

Section 2 of
Traumatic Brain Injury and Substance Use Disorders: Making
the Connections

S E C T I O N 2

SCREENING
FOR
BRAIN INJURY

Author: Carolyn Lemsy, PhD, C Psych ABPP-
CN

Editors: Patricia Stilen, MSW and Thomasine
Heitkamp, LCSW

Mid-America (HHS Region 7) Addiction Technology Transfer Center
Network and Mountain Plains ATTC (HHS Region 8) Addiction
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SCREENING FOR BRAIN INJURY

Unless a client had a severe injury and is aware of the resulting difficulties, you may not know about a client's history of brain injury before their first visit with you. A client you are serving may not be aware of their personal history of brain injury and how it is impacting their current functioning. If they are aware, they might not realize its relevant to other concerns and might not think to mention it. This is particularly true when an individual sustained their injuries in the context of intimate partner violence (IPV) or abuse. Use screening questions that are specific, and provide your client with cues about how to think about their own history to provide the information you need to determine if care adaptations may be required.



Any clinician who has taken the time to learn how to use a screening measure and interpret the results can screen for brain injury. Some clinicians express the concern that they should not screen for a problem when they do not have the knowledge or resources for intervention. There are many skills you can incorporate to ensure the intervention you are delivering is more effective. Screening is critical. However, it is important to recognize that screening is not a diagnosis. A positive screen gives us some clues that could help to explain our clinical observations and suggest measures that might be taken to improve their situation. For example, when someone reports a history of brain injury to you, they provide information that you can use to formulate a care plan that

considers the risk of suicide. Adolescents and adults who have sustained a TBI are at a significantly increased risk of suicidal ideation, acts, and attempts.¹⁵

Who Should Be Screened for Brain Injury?

The answer is simple: Everyone you serve. As we discussed in the introduction to this toolkit, brain injury often comes with invisible disabilities. Depending on the setting, there may be a high risk of brain injury in the people you serve.

When Should Screening Occur?

The timing of screening for brain injury will depend on the setting you work in and the clients you serve. Questions pertaining to a history of illness or injury affecting the head or brain can be included in intake questionnaires. The best practice is to follow-up with an interview to ensure that the client has understood, remembered, and reported all the important events and information. There are also some important considerations to minimize the possible negative impact of screening.

Managing Stigma. While it is very important to screen for brain injury, it is also important to be sensitive to the potential for clients to feel stigmatized by the discussion. It is common for people who have a history of brain injury to feel that others see them as “dumb” or “damaged.” It is important to consider how you, as a clinician, must elicit the history in a respectful manner. **The importance of recognizing and affirming a client’s individual’s resilience, abilities, and strengths throughout this discussion is critical.** It is also important to recognize and reinforce that having a problem with memory, attention, cognitive slowing, or communication does not mean that a person is unable to make decisions for themselves or make important contributions to others. What it does mean, though, is that understanding these difficulties and compensating for them will allow a person to have more impact. They will, then, be able to make the best possible decisions for themselves and be better understood and more in control.

Trauma-Informed Care. For many people, talking about their medical history and, in particular, any injuries to their head or brain may elicit traumatic memories. Before asking direct questions about brain injury, screening for a history of trauma will help avoid unexpected and negative reactions to the assessment. Even with screening, however, a client may have an emotional reaction to being asked about their history of injury. This is particularly true if their injury occurred under traumatic circumstances. The clinician will need to use their judgment regarding the timing of a screening interview and how far to pursue specific information if a client appears distressed.

Clients who may have sustained an injury in the context of intimate partner violence or other trauma may feel more comfortable and, therefore, provide more complete reports on questionnaires that they can complete privately rather than in interviews.³⁹ Screening tools may need to be modified slightly to include questions related to near strangulation. If you are working in an addiction setting, you may want to ask about overdose episodes explicitly.

