

Behavioral Health Guide: Considerations for Best Practices for Children, Youth, and Adults with TBI

June 22, 2022



TBI TARC is supported by contract number HHSP233201500119I from the U.S. Administration for Community Living, Department of Health and Human Services, Washington, D.C. 20201

Welcome



**Terry
Camacho-Gonsalves,
PhD**

Director

Traumatic Brain Injury
Technical Assistance and
Resource Center (TBI
TARC)

Thank you for joining us to learn about the [Behavioral Health Guide: Considerations for Best Practices for Children, Youth, and Adults with TBI.](#)

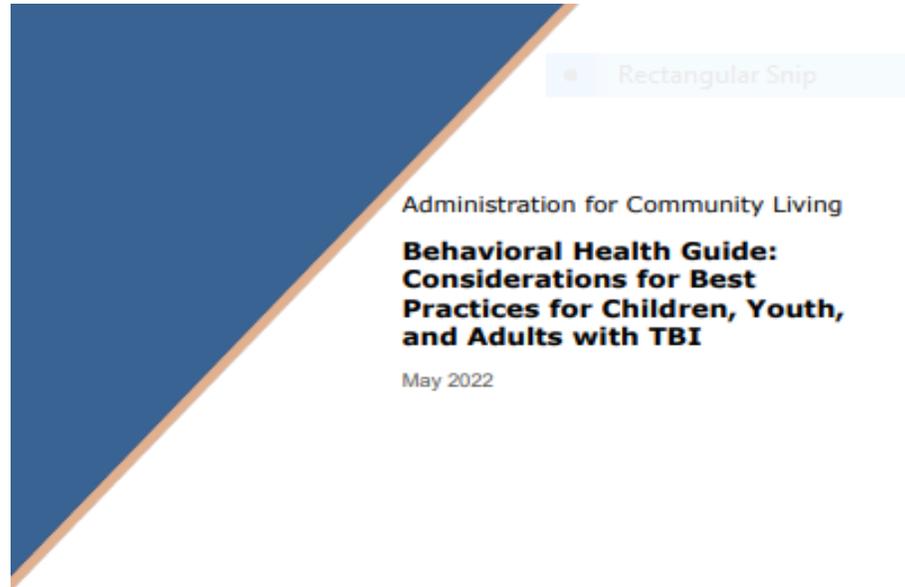
This webinar is sponsored by the TBI TARC which is funded by the Administration for Community Living.

The TBI TARC provides technical assistance and support to the Traumatic Brain Injury State Partnership Grant Program grantees and to other TBI stakeholders including other states, policymakers, providers, people with lived experience with TBI and their family members.

The TBI TARC is administered by the Human Services Research Institute (HSRI) with the assistance of the National Association of State Head Injury Administrators (NASHIA).

TBI TARC webinars are free and open to the public.

Behavioral Health Guide: Considerations for Best Practices for Children, Youth, and Adults with TBI



The guide is available for download from the Administration for Community Living (ACL) website: https://acl.gov/sites/default/files/programs/2022-05/TBITARC_BH_Guide_Final_May_2022_Accessible.pdf



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Webinar Logistics

- Participants will be in listen-only mode during the webinar. Please use the **chat** feature in Zoom to post questions and communicate with the hosts.
- Towards the end of each section our speakers will have an opportunity to respond to questions that have been entered into chat.
- The webinar will be live captioned in English and Spanish. To access the Spanish captions, please use this link: <https://www.streamtext.net/player?event=HSRI>
- El seminario de web estará subtulado en vivo en inglés y Español. Para tener acceso a los subtítulos en español, utilice este enlace: <https://www.streamtext.net/player?event=HSRI>
- This live webinar includes polls and evaluation questions. Please be prepared to interact during polling times.



