Building Capacity for Brain Injury

A guide for organizations to develop capacity to work with people who experience brain injury

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Introduction

Brain Injury is a significant public health issue in the state of Iowa and across the United States. Organizations providing human services are likely to encounter people who have experienced brain injury. Often people with brain injury may act in ways that others find confusing. Three of the most common areas people experience challenges in after injury include cognitive, behavioral, and emotional. These challenges may make it difficult for people to access community services. Service providers and the person seeking services may become frustrated due to these challenges.

The purpose of this guide to help organizations understand the steps they can take to serve people with brain injury in a person-centered manner. This guide outlines several steps to increase organizational knowledge about brain injury and the potential impacts it may have on people served in your organization, allowing your staff and volunteers to work more effectively with people experiencing brain injury. This enhanced ability to help people will promote organizational inclusivity and positively impact staff and volunteer satisfaction.

This guide will outline steps organizations can take to become brain injury informed and embed brain injury-friendly practices into their day-to-day operations. This guide allows organizations to take a measured approach to implementation based on their resources and needs. The sustainability of these efforts will be discussed throughout the guide.

The following are examples of organizations that may find this guide beneficial:



Incidence and Prevalence of Brain Injury

Brain injury significantly affects the lives of thousands of Americans each year and is the leading cause of death and disability among children and young adults. Each year the CDC estimates that 2.9 million Americans sustain a brain injury. This number includes individual deaths, hospitalizations, and emergency room visits.

Brain Injury Affects How the Brain Works

Brain Injuries affect the lives of people of all ages. Anyone can experience a brain injury, but data suggests that some groups are at greater risk. Examples of groups who are more likely to be affected by brain injury include:

- Racial and ethnic minorities
- Service members and Veterans
- People who experience homelessness
- People who are in correctional and detention facilities
- Survivors of intimate partner violence
- People living in rural areas
- People who abuse substances

Causes

Common causes of brain injuries include falls, firearm-related injuries, motor vehicle crashes, and assault. Research shows that:

- Falls lead to nearly half of brain injury-related hospitalizations
- Motor vehicle crashes and assaults are other common ways a person may experience a brain injury

Impact

A brain injury may lead to short- or long-term health problems. Depending on the severity of the injury, people may face health problems that last a few days or the rest of their lives.

A person with a mild brain injury or concussion may experience short-term symptoms and feel better within a couple of weeks or months. And a person with a moderate or severe brain injury may have long-term or life-long effects from the injury.

Brain Injury in Childhood

A brain injury during childhood may affect brain development. Brain injury affects children differently than adults. An injury of any severity to the developing brain may:

- Disrupt a child's development
- Limit their ability to participate in school and other activities, like sports

As a result, children may experience changes in their health, thinking, and behavior that affect learning, selfregulation, and social participation. Children are resilient and can experience good recovery after brain injury, however problems can show up later in life.

Factors that influence pediatric brain injury recovery include:

- Age at injury
- Injury severity
- Resources for care after brain injury
- Personal characteristics including learning style and pre-injury level of functioning

Challenges that may show up in adulthood include:

- Challenges with academics or finding and keeping a job
- Behavioral issues
- Risky behaviors that may lead to incarceration
- Substance use disorder
- Depression and other behavioral health challenges
- Difficulty with relationships











Physical Changes after Brain Injury

Fatigue

Fatigue is a feeling of exhaustion, tiredness, weariness, or lack of energy. As many as 70% of survivors of brain injury report some type of fatigue post brain injury. Fatigue impacts people by interfering with their ability to think clearly, which can negatively influence mood and overall functioning. Other conditions can cause fatigue. If an individual is experiencing significant fatigue, they should contact their medical provider to evaluate other possible conditions. After brain injury, people may experience multiple types of fatigue, including:



Changes in Motor Skills

Motor skills are movements of the body that use muscles to produce coordinated actions. Examples of gross motor skills include walking, running, and sitting. Examples of fine motor skills include writing or drawing, typing, tying shoes, and fastening buttons. Motor skill can change after brain injury in the following ways:

- Muscles may be stiff and difficult to move
- Movement may be erratic, or jerky and coordination may be difficult
- Muscles may become paralyzed or difficult to move voluntarily
- Planning and executing movements may be difficult

Changes in Hearing and Vision

Eyes and ears take in and process verbal and visual information and utilize this information to make sense of what we see and hear. When visual or hearing systems are not functioning properly, it can impact every area of a person's life, including employment, daily living activities, and quality of life. Some common types of problems with vision include:

- Blurred Vision
- Double Vision
- Decreased peripheral vision

Some common types of problems with the ears and hearing may include:

- Ringing in the ears
- Increased sensitivity to noise
- Increased sensitivity to air pressure

Changes in Balance

Difficulty with balance can also occur after brain injury. Balance is the ability to keep the body centered over its base of support, preventing individuals from falling and allowing them to control movement. If a person has poor balance after a brain injury, they have a high risk of falling. Falls can cause additional brain injury(s) or other physical injuries. Balance can impact walking and self-care tasks like bathing, using the toilet, and dressing. Poor balance can keep people from being able to engage in leisure activities, drive, or work.