Screening Methods

Screening measures that use only one or two questions to determine whether a brain injury has occurred have been found to miss milder and more remote histories of brain injury.⁴⁰ For this reason, researchers have developed screening measures that provide the individual with a clear set of cues to help them think back on their own history and provide responses that indicate when the injury happened and how severe it was. Although self-reporting is not perfect, it can provide a reasonable estimate of an individual’s exposure to brain injury over the course of their lifetime. An experienced interviewer may be able to complete this screening in as little as just a few minutes for an uncomplicated history, or up to 15 minutes if there is a substantial brain injury history.

Suggested Screening Tools:

The Ohio State University Traumatic Brain Injury Identification Method (OSU TBI-ID)

The OSU TBI-ID⁴¹ uses a set of specific cues to help interviewees remember their lifetime history of TBI. This screening tool is recommended because it has been shown to be a reliable way to elicit TBI history and includes guidelines for clinical interpretation of the findings. The OSU TBI-ID can be administered by anyone who has completed training. Free training to administer the OSU TBI-ID method is available online at <http://www.brainline.org/content/2013/08/new-tbi-screening-tool.html> and <http://ohiovalley.org/tbi-id-method> and takes less than one hour to complete. Because of the research evidence that the OSU TBI-ID method elicits a complete and reliable estimate of TBI history, this measure is recommended.

Name: _____ Current Age: _____ Interviewer Initials: _____ Date: _____

Ohio State University TBI Identification Method — Interview Form

Step 1

Ask questions 1-5 below. Record the cause of each reported injury and any details provided spontaneously in the chart at the bottom of this page. You do not need to ask further about loss of consciousness or other injury details during this step.

I am going to ask you about injuries to your head or neck that you may have had anytime in your life.

1. In your lifetime, have you ever been hospitalized or treated in an emergency room following an injury to your head or neck? Think about any childhood injuries you remember or were told about.

☐ No ☐ Yes—Record cause in chart

2. In your lifetime, have you ever injured your head or neck in a car accident or from crashing some other moving vehicle like a bicycle, motorcycle or ATV?

☐ No ☐ Yes—Record cause in chart

3. In your lifetime, have you ever injured your head or neck in a fall or from being hit by something (for example, falling from a bike or horse, rollerblading, falling on ice, being hit by a rock)? Have you ever injured your head or neck playing sports or on the playground?

☐ No ☐ Yes—Record cause in chart

4. In your lifetime, have you ever injured your head or neck in a fight, from being hit by someone, or from being shaken violently? Have you ever been shot in the head?

☐ No ☐ Yes—Record cause in chart

5. In your lifetime, have you ever been nearby when an explosion or a blast occurred? If you served in the military, think about any combat- or training-related incidents.

☐ No ☐ Yes—Record cause in chart

Interviewer instruction:

If the answers to any of the above questions are "yes," go to Step 2. If the answers to all of the above questions are "no," then proceed to Step 3.

Step 2

Interviewer instruction: If the answer is "yes" to any of the questions in Step 1 ask the following additional questions about each reported injury and add details to the chart below.

Were you knocked out or did you lose consciousness (LOC)?

If yes, how long?

If no, were you dazed or did you have a gap in your memory from the injury?

How old were you?

Step 3

Interviewer instruction: Ask the following questions to help identify a history that may include multiple mild TBIs and complete the chart below.

Have you ever had a period of time in which you experienced multiple, repeated impacts to your head (e.g. history of abuse, contact sports, military duty)?

If yes, what was the typical or usual effect--were you knocked out (Loss of Consciousness - LOC)?

If no, were you dazed or did you have a gap in your memory from the injury?

What was the most severe effect from one of the times you had an impact to the head?

How old were you when these repeated injuries began? Ended?