Feedback and Follow-Up

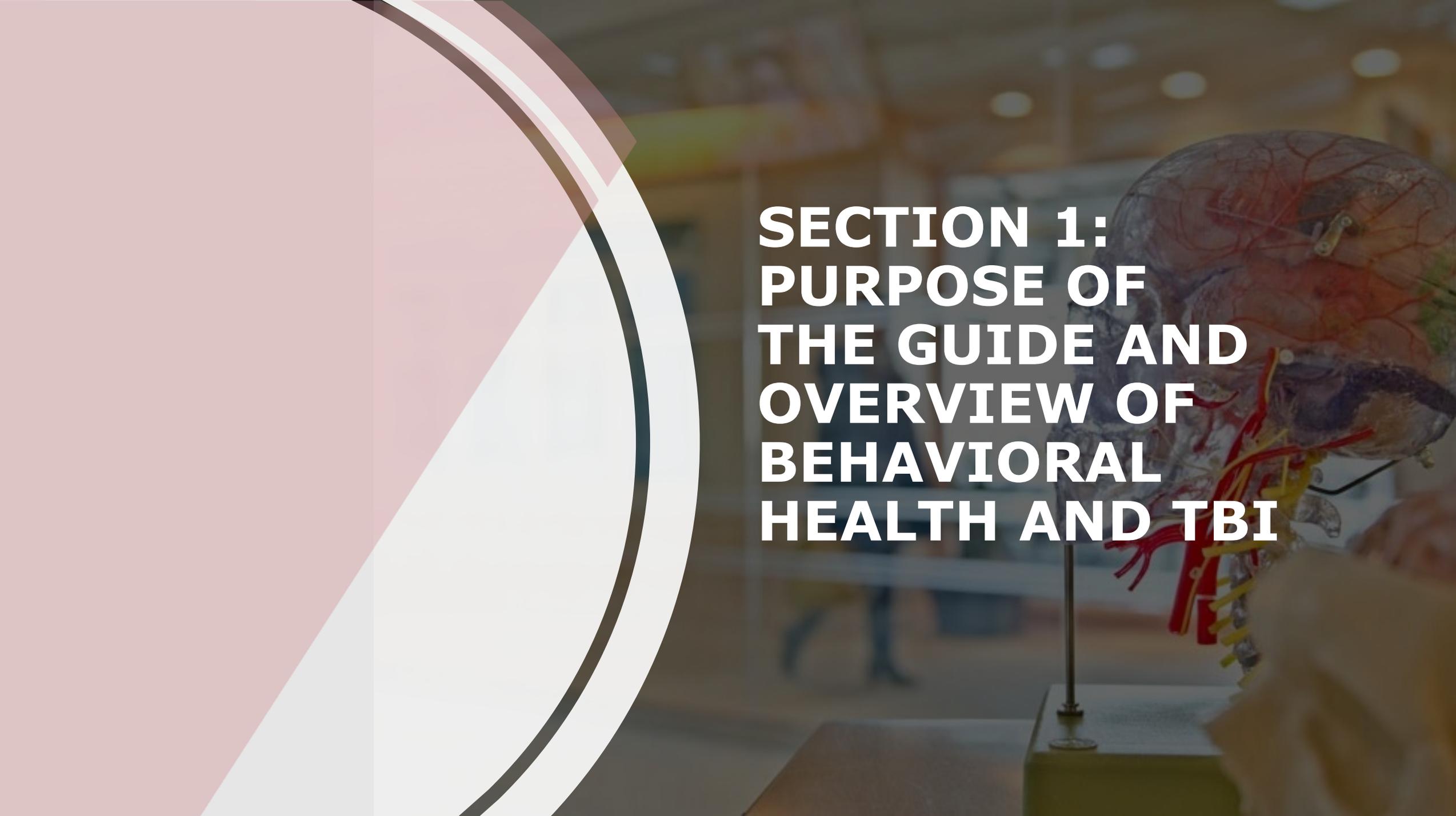
- After the webinar, you can send follow-up questions and feedback to tbitarc@hsri.org
(Please note: This email address will not be monitored during the webinar.)
- A recording, including a pdf version of the slides, will be available on the ACL website (acl.gov)

Who's Here?



“In what role(s) do you self-identify? Select all that apply.”

1. Person with a traumatic brain injury (TBI) or other disability
2. Family member or friend of a person with a TBI or other disability
3. Self-advocate / advocate
4. Peer-specialist / peer-mentor
5. Social worker, counselor, or care manager
6. Researcher / analyst
7. Service provider organization employee
8. Government employee (federal, state, tribal, or municipal)

The image features a blurred background of an anatomical model of a human head and neck, showing the brain, nerves, and blood vessels. The model is mounted on a stand. On the left side, there is a large, semi-circular graphic element with a light pink and white gradient. Overlaid on the right side of the image is the text "SECTION 1: PURPOSE OF THE GUIDE AND OVERVIEW OF BEHAVIORAL HEALTH AND TBI" in a bold, white, sans-serif font.

**SECTION 1:
PURPOSE OF
THE GUIDE AND
OVERVIEW OF
BEHAVIORAL
HEALTH AND TBI**

Section 1 Speaker



**Judy Dettmer,
BSW**

*Director for Strategic
Partnerships*

TBI TARC and NASHIA

Judy Dettmer has been working in the field of brain injury for 30 years. Ms. Dettmer is currently the Director for Strategic Partnerships and a Technical Assistance Lead for the Traumatic Brain Injury Technical Assistance and Resource Center (TBI TARC) at the National Association of State Head Injury Administrators (NASHIA). Ms. Dettmer has worked extensively with adults, children and family members of individuals with brain injury. She has provided direct and systems consultation to improve the lives of individuals with brain injury. Judy has also assisted with research efforts related to brain injury and has conducted countless presentations, classes and seminars on brain injury both in the state of Colorado and nationally.

Purpose of the Guide

- Given the significant prevalence of brain injury and co-occurring behavioral health conditions, there is a need for guidance to states about how to effectively support these individuals.
- State government-led brain injury programs are in a unique position to affect policy, increase training and implement practice changes within the state behavioral health system to ensure improved outcomes for this population.
- The [Behavioral Health Guide: Considerations for Best Practices for Children, Youth, and Adults with TBI](#) provides states with tools for initiating or improving their partnerships within state mental health systems.

This Guide Provides

- An overview of the prevalence and systematic issues that add to the complexity for support.
- A review of partners and strategies for partnering.
- Insight into training approaches that states might implement.
- An overview of screening protocol that can be implemented in behavioral health settings.
- Strategies for modifying clinical interventions.
- Guidance for modifying pharmacological interventions.

Overview of Behavioral Health and TBI

- 1/3 of individuals with brain injury will experience mental health concerns 6 months to 1 year post injury.
- People with brain injury of any severity have two to four times the risk of attempting or having a death by suicide.
- Between 23% and 51% of adolescents and adults sustaining a TBI were intoxicated when the injury occurred.
- 1/4 of people hospitalized for TBI have a history of substance use disorders.