Changes in Sensory Perception

Oftentimes after brain injury a person will experience changes in sensory perception. These may include a lack of taste and smell or altered taste, or decreased ability to smell. These changes can significantly impact a person's food intake, which puts them at enhanced risk for malnutrition and other medical issues. It can also significantly impact an individual's quality of life.



Strategies to Address Physical Challenges

There are strategies that can help individuals experiencing brain injury overcome physical challenges. When developing strategies, always consider that each person is an individual, determine which strategies they may need, and which will work with their lifestyle. The following strategies may help with some of the physical challenges associated with brain injury:

Make materials visually accessible	
Allow extra time for physically demanding tasks	
Ensure that accommodations are accessible	
Shorten meeting times with the individual	
Break down work and activities into smaller segments	
Supplement visual materials with audio instructions	
Reduce visual clutter	
Reduce visual clutter Allow time for rest	
Reduce visual clutter Allow time for rest Develop strategies for good sleep hygiene practices	
Reduce visual clutter Allow time for rest Develop strategies for good sleep hygiene practices Limit environmental/background noise	
Reduce visual clutter Allow time for rest Develop strategies for good sleep hygiene practices Limit environmental/background noise Give clear instructions and ask for understanding	

Cognitive Changes after Brain Injury

Changes in Attention and Concentration

After brain injury, attention and concentration may be challenging. Individuals may have trouble paying attention or staying focused, which can lead to people:

- Getting distracted more easily
- Having difficulty completing tasks
- Experiencing challenges switching attention from one task to another
- Having difficulty learning and remembering new information

Changes in Processing and Understanding Information

Processing and understanding information can be impacted after brain injury. People may not understand instructions or may need more time to understand what is being asked of them. An individual may:

- Have trouble understanding what others are saying
- May need more time to understand and follow directions
- React more slowly to changes and warning signs in their environment
- Take longer to carry out routine activities

Changes in Communication after Brain Injury

Communication challenges after brain injury can make it harder for someone to express their thoughts and may create difficulty in understanding what others say. People may experience:

- Difficulty thinking of the right word
- Trouble expressing thoughts in an organized manner
- Problems using and understanding non-verbal communications and cues
- Rambling or disjointed speech

Changes in Planning and Organization

Planning and organization may be impacted after brain injury, preventing the individual from following the steps needed to accomplish a goal or organize their daily life. Examples include:

- Difficulty planning their day and scheduling appointments
- Trouble organizing and keeping track of things like paperwork or mail
- Challenges with tasks that require multiple steps to be completed in a particular order, such as cooking or brushing teeth

Changes in Learning and Remembering

Trouble learning and remembering new information is a common challenge among people who experience brain injury. These memory impairments can be short and longterm and can make engaging in daily activities very challenging. Memory challenges also cause frustration and can impact a person's sense of self.



Strategies to Address Cognitive Challenges

There are strategies that can help individuals experiencing brain injury overcome physical challenges. When developing strategies, always take into account that each person is an individual, determine which strategies they may need, and which will work with their lifestyle. The following strategies may help with some of the cognitive challenges associated with brain injury:



Emotional Changes after Brain Injury

Changes in Emotional Control

Difficulty controlling emotions can be caused by damage to the part of the brain that controls emotion and behavior. In some situations, individuals may anger easily but then calm down quickly. Other emotions may also develop quickly and dissipate or may be expressed at times inconsistent with the situation or environment.

Anxiety

Anxiety is an experience of fear or nervousness and can be overwhelming. After brain injury, people may experience anxiety without knowing exactly what is causing the feeling. Situations that were not previously challenging may be harder to handle secondary to cognitive issues, causing general anxiety for some individuals or trigger panic attacks in others.

Depression

Depression is a chronic feeling of sadness or worthlessness. Depression can cause changes in sleep and appetite. Individuals may have difficulty concentrating, and experience increased social isolation, and, in some instances, may have recurring thoughts of death or suicide. Depression can be caused by adjustment issues or physiological changes to the brain. If these symptoms are present, it is best to get treatment early as depression can negatively impact rehabilitation and recovery.