Step 1	Step 2						
Cause	Loss of consciousness (LOC)/knocked out				Dazed/Mem Gap		Age
	No LOC	< 30 min	30 min-24 hrs	> 24 hrs	Yes	No	

If more injuries with LOC: How many? _____ Longest knock out? _____ How many ≥ 30 mins.? _____ Youngest age? _____

Step 3	Typical Effect		Most Severe Effect			Age	
	Dazed/ memory gap, no LOC	LOC	Dazed/ memory gap, no LOC	LOC < 30 min	LOC 30 min - 24 hrs.	LOC > 24 hrs.	
Cause of repeated injury							Began Ended

Adapted with permission from the Ohio State University TBI Identification Method (Corrigan, J.D., Bogner, J.A. (2007). Initial reliability and validity of the OSU TBI Identification Method. J Head Trauma Rehabil, 22(6):3-8-329.
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The screening method includes detailed questions, listing possible ways that an injury may occur. The interviewer/clinician notes each possible injury and the age at which it occurred. Once all injuries are listed, the interviewer returns to each injury and asks a series of questions to determine the severity of the injury. Often several blows to the head occur frequently during a period of time. For example, a young athlete might have had a number of hard hits while playing football. Someone living



with an abusive partner may report a period of time when they sustained hits to their head. In that case, the client is asked to talk about the worst of the injuries they sustained, and the period of frequent injury is noted on the form.

Quick Screening for Lifetime History of TBI from the OSU TBI-ID

If your agency/employer wants to have screening completed during the intake process or in a setting in which a 10-minute interview with a trained provider is impractical, a brief screening form is useful.

A brief form for self-screening was developed by the creators of the original OSU TBI-ID. These questions allow the three results of screening to be computed:

- Positive for a lifetime history for TBI with loss of consciousness (LOC) (yes/no);
- Worst TBI with LOC was mild, moderate, or severe (no TBI with LOC, mild TBI with LOC, moderate TBI, severe TBI);
- Age at which first TBI with LOC occurred (in years). This measure does not get information about aftereffects of injury, and the interested clinician would need to follow up on that independently.

OSU TBI-ID Quick Screen

Please think about injuries you have had over your entire lifetime, especially those that affected your head or neck. It might help to remember times you went to the hospital or emergency room. Think about injuries you may have received from a car or motorcycle wreck, bicycle crash, being hit by something, falling, being hit by someone, playing sports, or during military service.

- Thinking about any injuries you have had in your lifetime, were you ever knocked out, or did you lose consciousness?
_____ Yes
_____ No (IF NO, STOP HERE)
- What was the longest time you were knocked out or unconscious? (Choose just one; if you are not sure, please make your best guess.)
_____ Knocked out or lost consciousness for less than 30 minutes
_____ Knocked out or lost consciousness for between 30 minutes and 24 hours
_____ Knocked out or lost consciousness for 24 hours or longer
- How old were you the first time you were knocked out or lost consciousness?
_____ Years old



Understanding the Results of Screening

Not all hits to the head result in a concussion or brain injury. Remember that the vast majority of brain injuries are mild, and most people with mild injuries recover within the first few months of injury. Even when people have had a couple of concussions in their lifetime, they may not have any lasting effects if they've had enough time to heal between injuries.

When a person reports a brain injury that included a loss of consciousness that lasted 30 minutes, or they remained confused for more than 24 hours, there's more reason to be concerned that they are living with some lasting problems from their injury.

Suppose a person suffers an injury with a loss of consciousness of any length before the age of fifteen. They are at risk for problems with emotional regulation and behavior, depending on the severity of the injury.