Systemic Issues

- Identifying brain injury
- Medical paradigm
- Lack of training for the behavioral health workforce

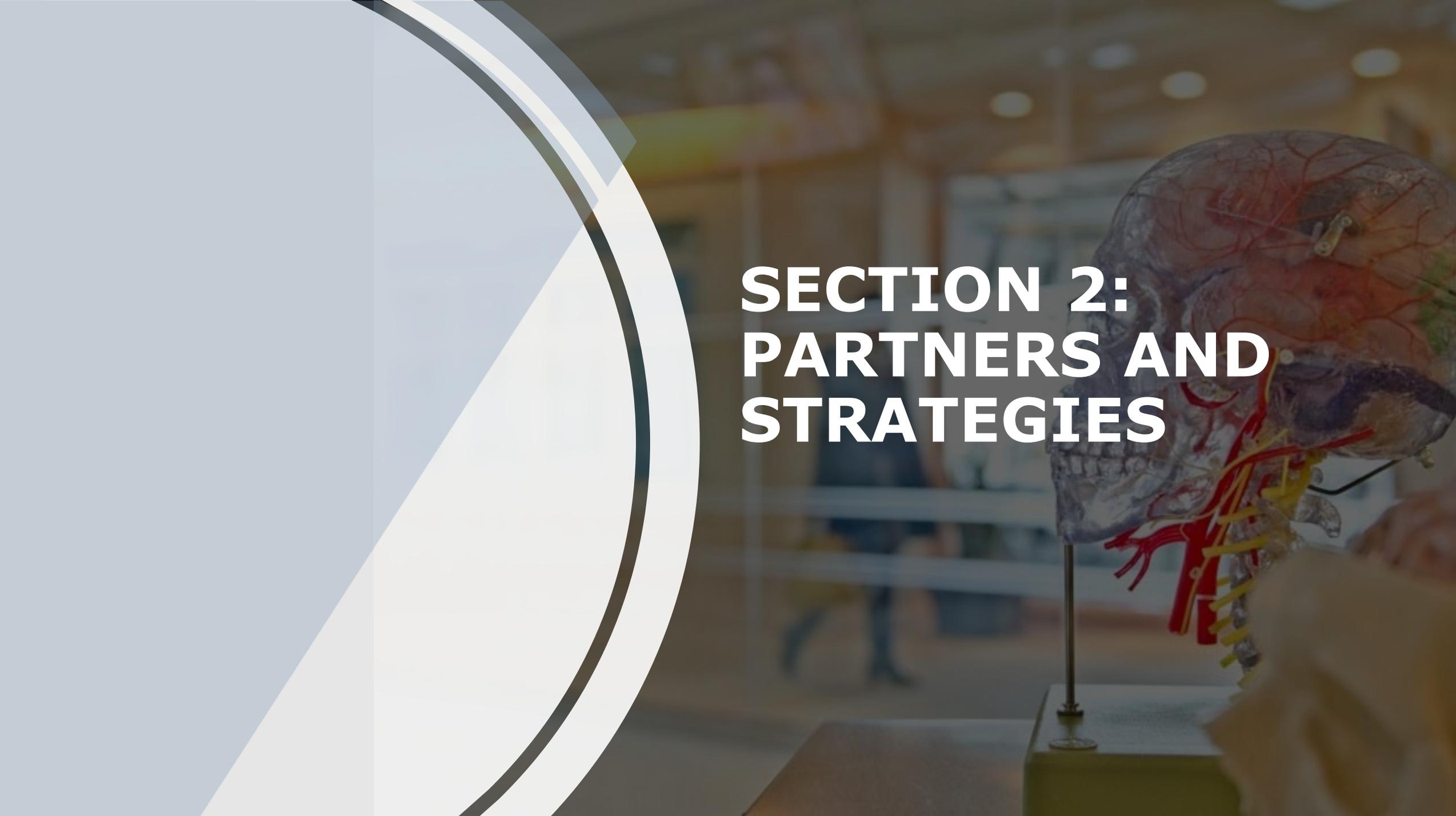
Addressing Systemic Issues

Two steps are needed by state brain injury programs to effect change in the behavioral health system:

- **Step 1** is to review the system's policies to ensure the language is not exclusive of supporting individuals with brain injury.
- **Step 2** is to develop and implement training protocols for the behavioral health workforce in each state, which addresses the third systemic issue identified.

QUESTIONS: PURPOSE OF GUIDE AND OVERVIEW OF BEHAVIORAL HEALTH AND TBI



An anatomical model of a human head and neck, showing the skull, brain, and various vessels and nerves. The model is mounted on a stand. The background is a blurred laboratory or classroom setting. A large, stylized graphic element consisting of overlapping light blue and white curved shapes is on the left side of the image. The text 'SECTION 2: PARTNERS AND STRATEGIES' is overlaid in the center-right area in a bold, white, sans-serif font.

SECTION 2: PARTNERS AND STRATEGIES

Section 2 Speaker



Thomasine Heitkamp, LCSW

Chester Fritz Distinguished Professor Emeritus

University of North Dakota

Thomasine Heitkamp is a Chester Fritz Distinguished Professor Emeritus at the University of North Dakota and is a Licensed Clinical Social Worker. She has 35 years of professional experience providing education, training, and technical assistance on organizational leadership. Professor Heitkamp has personally experienced the opportunities and challenges of establishing and maintaining partnerships and is committed to the application of best practices in addressing behavioral health needs in an expansion of integrated care models. She is the author of *30 Steps for Cross-System Collaboration Specific to Technology Transfer* in April 2020 and helped facilitate a July 2020 report, *Substance Use Disorder Collaborations that Work: Findings from Providers in Region 8*. Professor Heitkamp partnered with National Association of State Head Injury Administrators and the Mountain Plains Addiction Technology Transfer Center to provide training and technical assistance. She also served as a co-editor of the *Traumatic Brain Injury and Substance Use Disorder: Making the Connect* toolkit published in November 2021 in collaboration with the Substance Abuse and Mental Health Services Administration's funded Addiction Technology Transfer Centers.

