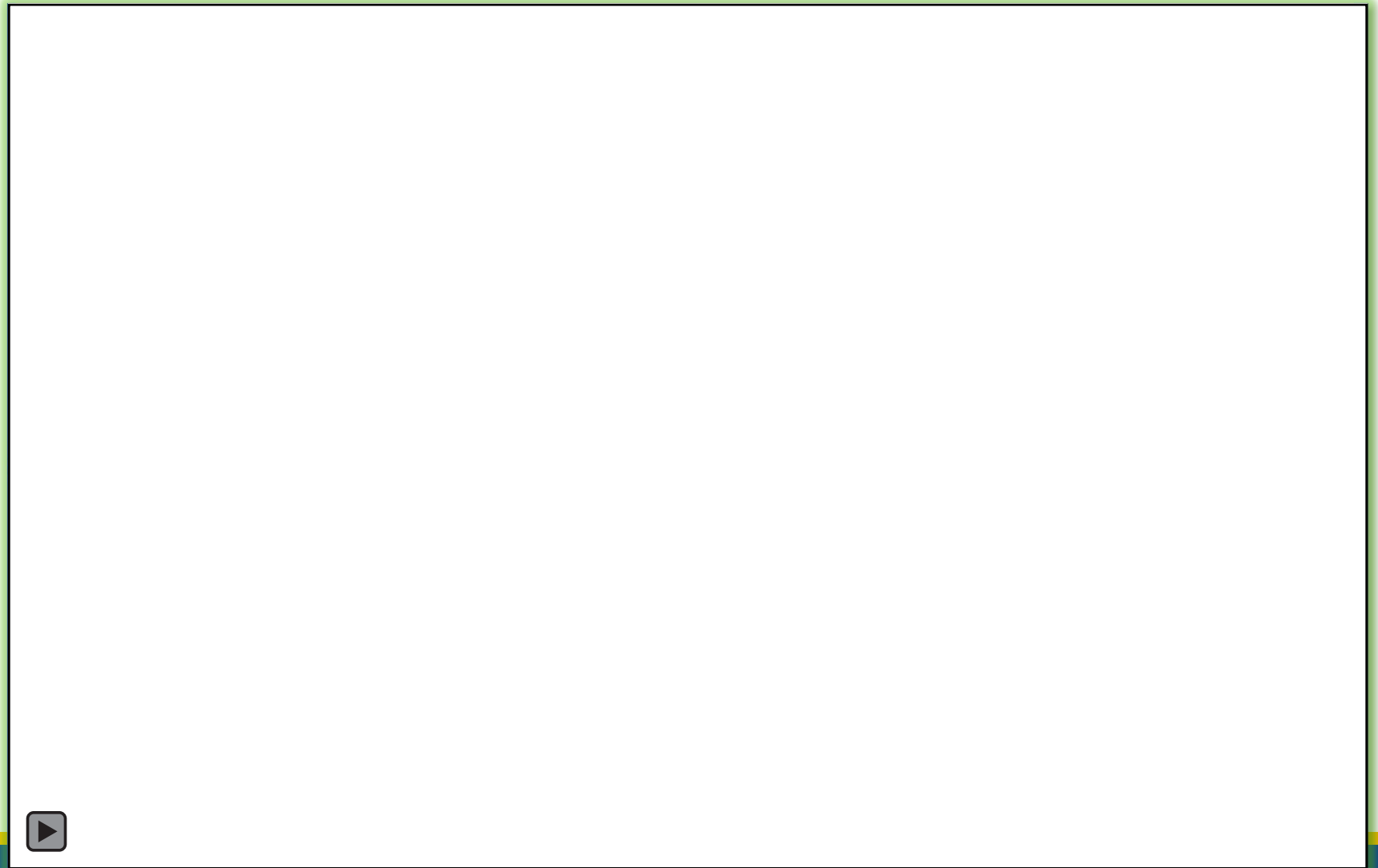


Classification of Impairments Due to Mental and Behavioral Disorders

"The Table", Page 301

Area of Function	CLASS 1 No Impairment	CLASS 2 Mild	CLASS 3 Moderate	CLASS 4 Marked	CLASS 5 Extreme
ADL					
Social	No impairment	Most useful function	Some, but not all useful function	Significant loss of useful function	Precludes useful function
Concentration, Pace					
Adaptation					

Chapter 4, Table 3, Page 142





Chapter 14, Table 14 and Chapter 4, Table 3

Chapter 14 Table 1, Page 301	Chapter 4 Table 3, Page 142
Class 1: None	None
Class 2: Mild – Most useful function	Mild: 0 – 14%
Class 3: Moderate – Some but not all useful function	Moderate: 15 – 29%
Class 4: Marked – Significantly impedes useful function	Severe: 30 – 49% Impedes almost all daily function
Class 5: Extreme – Precludes useful function	Severe: 50 – 70% Total dependence



Case 2 - PTSD

Detail in your report how ***“Moderate limitation of some but not all social and interpersonal daily living functions”*** from Chapter 14 correlates with the Chapter 4, Emotional or Behavioral Impairments from Table 3, page 142.

