

# Pain After TBI – A Round Table Discussion

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## Pain is a Problem!

- 2.5 million TBI's per year in US
- Up to 81% of individuals with moderate to severe TBI reported pain (inclusive of headache)
- Headache is the most common pain symptom. Other pain types are often grouped together due to lower frequency:
  - Neuropathic/central pain
  - Pain related to spasticity
  - Heterotopic ossification
  - Musculoskeletal/soft tissue
  - Co-occurring spinal cord injury
  - Peripheral nerve injury
- Complexity of co-morbidities
  - Depression, anxiety, PTSD, cognitive, fatigue, sleep

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## Inspiration for this Roundtable

The collage includes several research posters and articles:

- Quick Facts about Traumatic Brain Injury:** A poster with a tree image, listing statistics such as "The number of people diagnosed with TBI each year is approximately 2.5 million" and "Approximately 1.5 million of these are moderate to severe TBI".
- TBI Care: The Effectiveness of Collaborative Care versus Usual Care for Pain after Traumatic Brain Injury:** A poster by James D. Fortney, PhD, et al., from the University of Washington.
- Dealing with the Dark Side of Plasticity: Pain in Neurorehabilitation:** A poster by Stephen Schmidt, MD, and Adrian Lopez, MD, from the University of Washington.
- CSM (Cognitive Skills Manual):** A logo for the Cognitive Skills Manual, a research program at the University of Washington.

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### TBI Care Study

*The Effectiveness of Collaborative Care versus Usual Care for Pain after Traumatic Brain Injury*

- > Objective is to improve the lives of individuals with TBI by reducing the impact of headache and other chronic pain in day-to-day life.
- > Comparing usual vs. collaborative care
- > Preliminary results indicate no decrease in pain scores, but a decrease in anxiety, depression, and pain interference.

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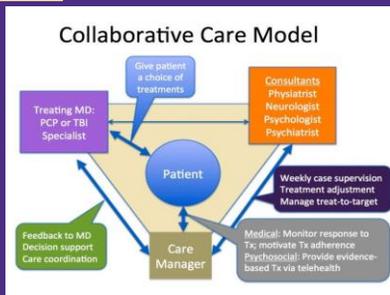
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### TBI Care Study



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### Pain Neuroscience Education (PNE)

- > There is strong evidence that "explaining to patients their pain experience from a biological and physiological perspective of how the nervous system/brain processes pain allows patients to move better, exercise better, think differently about pain, and push further into pain."<sup>2</sup>

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## Pain Neuroscience Education (PNE)<sup>2</sup>

- > Expanding the conversation from the orthopedic/musculoskeletal world to the neurological population
- > PNE, aerobic exercise, sleep hygiene, and goal setting
- > Paired with active treatment interventions (sensory discrimination, graded motor imagery)

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## Discussion Question #1

- > Do you use a specific pain protocol or pathway to address pain?
- > How do you communicate with the rehab team about pain? Pain plan?
- > Do you provide any formal education or competencies to staff about pain assessment or management?

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## Pain Assessment Tools: Outpatient Rehab

Pain Score	<input type="checkbox"/> 0 - No pain   <input type="checkbox"/> 1   <input type="checkbox"/> 2   <input type="checkbox"/> 3   <input type="checkbox"/> 4   <input type="checkbox"/> 5 - Moderate pain   <input type="checkbox"/> 6   <input type="checkbox"/> 7   <input type="checkbox"/> 8   <input type="checkbox"/> 9   <input type="checkbox"/> 10 - Worst possible pain
Current Level of Pain	<input type="checkbox"/> 0 - No pain   <input type="checkbox"/> 1   <input type="checkbox"/> 2   <input type="checkbox"/> 3   <input type="checkbox"/> 4   <input type="checkbox"/> 5 - Moderate pain   <input type="checkbox"/> 6   <input type="checkbox"/> 7   <input type="checkbox"/> 8   <input type="checkbox"/> 9   <input type="checkbox"/> 10 - Worst possible pain
Best Level of Pain	<input type="checkbox"/> 0 - No pain   <input type="checkbox"/> 1   <input type="checkbox"/> 2   <input type="checkbox"/> 3   <input type="checkbox"/> 4   <input type="checkbox"/> 5 - Moderate pain   <input type="checkbox"/> 6   <input type="checkbox"/> 7   <input type="checkbox"/> 8   <input type="checkbox"/> 9   <input type="checkbox"/> 10 - Worst possible pain
Worst Level of Pain	<input type="checkbox"/> 0 - No pain   <input type="checkbox"/> 1   <input type="checkbox"/> 2   <input type="checkbox"/> 3   <input type="checkbox"/> 4   <input type="checkbox"/> 5 - Moderate pain   <input type="checkbox"/> 6   <input type="checkbox"/> 7   <input type="checkbox"/> 8   <input type="checkbox"/> 9   <input type="checkbox"/> 10 - Worst possible pain
Aggravating Factors	<input type="text"/>
Relieving Factors	<input type="text"/>
FLACC	<input type="checkbox"/> 0 - No pain   <input type="checkbox"/> 1   <input type="checkbox"/> 2   <input type="checkbox"/> 3   <input type="checkbox"/> 4   <input type="checkbox"/> 5 - Moderate pain   <input type="checkbox"/> 6   <input type="checkbox"/> 7   <input type="checkbox"/> 8   <input type="checkbox"/> 9   <input type="checkbox"/> 10 - Worst possible pain
OUCHER	<input type="checkbox"/> 0 - No pain   <input type="checkbox"/> 1   <input type="checkbox"/> 2   <input type="checkbox"/> 3   <input type="checkbox"/> 4   <input type="checkbox"/> 5 - Moderate pain   <input type="checkbox"/> 6   <input type="checkbox"/> 7   <input type="checkbox"/> 8   <input type="checkbox"/> 9   <input type="checkbox"/> 10 - Worst possible pain
Other Pain Score	<input type="text"/>

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### Pain Assessment Tools: Inpatient Rehab

<b>PAIN:</b> <Hide Structure> <Use Free Text>	
OTHER	
No pain / PCA in use / Premedicated for therapy / RN notified / OTHER	
Patient reports no pain	
Description	Pain at rest====/0) OTHER Pain with exercise====/0) OTHER FLACC at rest==== OTHER FLACC with exercise==== OTHER Doucher (children ages 4-10)==== OTHER
Plan for pain control discussed and reviewed with the team	
Pain is limiting patient's participation	

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### Discussion Question #2

- > Do you have a formal or informal way of introducing Pain Neuroscience Education?
- > Who provides the education?
- > Is it taught in a 1:1 or a group format?
- > How is it taught? Verbal? Handout? Video? Visuals?

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### References

1. Hoffman, J. (2019) "Pain After Traumatic Brain Injury: Understanding the Problem and How to Treat It" [PowerPoint presentation].
2. Schmidt, S & Lonn, A. (2019). "Dealing with the Dark Side of Plasticity: Pain in Neurorehabilitation" [PowerPoint presentation].

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