Advantages to Partnerships

“A collaborative relationship between entities to work toward shared objectives through a mutually agreed-upon division of labor.”

--World Bank, 2003

- Enhancing the capacity to better serve clients and the community
- Sharing best practices
- Collaborating on cross-referrals
- Increasing knowledge-based resources that improve the effectiveness
- Improve organizational capacity
- Engage new audiences
- Build organizational networks



Ingredients to Effective Partnerships

Strategies Provided (slide 1 of 2)

- Shared Vision
- Shared Purpose
- Mutual Trust and Respect
- Transparent Communications
- Flexibility



Ingredients to Effective Partnerships Strategies Provided (slide 2 of 2)

- Anticipate Challenges
- Adherence to a Code of Conduct
- Use of collaborative technology
- Culturally responsive practice (DEI)



Lessons Learned

- Partnerships require time and due diligence in maintaining and supporting relationships.
- Avoid grandstanding with partners.
- Do your share of the work, be honest, and communicate professionally.
- Praise accomplishments publicly and address concerns privately.
- Maintain a focus on the objectives and the needs of the population you serve.



Partners for Consideration

- National Association of State Mental Health Program Directors (NASMHPD)
- National Association of State Alcohol and Drug Abuse Directories (NASADAD)
- Substance Abuse and Mental Health Services Administration (SAMHSA)
- National Alliance on Mental Illness (NAMI)
- Mental Health America (MHA)
- National Institute on Drug Abuse (NIDA)

QUESTIONS: PARTNERS AND STRATEGIES





**SECTION 3:
TRAINING
APPROACHES**

Section 3 Speaker



**Maria Crowley,
MA, CRC**

*Director, Professional
Development*

TBI TARC and the National
Association of State Head
Injury Administrators
(NASHIA)

Maria Crowley, MA, CRC is NASHIA's Professional Development Director and a Technical Assistance Lead for the Traumatic Brain Injury Technical Assistance and Resource Center. She has worked in the disabilities field with state government for 30 years, and specifically in brain injury since 2000, helping individuals to successfully transition to home, community, and employment. Maria was the State TBI Program Director for the Alabama Department of Rehabilitation Services for 14 years. She has led numerous state initiatives, conducted training and provided technical assistance related to brain injury, employment and disability, concussion management, intimate partner violence, service coordination and trauma registries.

Why Is Training Important?

- Increases awareness of brain injury
- Reduces risk
- Increases successful intervention

Does everyone need to be a brain injury expert?