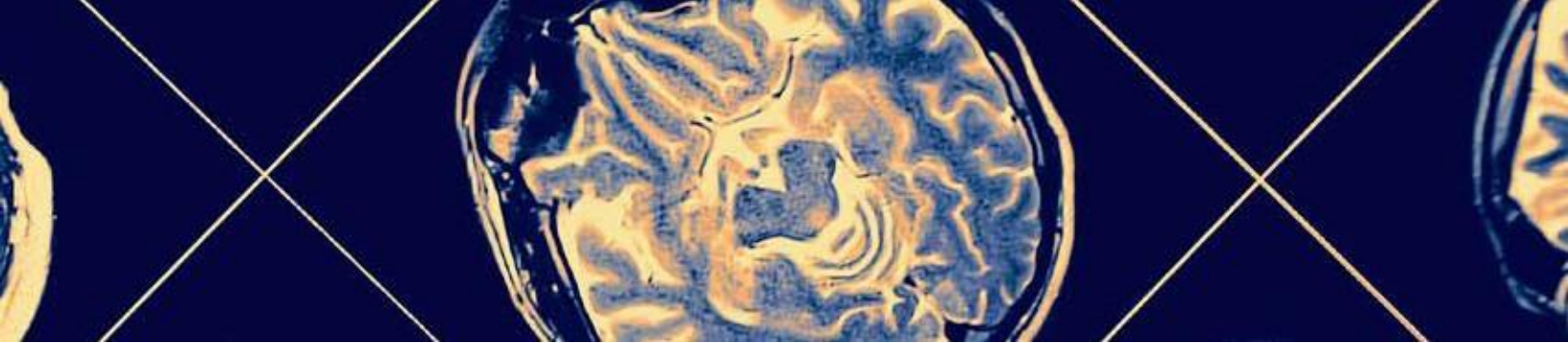
Suppose a person has had a number of injuries, particularly if they are spaced closely enough together that a second injury occurs while the first is still healing. In that case, there is reason to be concerned about lasting impacts.

People with injuries that occurred within a few months' time (if they were mild) or within the first year or two (if they were more severe) are more likely to be experiencing symptoms related to their TBI.

When brain injuries occur with other health or behavioral health concerns, they are more likely to have lasting effects. Mental health problems such as depressed mood and anxiety may be made worse by a brain injury. People who have serious mental health problems, such as someone diagnosed with schizophrenia, may find that the injury exacerbates existing difficulties with thinking and memory or worsens some of their psychiatric symptoms.

Specialty Referrals

Ideally, when a history of brain injury is discovered and cognitive and functional impairments suspected, the client should be referred to a professional working in the field of rehabilitation familiar with brain injury for assessment and intervention or consultation. Cognitive assessment by a neuropsychologist can provide an understanding of an individual's particular strengths and weaknesses. Assessment by an occupational therapist may provide information about an individual's ability to meet the demands of daily living, enabling the therapist to provide practical recommendations for accommodating cognitive impairments and improving function. Evaluation by a neurologist may be required if there is a concern about ongoing neurological symptoms, such as episodes of loss of consciousness or a recent change in cognitive functioning. **In many cases, these specialized referrals are not readily available, and providers of substance use disorder treatment may need to make their own observations of a client's needs and abilities.**



Screening for Functional Impairments

Once you understand a client's history, you will need to have a clear picture of the client's current challenges. Often a clinician will need to assess a client's cognitive difficulties without the benefit of a formal psychological assessment. Typically, the goal of assessment is to identify what might be causing a given difficulty to determine the best treatment. In the case of co-occurring mental health issues and addictions and/or brain injury, it is generally impossible to determine precisely what is causing a given cognitive or behavioral problem. Many brain injury symptoms overlap with the cognitive and behavioral symptoms that are often observed as a direct result of substance use. Intoxication, as well as cognitive and behavioral changes that result from substance use, may closely resemble symptoms of brain injury. Complex histories that include adverse childhood experiences, recent traumatic events, and serious mental illness can also contribute to behavioral and cognitive difficulties. The best approach is to assess a client's current abilities and accommodate them.

Assessing the functional impact of cognitive impairment in the interview

The table on page 31 provides some sample questions that may help to identify cognitive impairment through direct questioning. Later sections will give suggestions on how to interpret your observation of a client's behavior during the intervention. Many clinicians may find it awkward to speak to someone directly about their disability or cognitive impairments. A clinician should open this discussion with a statement that indicates that the purpose of the questioning is to better address their needs.

As you discuss a client's history, it is important to note whether the client has experienced any significant problems in activities of daily living that have resulted from the disability. This will help you understand the types of accommodations they may require. Programs for treating substance use disorders often include assessment of activities of daily living along with life-skills training. In the event your program does not have this type of assessment as a part of the intake process, one option is to use the World Health Organization Disability Assessment Scale (WHODAS 2.0 Screening Tool), which is available for clinical use without cost.