Changes in Irritability and Expressions of Anger

Increased irritability and expressions of anger can lead to people who have experienced brain injury to be described as having quick tempers or being easily upset. After brain injury, some individuals experience increased irritability, which can lead to behavior that can be challenging both for them and the people around them. People may express irritability in a variety of ways, including verbally and physically.

Changes in Sexual Functioning and Expression

Changes in sexual functioning and expression can occur after brain injury. These changes can be due to both the physical and psychosocial impacts, hormonal changes, and the impacts of some medications. Some common changes include:

- Increased or decreased arousal or sexual desire
- Difficulty or inability to reach orgasm
- Changes in the reproductive systems
- Challenges in expressing sexuality in a contextually appropriate manner

Strategies to Address Emotional Changes after Brain Injury

There are strategies that can help individuals experiencing brain injury overcome emotional challenges. When developing strategies, always consider that each person is an individual, determine which strategies they may need, and which will work with their lifestyle. The following strategies may help with some of the physical challenges associated with brain injury:



See Appendix A for specific strategies and interventions to address challenges.

Behavioral Changes after Brain Injury

After brain injury, cognitive changes can influence how an individual interprets their environment. This interpretation can cause people to behave in ways that are different than those who do not have cognitive deficits secondary to brain injury. These changes in behavior can cause individuals challenges in many environments. Using simple strategies can help you to interact with people who experience these changes and challenges.

Understanding the reasons for and assessing the behavior helps to answer the following questions:



See Appendix A for specific strategies and interventions to address challenges.

Steps to Enhancing Your Capacity to Serve People with Brain Injury

The following pages will provide a series of tips and resources to help organizations enhance their capacity to serve people with brain injury. Each section is a tool or task that can be utilized independently or in concert with the other options to move an organization toward brain injury friendly services.



Develop Awareness

Awareness of brain injury has become more common in the United States. Stories about NFL players and a focus on youth concussions have helped to raise awareness. Organizations may have not previously considered they are serving people with brain injury every day. The first step to enhancing capacity to serve people with brain injury is to become aware of brain injury and its impacts on the lives of individuals participating in your services.

Familiarize Yourself with Brain Injury

There are many resources available to begin learning about brain injury. By learning about brain injury, you may start to recognize signs and symptoms in people you know or customers you serve. Some reputable resources to learn about brain injury include:

Administration for Community Living

(ACL) Traumatic Brain Injury State Partnership Program provides grants to states to build capacity for brain injury services and service providers within states. States who receive funding focus on expanding infrastructure to promote brain injury systems change. <u>https://acl.gov/programs/post-injury-support/traumaticbrain-injury-tbi</u>

Brain Injury Association of America (BIAIA)

BIAIA is the nation's oldest brain injury advocacy organization. BIAA provides education and resources on brain injury. BIAA has state affiliates that provide local education, training, and resources. Affiliates can be found on the BIAA website. <u>https://www.biausa.org</u>

BrainLine

BrainLine is a national resource that provides an online platform to educate about brain injury and provide support to people experiencing brain injuries, their families, friends, and professionals. BrainLine is also a resource on traumatic brain injury and Post-Traumatic Stress Disorder for veterans, service members, and their families. The site includes a section on TBI Basics, which is an excellent place to begin learning about brain injury.

https://www.brainline.org

Centers for Disease Control and Prevention (CDC)

The CDC monitors the incidence and prevalence and completes research on brain injury in the United States. The CDC provides publications, reports, and educational resources about traumatic brain injury and concussion for the general public, researchers, and service providers.

https://www.cdc.gov/traumaticbraininjury/index.html

United States Brain Injury Alliance (USBIA)

USBIA is an education, resource, and advocacy organization. USBIA has state affiliates that provide education, training, and resources within their states. Affiliates can be found on the USBIA website. https://www.usbia.org

Staff Training

Training for staff within human service organizations that interact with people who experience brain injury is a crucial component in developing capacity. Training allows staff who work with individuals to understand the causes and changes secondary to brain injury. Understanding brain injury allows staff to function in a person-centered manner which will help improve both individual and organizational outcomes. Initial training should be general and focus on several key areas:

- Incidence and prevalence of brain injury
- Changes that occur after brain injury
- Strategies and interventions for working effectively to help people manage changes after brain injury
- Community resources for people who experience brain injury





- Screening
- Service planning
- Personal interaction strategies
- Working with families after brain injury

- Assessment
- Challenging behaviors
- Multi-occurring conditions
- Advocacy training