Training Tiers



The Basics

Intermediate
Steps

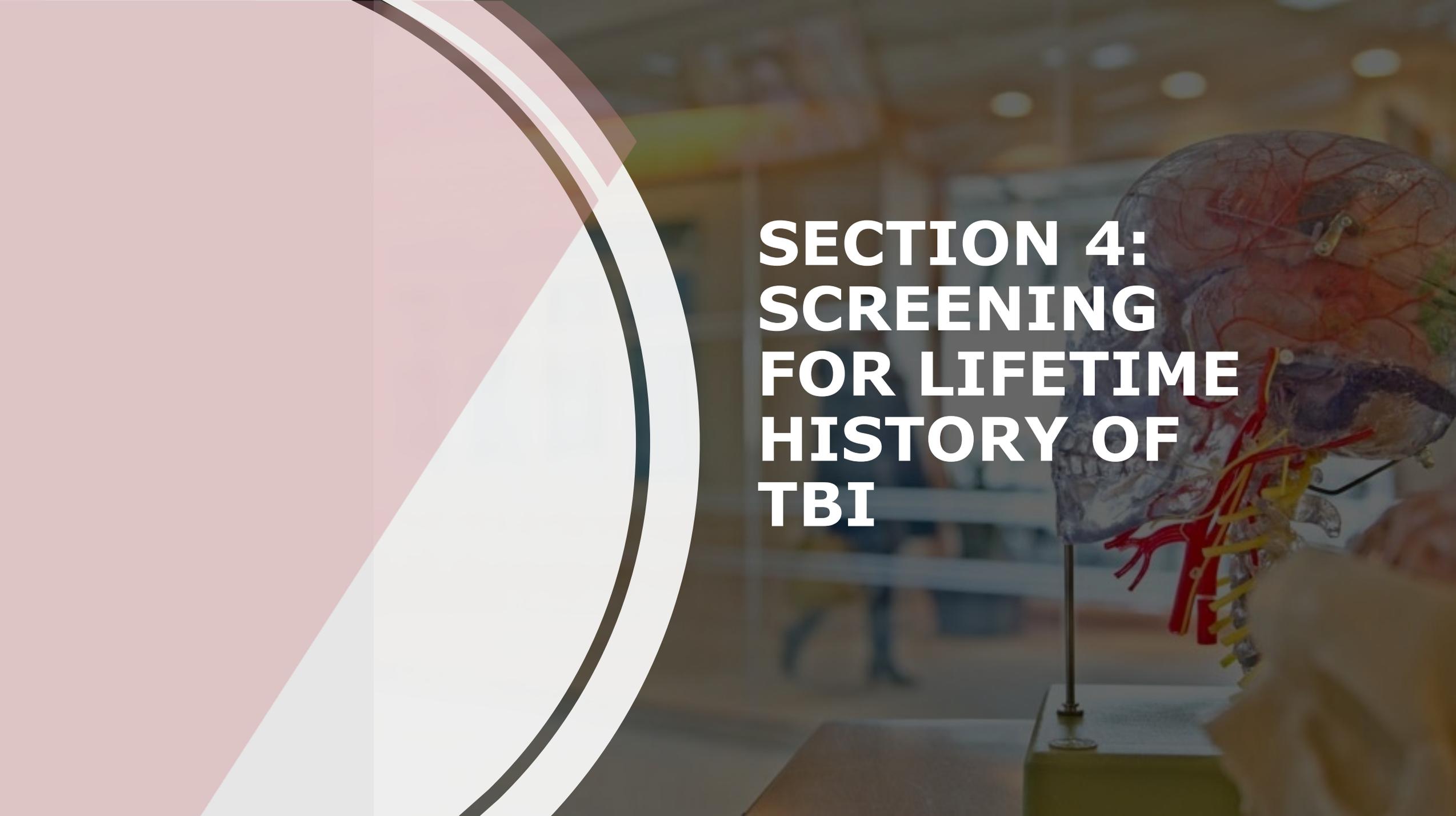
Advanced

Trainers and Resources

- Use what's out there:
 - TBI TARC staff and website
 - NASHIA staff and website
 - State BI Programs
 - State Affiliates through USBIA and BIAA
 - TBI Model Systems and KTC Resources

QUESTIONS: TRAINING APPROACHES



The image features a blurred background of an anatomical laboratory. In the foreground, a detailed anatomical model of a human head and neck is mounted on a stand. The model shows the skull, brain, and various blood vessels in red and yellow. A person's hand is visible near the model, suggesting it is being used for educational purposes. On the left side of the image, there is a large, semi-circular graphic element with a light pink and white gradient. Overlaid on the right side of the image is the text 'SECTION 4: SCREENING FOR LIFETIME HISTORY OF TBI' in a bold, white, sans-serif font.

**SECTION 4:
SCREENING
FOR LIFETIME
HISTORY OF
TBI**

Section 4 Speaker



**John D. Corrigan,
PhD, ABPP**

Professor

Department of Physical
Medicine and Rehabilitation;
and director, Ohio Valley Center
for Brain Injury Prevention and
Rehabilitation, the Ohio State
University

Dr. John D. Corrigan is the Director of the Ohio Valley Center for Brain Injury Prevention and Rehabilitation and the Ohio Brain Injury Program. Dr. Corrigan is Editor-in-Chief of the *Journal of Head Trauma Rehabilitation*. He is co-creator with Jennifer Bogner, the Ohio State University TBI Identification Method.

Why screen for TBI?

- A brain injury that is affecting current cognitive function, emotional expression or behavior control will affect multiple BH treatment issues, for example:
 - Clients' awareness of their own behavior
 - Ability to understand the rationale or methods of treatment
 - Cognitive endurance to meet the daily demands
 - Social skills for participating with other clients
- Need to know nature and extent of lifetime history
 - Severity, cumulative effects, age at injury, recency

Why use retrospective self-report?

- Lifetime history very different than diagnosis of TBI that just occurred:
 - Imaging, neuropsychological assessment are not sensitive to lifetime history, biomarkers are not specific
 - Medical records only if treated, and commonly miss mild TBI
- Retrospective self-report is the gold standard, despite limits
 - Injuries before age 5; injuries in one's remote past, stigma about impaired brain function
 - Depends how self-report is elicited—stimulate recall of less severe injuries, avoid self-diagnosis, use signs but not symptoms

Screening Tools

- Boston Assessment of Traumatic Brain Injury Lifetime (BAT-L)
- Brain Injury Screening Questionnaire (BISQ)
- Defense and Veterans Brain Injury Center’s Brief TBI Screen (BTBIS)
- Ohio State University TBI Identification Method (OSU TBI-ID)
- TBI Questionnaire (TBIQ)
- Brain Check Survey (for children and youth)

The screening tools appear on page 37 of the Behavioral Health Guide: Considerations for Best Practices for Children, Youth, and Adults with TBI. It can be downloaded here:

https://acl.gov/sites/default/files/programs/2022-05/TBITARC_BH_Guide_Final_May2022_Accessible.pdf