- 15% WP – 29% WP
 - Select single IR percentage within the range that best fits clinical condition of IE

Questions about Case 2?



OTHER GENERAL QUESTIONS?





Evidence-Based Medicine

Traumatic Brain Injury and Mental & Behavioral Disorders



TBI and Mental & Behavioral

ADDITIONAL EBM
related to
TBI



Traumatic Brain Injury

Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)

- *"Neurobehavioral symptoms tend to be the most severe in the time frame immediately after the TBI".*
- *"Except in cases of severe TBI, the typical course is complete or substantial improvement in associated neurocognitive, neurological and psychiatric symptoms and signs".*



Traumatic Brain Injury

- As per the DSM-5, “**Neurocognitive symptoms associated with mild TBI tend to resolve within days to weeks after the injury with complete resolution typical by 3 months**”.

American Psychiatric Association (APA). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, DSM-5, 2013.



Traumatic Brain Injury

- The Department of Defense (DOD) / Veterans Affairs (VA) also concluded that most individuals who have sustained a concussion form of mTBI improve with no lasting clinical sequelae.
- The DSM-5 AND the DOD / VA consensus is also consistent with the vast majority of EBM literature that in most individuals, the effects of a true concussion event resolve within 3 months and have no lasting neuro-cognitive-behavioral sequelae.



Traumatic Brain Injury

- When symptoms persist beyond the 3 months after a valid concussion event, the SYMPTOMS are more probable to be due to another disorder, so there is considerable risk of misdiagnosis of a collection of symptoms as being due to post-concussion syndrome.
- **Causes for persistent symptoms after an injury to the head:**
 - Organic (real),
 - Psychological factors or psychiatric disorders
 - Non-injury related factors **[See References.]**



Traumatic Brain Injury

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- **Causes for persistent symptoms after an injury to the head:**
 - Organic (real),
 - Psychological factors or psychiatric disorders
 - Non-injury related factors **[See References.]**



Traumatic Brain Injury

Be aware of what types of findings are consistent with the different clinical grades of TBI.

Mild TBI and most Moderate TBI are unlikely to be associated with several categories of potential IR under Chapter 4:

- Disturbances of consciousness and awareness

- Aphasia or Communication Disturbances

- Special types of preoccupation or obsession

- Major motor or sensory abnormalities

- Movement disorders

- Episodic neurologic disorders

- Sleep and arousal disorders.



Traumatic Brain Injury

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An excellent starting reference for learning about expectations after TBI.

McCrea, MA (2008). Mild Traumatic Brain Injury and Post-concussion Syndrome: The New Evidence Base for Diagnosis and Treatment. American Academy of Clinical Neuropsychology. Oxford University Press.

- Chapter 8: Acute Symptoms and Symptom Recovery, p 85 – 96.
- Chapter 9: Acute Cognitive Effects and Early Recovery, p 97 - 108.
- Chapter 10: Neuropsychologic Recovery , p 109 – 118.
- Chapter 12: Measuring Neurophysiologic Recovery, p 125 – 132.

All chapters valuable.



Traumatic Brain Injury

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Traumatic Brain Injury

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Traumatic Brain Injury

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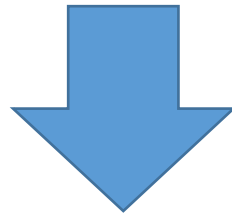
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The Clinical Neuropsychologist, 35:6, 1053-1106, DOI: [10.1080/13854046.2021.1896036](https://doi.org/10.1080/13854046.2021.1896036)



TBI and Mental & Behavioral DSM-5 Criteria of the Trauma & Stress Related Disorders



Post-Traumatic Stress Disorder (PTSD)



Trauma & Stress Related Disorders

Trauma and stressor related disorders are “*disorders in which exposure to a traumatic or stressful event(s) is listed explicitly as a diagnostic criterion*”. [DSM-V.]

- These include:
 - Adjustment disorders,
 - Acute stress disorder (ASD)
 - Post-traumatic stress disorder (PTSD),
- Exposure to stressors can result in expression of anxiety or fear-based symptoms or dysphoric symptoms, angry or aggressive symptoms or dissociative symptoms.
- Not uncommon for there to be a combination of symptoms after a significant trauma.