Training Resources

There are various training opportunities available to staff that include low- and no-cost options that offer general information about brain injury. The following resources include virtual and in-person training options with both basic and advanced content:

Brain Injury Basic Training

Brain Injury Fundamentals

Brain Injury Fundamentals was developed by the Brain Injury Association of America. The training is designed for people who may encounter or work with individuals experiencing brain injury, including staff, family members, and friends. Certified instructors lead the training through state program affiliates. The cost for the training varies by instructor. Contact the Brain Injury Association of America or your state affiliate for more information.

https://www.biausa.org/professionals/acbis/acbis-fundamentals/acbis-fundamentals

CBIRT Staff TBI Skill Builder

The Staff TBI Skill Builder was developed by the Department of Psychology at the University of Oregon through a grant from the Administration on Community Living. The CBIRT Staff TBI Skill Builder is a free, online training program designed for staff who are new to working with adults experiencing brain injury. The training is made up of 14-modules which takes approximately 3-5 hours to complete. The course is also a good refresher for staff who have experience working in the field of brain injury. <u>https://cbirt.org/research/current-projects/staff-tbi-skill-builder</u>

Advanced Brain Injury Training

Academy of Certified Brain Injury Specialists (CBIS)

CBIS training was developed by the Brain Injury Association of America. Individuals who complete the training are eligible to sit for an examination to earn a nationally recognized credential. CBIS is an advanced training led by certified instructors through program affiliates; costs vary per instructor. Contact the Brain Injury Association of America or your state affiliate for more information. <u>https://www.biausa.org/professionals/acbis/about/about-acbis-mission-vision-history</u>

Topic Related Training

Administration for Community Living TBI Technical Assistance Resource Center ACL TBI Technical Assistance Resource Center provides webinars and educational series on various topics related to brain injury. <u>https://tbi.acl.gov/Request-Assistance</u>

• Archived webinars can be found by visiting this site: <u>https://tbi.acl.gov/News-Updates</u>

Brain Injury Alliance & Brain Injury Association

BIA and state affiliates provide basic, advanced, and ongoing training that can be tailored specifically to your organization's needs. Affiliates offer in-person conferences, webinars, workshops, and other training on brain injury, covering various topics. To find your state affiliate visit:

- Brain Injury Association of America: <u>https://www.biausa.org</u>
- United States Brain Injury Alliance: <u>https://usbia.org</u>

The National Association of State Head Injury Administrators (NASHIA)

NASHIA is a credible source of information and education for state employees who support public brain injury programs. NASHIA provides updates on national trends, best practices to state and federal agencies, national associations, and brain injury stakeholders across the country.

https://www.nashia.org/professional-development



Other Educational Resources

BrainLine

BrainLine is a national online platform focusing on brain injury education and resources for people with Brain Injuries, their families, friends, and professionals. BrainLine is a resource for veterans, service members, and their families on Traumatic Brain Injury and Post-Traumatic Stress Disorder, offering various articles, video clips, and resources on specific topics related to brain injury. https://www.brainline.org

Family Caregiver Alliance

Family Caregiver Alliance provides resources to families caring for or supporting individuals experiencing physical or cognitive challenges, including brain injury. The Family Caregiver Alliance has specific information on brain injury as well as general information on caregiver support.

https://www.caregiver.org/resource/traumatic-brain-injury/

Traumatic Brain Injury Center of Excellence

The Traumatic Brain Injury Center of Excellence is focused on rehabilitation and reintegration for service members, veterans, and their families. The center has clinical tools, educational resources, and research information focused on brain injury. <u>https://health.mil/About-MHS/OASDHA/Defense-Health-Agency/Research-and-Development/Traumatic-Brain-Injury-Center-of-Excellence</u>

TBI Model Systems Knowledge Translation Center (TBIMS)

TBIMS is sponsored by several federal governmental agencies. TBIMS provides funding for regional Traumatic Brain Injury Model Systems grants for institutions that are leaders in medical research and patient care for individuals experiencing brain injury. These centers often offer educational programming and resources to stakeholders within their respective regions. <u>https://msktc.org/tbi/model-system-centers</u>

The Center for Outcome Measurement in Brain Injury (COMBI)

COMBI hosts a variety of assessment and outcome measurement tools related to brain injury. There are more than 25 tools available on the COMBI website that measure a variety of outcomes related to brain injury. <u>https://www.tbims.org</u>

Identify Internal Champions

When organizations desire to make internal changes or begin the process of serving new populations, it is essential to have internal champions. Internal Champions help guide, coordinate, and communicate change efforts to ensure that a compelling case has been made to engage in the effort. This person or group of people can help develop support and programs that will help organizations become better suited to serve people who experience brain injury.