Table 1: Valid and Reliable Screening Tools

Instrument	Instrument Information
Boston Assessment of Traumatic Brain Injury Lifetime (BAT-L) ²⁰	<ul style="list-style-type: none"> • 15–37 items depending on history of 1, 2 or 3 TBIs. • Length of administration depends on number of TBIs and version. • Administered by doctoral-level neuropsychologists or other comparably trained professionals. • Developed for military service members with adaptations for civilian and domestic-violence uses. • Lifetime history of TBI. • Free.
Brain Injury Screening Questionnaire (BISQ) ²¹	<ul style="list-style-type: none"> • 3 sections/173 items. • 10–15 minute administration. • Self-report or administrated with assistance. • Lifetime history of TBI. • Pediatric & adult versions/scored, then mini-report generated. • \$10–\$15 per administration.
Defense and Veterans Brain Injury Center’s Brief TBI Screen (BTBIS) ²²	<ul style="list-style-type: none"> • 3 questions with 6–8 sub-questions each. • 3-5 minute administration. • For military service members post-combat. • TBIs incurred during deployment. • Free.
Ohio State University TBI Identification Method (OSU TBI-ID) ^{23,24,25,26}	<ul style="list-style-type: none"> • 3-step interview. • 3–5 minute administration. • Administered by anyone who completes online training. • Lifetime history of TBI. • Free.
TBI Questionnaire (TBIQ) ²⁷	<ul style="list-style-type: none"> • 3 sections. • 15-minute administration. • Administered by clinician. • History of common TBIs, symptom severity and physical and behavioral symptoms. • Free.
Brain Check Survey ²⁸ (for children and youth)	<ul style="list-style-type: none"> • 3 sections/173 items. • 10–15 minute administration. • Parent-/guardian-report measure. • History of TBI, other sources of brain impairment and physical and behavioral symptoms. • Intended for children & youth. • Free.

Reliability & Validity of Screening

- Reliability—if I ask again, will I get the same result?
 - Test/retest most relevant for an interview-based screener
 - Not all tools have tested reliability
 - A tool cannot be anymore valid than it is reliable
- Validity—does the result reflect the condition of interest?
 - Face, content, concurrent, predictive, and construct validity
 - Correspondence with medically documented TBI
 - Predicts current functioning that is a typical consequence of TBI
 - Associated with structural or functional abnormalities

OSU TBI-ID

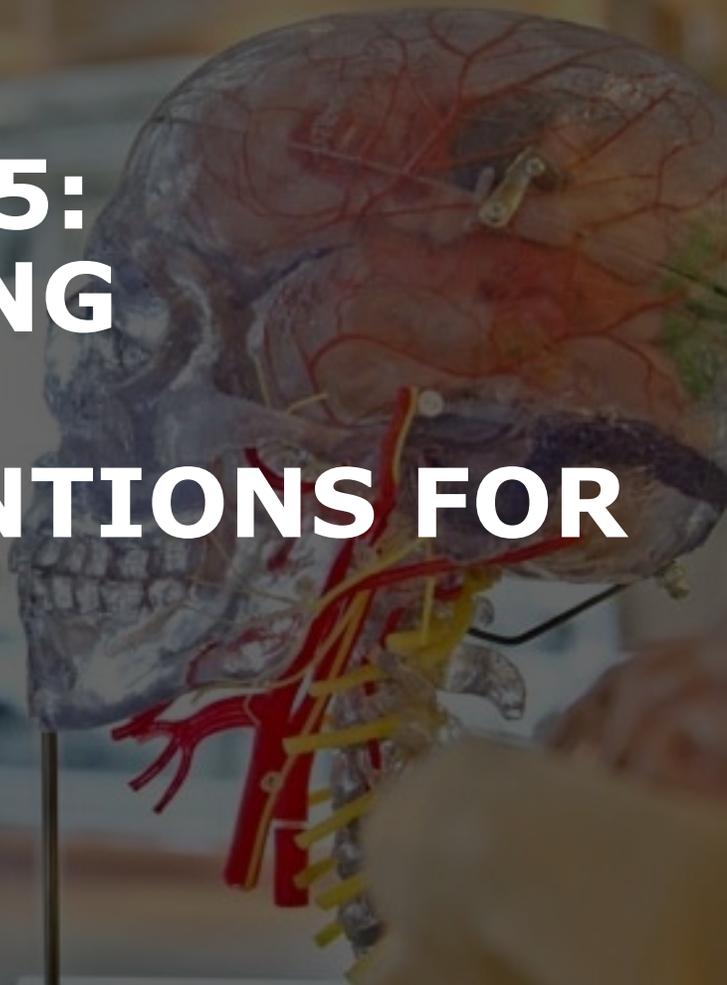
- Structured interview, self-administered developed more recently
- 3-5 minutes typically
- Multiple studies of test/re-test reliability
- Developed based on prediction of current effects from lifetime exposure
- Shown to correspond with contemporaneous medical records
- Associated with abnormalities observed via MRI, fMRI, DTI and proteomics
- Provides: worst lifetime, age at first, multiple TBIs, most recent
- Has been adapted for specialized uses

Other Acquired Brain Injuries (ABIs)

- Do not have validated instruments for self-report of other ABIs
- Anoxia/hypoxia
 - Residual executive function effects similar to TBI
 - Need to cue multiple causes (e.g., strangulation, overdose, cardiac arrest, toxic exposures)
 - Often may not receive medical attention
- Cardiovascular events typically focal vs. diffuse, receive medical attention
- Many other sources of ABI also receive medical attention

QUESTIONS: SCREENING FOR LIFETIME HISTORY OF TBI





**SECTION 5:
MODIFYING
CLINICAL
INTERVENTIONS FOR
TBI**

Section 5 Speakers



**Maria Kajankova,
PhD**

Assistant Professor

Department of
Rehabilitation and Human
Performance, Icahn School
of Medicine at Mount Sinai



**Theo Tsaousides,
PhD, ABPP**

*Clinical Assistant
Professor*

Department of
Rehabilitation and Human
Performance, Icahn School
of Medicine at Mount Sinai

Dr. Maria Kajankova is a Clinical Instructor in the Department of Rehabilitation Medicine at the Icahn School of Medicine at Mount Sinai (ISMMS). She completed predoctoral and postdoctoral training at the Brain Injury Research Center of Mount Sinai (BIRC-MS), leading groups in the National Institute on Disability Independent Living and Rehabilitation Research (NIDILRR)-funded Short-Term Executive Plus (STEP) trial. She is the Director of Training of the BIRC-MS and Investigator on the current EmReg™ study, for which she trained and supervised study therapists in EmReg™ protocol.