Trauma & Stress Related Disorders

- A minority of victims of traumatic events have sufficient symptoms to fulfill the diagnostic criteria for ASD or PTSD.
- The number of individuals that have been abused or neglected, raped or assaulted, robbed, had catastrophic near-death accidents, been in natural disasters and witnessed death is astounding.
- All will have a period of adjustment after such a traumatic event(s), but most come out of this phase and never meet DSM-5 criteria for a specific diagnosis and return to their psychological baseline.
- Not everyone exposed to life-threatening events develops ASD/ PTSD.
- Of those that develop ASD, only a small percent goes on to develop PTSD.



What ARE the criteria for PTSD?

The first criterion for both ASD and PTSD is:

A. Exposure to actual or threatened death, serious injury, or sexual violation in 1 (or more) of the following ways:

- Directly experiencing the traumatic events(s) AND / OR
- Witnessing, in person, the event(s) happening to others, AND / OR
- Learning that the event(s) occurred to a close family member or close friend (in cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental),
- Experiencing repeated or extreme exposure to aversive details of the traumatic event(s)



DSM-5 Criteria PTSD

Criterion B. - E.

B. Intrusion symptoms:

C. Persistent avoidance of stimuli associated with the traumatic event

D. Negative alterations in cognition or mood associated with the traumatic event(s)

E. Marked alterations in arousal and reactivity associated with the traumatic event(s)

C / D / E = beginning or worsening after the traumatic event(s) occurred



DSM-5 Criteria PTSD

B. Intrusion symptoms include the following:

1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s)
2. Recurrent distressing dreams in which the content or affect of the dream is related to the event(s)
3. Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. Dissociative symptoms include an altered sense of the reality of one's surroundings or oneself (e.g., seeing oneself from another's perspective, being in a daze, or feeling that time is slowing)

DSM-5 Criteria PTSD

B. Intrusion symptoms include the following (continued):

4. Intense or prolonged psychological distress in response to internal OR external cues that symbolize or resemble an aspect of the traumatic event(s)
5. Marked physiologic reactions in response to internal OR external cues that symbolize or resemble an aspect of the traumatic event(s)



DSM-5 Criteria PTSD

C. Persistent avoidance of stimuli associated with the traumatic event beginning or worsening after the traumatic event(s) occurred as evidence by one or both of the following:

1. Avoidance of or efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s),
2. Avoidance of or efforts to avoid external reminders (egg, people, places, conversations, activities, objects, or situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).



DSM-5 Criteria PTSD

D. Negative alterations in cognition or mood associated with the traumatic event(s) beginning or worsening after the traumatic event(s) occurred as evidence by two (or more) of the following:

1. Inability to remember an important aspect of the traumatic event(s), typically resulting from **dissociative amnesia** and **not** from other factors (egg, head injury, alcohol or drugs)
2. Persistent and exaggerated negative beliefs or expectations about oneself, others or the world,
3. Persistent, distorted cognitions about the cause or consequences of the traumatic event that lead the person to blame themselves or others,

DSM-5 Criteria PTSD

D. Negative alterations in cognition or mood associated with the traumatic event(s)(continued)

4. Persistent negative emotional state,

5. Markedly diminished interest or participation in significant activities,

6. Feelings of detachment or estrangement from others

7. Persistent **inability** to experience positive emotions (egg, inability to experience happiness, satisfaction, or loving feelings



DSM-5 Criteria PTSD

E. Marked alterations in arousal and reactivity

associated with the traumatic event(s) beginning or worsening after the traumatic event(s) occurred as evidence by two (or more) of the following:

1. Irritable behavior and angry outbursts (with little or no provocation), typically expressed as verbal or physical aggression toward people or objects,
2. Reckless or self-destructive behavior,
3. Hypervigilance,
4. Exaggerated startle response
5. Problems with concentration
6. Sleep disturbance (egg, difficulty falling or staying asleep or restlessness during sleep)



DSM-5 Criteria PTSD

F. The **duration** of the disturbance is: PTSD = more than one month for Criteria B, C, D, and E.

G. The **disturbance causes** clinically significant distress or impairment in social, occupational, or other important areas of functioning.

H. The **disturbance cannot be attributed to** the physiologic effects of a substance (e.g., a medication or alcohol) or another medical condition (e.g., mild traumatic brain injury) and cannot be better explained by a diagnosis of brief psychotic disorder.



TBI & Mental and Behavioral

Criteria H for PTSD

DSM-5 disorders that are MORE COMMON and part of the differential diagnosis process:

- Bipolar and Related Disorders
- Anxiety Disorders
- Somatic and Symptom Related Disorders
- Sleep-Wake Disorders
- Neurodevelopmental Disorders



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Non-MSK

You will find more complete discussion of some of the NON-MSK Chapters along with pearls related to other Chapters in the PDF for the NON-MSK section of the Certification Course.

THANK YOU

<https://www.tdi.texas.gov//wc/dd/training.html>