WHODAS 2.0 Screening Tool

For some client groups, it will be useful to have an overview of a client's disability in terms of their capacity to complete day-to-day activities. The World Health Organization's Tool covers six domains of functioning: cognition, mobility, self-care, getting along with others, life activities, and participation. This tool is designed to be useful across disability groups, including mental, neurological, and substance use disorders. It is relatively short and easily administered (it takes 5 to 20 minutes to complete) and has been found to be relevant across cultures.

The format of the questions is like the table on page 31 but pertains to each of the six different functional areas. A detailed manual provides information about the interview administration as well as scoring. The manual, as well as an overview of the psychometric characteristics of the measure, can be found at: https://www.who.int/classifications/icf/more_whodas/en/.

Cognitive Screening

Screening for cognitive impairment at the start of treatment can include a cognitive screening measure that directly assesses cognition. Cognitive screening has the

benefit of providing a measure of abilities at the time the assessment was conducted. It can be a window into the types of problems a person is having with thinking, and scores can be used to track the changes in cognitive abilities that may be occurring as the result of recovery. In most cases, the cognitive screening will not pick up on the behavioral aspects of brain injury-related impairments. Observations of day-to-day difficulties will still be needed to develop appropriate accommodations.



Cognitive screening should be completed by an individual who has been trained in the use of the assessment instrument and understands how age, education, and effort during testing may directly impact the results observed on screening. The resource section of this manual includes links to measures that can be used to learn more about cognitive screening.

SYMPTOMS ASSOCIATED WITH BRAIN INJURY

ASK: HAVE YOU EVER HAD DIFFICULTIES WITH...	LISTEN FOR AND OBSERVE
<i>Getting your point across to others?</i>	Is speech clear? Do words come easily? Is the message organized and complete? Do verbal statements match nonverbal behavior?
<i>Sitting still?</i>	Are there specific times/places that are difficult? What is the client's experience with this at work, school, etc.? What does the client think causes the difficulty? What helps?
<i>Focusing your attention?</i>	How long has this been a problem? When is it best? When is it worse? What seems to help?
<i>Understanding what others are saying?</i>	<ul style="list-style-type: none"> • Knowledge of the language of service delivery • Ability to understand words in primary language • Ability to pay attention one-on-one; ability to pay attention in groups • Hearing one-on-one; hearing in groups
<i>Communicating your thoughts and feelings?</i>	<ul style="list-style-type: none"> • Recognizing feelings • Organizing thoughts
<i>Managing your anger?</i>	History of aggression: When is anger worse? When is anger least likely?
<i>Remembering things?</i>	Memory for information? Memory for events in the past? Memory for things to do in the future? When is it best? When is it worse? What does the client do about it?
<i>Following instructions</i> (verbal or written), e.g., directions to a location, for building something, for cooking something?	What kind of instructions are most difficult to follow? What kind of instructions are easiest to follow?
<i>Becoming tired easily?</i>	In which situations is fatigue occurring? What is the client's endurance for mental activity (e.g., education sessions, group therapy)? What is the client's endurance for physical activity (e.g., walking)? What helps?
<i>Getting along with others?</i>	<ul style="list-style-type: none"> • State of family relationships • State of friendships
<i>Being impulsive — doing before thinking?</i>	When is the client at their most impulsive? When is the client at their most organized and able to make plans?
<i>Trouble getting thoughts out of your head?</i>	Does the client have trouble letting go of angry or upsetting thoughts? Does the client have trouble with worrying?
<i>Making up your mind?</i>	What sort of decisions are easiest? What sort of decisions are most difficult?
<i>Solving problems you haven't seen before?</i>	Examples of problems that proved difficult: Is the client willing to seek assistance? Does the client try to solve a problem before seeking assistance?
<i>Getting started on something you need or want to do?</i>	Is the problem making plans? Is the problem remembering what needs to be done? Is the problem poor initiation (knowing what needs to be done but putting it off with little/no reason for doing so)?