Dr. Theo Tsaousides is a neuropsychologist, speaker, and author. For the last few years, he has been in independent practice in New York. He is an assistant professor in the Department of Rehabilitation Medicine at ISMMS, where he has served as a researcher and training director of the BIRC. He also co-created EmReg™, a training program designed to improve emotion regulation, the ability to identify and influence one's own emotions. His clinical and research work focus on goal achievement, mental fitness, and emotional intelligence.

Delivering Mental Health Interventions for People with TBI (slide 1 of 2)

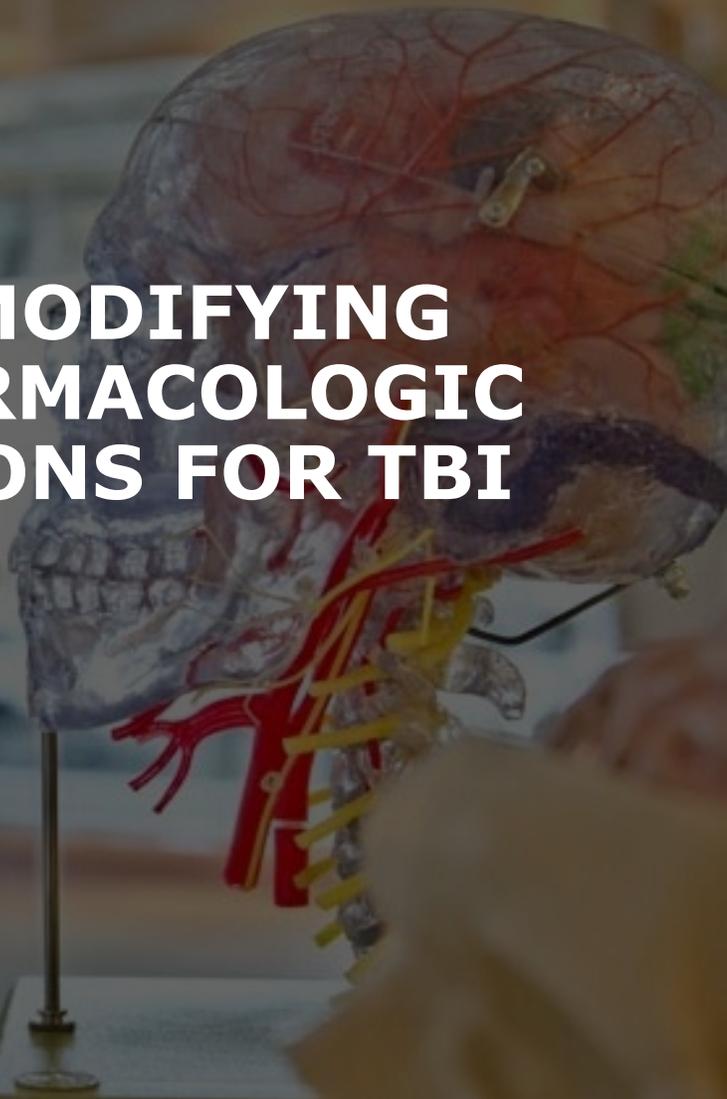
- Diagnosis
 - Know the prevalence
 - Prevent misdiagnosis
 - Modify the use of screening and assessment measures
 - Select measures appropriate for people with TBI

Delivering Mental Health Interventions for People with TBI (slide 2 of 2)

- Treatment
 - Be aware of the impact of reduced cognitive functioning and self-awareness
 - Consider and adjust for cognitive challenges
 - Memory
 - Attention
 - Processing speed
 - Executive function
 - Select interventions adapted for people with TBI

QUESTIONS: MODIFYING CLINICAL INTERVENTIONS FOR TBI





**SECTION 6: MODIFYING
PSYCHOPHARMACOLOGIC
INTERVENTIONS FOR TBI**

Section 6 Speakers



**Lindsey Gurin,
MD**

*Clinical Assistant Professor
of Neurology, Psychiatry,
and Rehabilitation Medicine*
NYU Langone
Health



**NYU Langone
Health**

Michael Chiou, MD

Brain Injury Fellow

"It is not only the kind of injury that matters, but the kind of head."

-- Sir Charles Symonds,
1937

- TBI-induced alterations in neural circuitry must be understood in the context of the whole person
- Posttraumatic psychiatric symptoms are influenced by
 - personality structure
 - preexisting psychiatric vulnerabilities
 - life experience and psychosocial factors
- The standard psychiatric assessment captures these essential elements and can be adapted to TBI with some modifications

Goals of psychiatric care in TBI

- Improve diagnostic clarity by identifying symptom clusters that
 - Resemble primary psychiatric illness; or
 - Are consistent with expected sequelae of TBI (e.g., cognitive impairments)
- Identify discrete target symptoms potentially amenable to intervention
- Treat target symptoms by supplementing non-pharmacological interventions with rational pharmacotherapy
 - Extrapolated from data for primary psychiatric illness;
 - Informed by TBI-specific data, where available; or
 - Driven by hypotheses about neurotransmitter disturbances caused by specific injury

Modifications to Psychiatric Assessment in TBI (slide 1 of 2)

- Timing: how recent was the TBI?
 - Acute/post-acute period: be aware of posttraumatic amnesia; expect evolution of symptoms as individual recovers; consider contribution of medical complications of TBI
 - Chronic: consider possibility of neurodegenerative cognitive impairment (TBI increases risk of dementia)

Modifications to Psychiatric Assessment in TBI (slide 2 of 2)

- Medical review of systems – attention to neurologic complications of TBI that may exacerbate psychiatric symptoms
 - Headaches, chronic pain (and adverse effects of pain meds)
 - Seizures (and adverse effects of antiseizure meds)
 - Dysautonomia (e.g., paroxysmal sympathetic hyperactivity which can mimic/trigger agitation; positional orthostatic tachycardia syndrome [POTS] after mTBI which can trigger anxiety)
 - Visual disturbances (common, increase cognitive fatigue and subjective stress, can improve with vision therapy)
- Get as much detail about the TBI as possible – severity, extent, lesion location

Modifications to the Mental Status Exam

- Supplement standard psychiatric mental status exam with some form of cognitive assessment
 - Evaluate for overt cognitive dysfunction during interview
 - In-office screening tools as needed:
 - Montreal Cognitive Assessment (MoCA)
 - Saint Louis University Mental Status (SLUMS)
 - Mini-Mental Status Exam (MMSE)

Further Medical and Neurologic Assessment

- Review prior brain imaging or obtain new imaging (MRI preferred over CT)
- Consider EEG to evaluate paroxysmal or episodic symptoms
- Bloodwork: standard psychiatric labs (e.g., thyroid function, B12) + low threshold to obtain pituitary hormone screening labs (pituitary hypofunction is a known consequence of TBI)

Diagnostic Formulation

- TBI can interact with primary psychiatric illness, altering expression of both and producing confusing clinical presentations
- Apply “best fit” diagnoses to symptom clusters that resemble primary psychiatric illness (even if not all symptoms are explained)
- Identify target symptoms directly attributable to TBI
 - Sleep/wake disorders
 - Emotional dyscontrol: irritability, lability, pseudobulbar affect
 - Behavioral dyscontrol: disinhibition, aggression
 - Diminished motivation: apathy, abulia
 - Cognitive impairment: especially inattention, memory impairment, executive dysfunction
 - Agitation: usually driven by multiple underlying factors (i.e., not itself a specific target symptom)

Modifying
Psychopharmacologic
Treatment: General
Principles
(slide 1 of 2)

- “Without a map, you cannot get to your destination” – know your target symptoms
- When possible, add by subtraction first
- “Start low, go slow – but go”
- Reassess frequently and adjust as needed
- Avoid polypharmacy – most of the time

Modifying Psychopharmacologic Treatment: General Principles (slide 2 of 2)

- Treat recognizable psychiatric syndromes according to standard of care, keeping in mind that TBI increases sensitivity to medication adverse effects
- Treat TBI-specific symptoms according to available evidence base
- Supporting cognition is key - especially cholinergic and dopaminergic pathways essential for executive function and attention
 - Avoid dopamine blockade if possible – atypical antipsychotics preferred; quetiapine has best side effect profile and may improve cognition in TBI
 - Avoid medications with significant anticholinergic activity
 - Amantadine promotes neurobehavioral recovery in severe TBI and is used commonly in TBI of all severities for a wide range of symptoms

Overview of psychopharmacologic treatment of TBI-specific syndromes

	Sleep/wake disorders	Emotional dyscontrol	Diminished motivation	Cognitive impairment	Agitation
First-line	Melatonin Ramelteon	Selective Serotonin Reuptake Inhibitors (SSRIs)	Amantadine	Amantadine	Beta blockers (propranolol)
Second-line	Trazodone Mirtazapine Stimulants (promote daytime wakefulness)	Anticonvulsants Amantadine Atypical antipsychotics	Methylphenidate	Donepezil Methylphenidate	SSRIs Anticonvulsants Amantadine Atypical antipsychotics Stimulants (sometimes)
Comments	Treating can have broad benefits on mood, cognition, behavior	SSRIs can work rapidly and at lower doses than needed for depression		Treating can have secondary benefit for mood/behavioral symptoms	Identify underlying contributors and treat those directly

QUESTIONS: MODIFYING PSYCHOPHARMACOLOGIC INTERVENTIONS FOR TBI



Wrap-up

Real-Time Evaluation Questions

- Please take a moment to respond to these six evaluation questions to help us deliver high-quality TBI TARC webinars
- If you have suggestions on how we might improve TBI TARC webinars, or if you have ideas or requests for future webinar topics, please send us a note at TBITARC@hsri.org

Real-Time Evaluation Questions (cont).

- 1. Overall, how would you rate the quality of this webinar?**
- 2. How well did the webinar meet your expectations?**
- 3. Do you think the webinar was too long, too short, or about right?**
- 4. How likely are you to use this information in your work or day-to-day activities?**
- 5. How likely are you to share the recording of this webinar or the PDF slides with colleagues, people you provide services to, or friends?**
- 6. How could future webinars be improved?**

Thank You

The Traumatic Brain Injury Technical Assistance and Resources Center (TBI TARC) is an initiative from the Administration for Community Living that helps TBI State Partnership Program grantees promote access to integrated, coordinated services and supports for people who have sustained a TBI, their families, and their caregivers. The Center also provides a variety of resources to non-grantee states, people affected by brain injury, policymakers, and providers.



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