As organizations engage in activities around awareness, staff training, and organizational development, it is vital to have a person acting as a "point person" for these activities. The point person can ensure coordination of activities both internally and externally. Organizations who choose to do more advanced brain injury training, screening for brain injury, etc., will want a point person who is able to develop networks and relationships in the brain injury community. These relationships help to develop further resources and support for change efforts.

Screening

Due to the prevalence of brain injury, screening is critical to delivering appropriate services and supports. Screening is an effective method for identifying a probable history of brain injury. It is a small and helpful first step in improving the lives of the millions of individuals who knowingly or unknowingly have experienced brain injury. Screening helps to build awareness about brain injury. Building awareness is essential as the consequences of brain injury are often overlooked and misdiagnosed.

Screening allows organizations to keep clear and accurate data on how many individuals they serve who may have experienced brain injury. This information can be helpful for clinicians as well as when making referrals. A process for referral will be described in the next section. Ensuring that screening and referral are a part of an organization's activities can enhance person-centered practices and outcomes.

Copies of the Ohio State Brain Injury Screening Tool and the Iowa Pediatric Brain Injury Screening Tool are included at the end of this guide.

Tips for Screening People Who May Have Experienced Brain Injury

The following should be taken into consideration when initiating a screening program for brain injury:

- Interviewing individuals with brain injury can be somewhat difficult due to cognitive challenges that can impact insight, memory, and the ability to concentrate
- Individuals may be unable to report information or details surrounding their injury accurately
- Individuals who have experienced brain injury often experience both physical and cognitive fatigue, which may impact their ability to sit through a lengthy screening process
- It is best to use an approach that allows the interviewer flexibility in rewording the questions and permission to probe to obtain the most helpful information. Prompts in the form of examples may be helpful



Develop Referral Process

When working with people who experience brain injury within your organization, it may be necessary to help to locate other services and supports. People who experience brain injury may require the help of multiple systems and professionals to be successful. It is not necessary for everyone to be an expert in brain injury to help people get access to the supports they need.

Brain Injury Specific Programs and Resources

There are two national organizations that provide training, education, and resources to people who experience brain injury and their families: the Brain Injury Association of America and the United States Brain Injury Alliance. Websites for both organizations are linked above, and their staff can help locate the specific state affiliate that may be able to help find appropriate supports and services.

Their phone numbers are:

- Brain Injury Association of America: 1-800-444-6443
- United States Brain Injury Alliance: 703-960-6500

State governments have programs and departments that are responsible for brain injury services in the state. The following link will take you to the most recent listing of these state programs. These programs can help to identify local resources and supports.

• NASHIA: <u>https://www.nashia.org/state-program-directory/</u>

Primary Care Physician

Individuals who screen positively for brain injury should be referred to their primary care physician or another medical professional to further assess and treat symptoms. When referring to outside medical professionals, it is helpful to provide a copy of the completed brain injury screening tool. The completed screening tool can help guide further conversation and assessment with the patient and their care provider to determine appropriate diagnosis and treatment options.

Maintaining Systems Change

It is important for organizations to systematize the steps above to ensure brain injuryinformed services are maintained. Training, screening, and referral are essential steps to develop brain injury-informed programming; however, these steps can be easily lost if not embedded into organization processes and procedures. The organization brain injury champion can help to guide the systems change process through the following steps:



Appendix A: Brain Injury Interventions

Common Physical Problems and Possible Interventions

Problem	Signs	What to Do
Fatigue	 Unable to sustain activity for long periods of time Frequently sleeping or resting Becomes overwhelmed quickly Irritability Increased errors when completing a task 	 Gradually introduce activities that require physical and cognitive stamina Offer frequent breaks (break task or activity into smaller steps) Gradually increase complexity of a task Watch for signs of fatigue and offer a break Encourage breaks prior to frustration or noticeable fatigue
Seizures	 Involuntary jerking or shaking in most or all limbs Unresponsiveness Convulsions Stiffening of body Loss of bladder control Loss of awareness Situationally inappropriate verbal responses Purposeless movement Staring Repetitive chewing, repeated swallowing, or lip-smacking motions 	 Do not attempt to restrain individual Make sure area surrounding individual is free of hazards Position individual on their side if necessary Do not get hands or fingers close to an individual's mouth Stay with individual until seizure is over Contact appropriate medical personnel

Common Communication Problems and Possible Interventions

Problem	Signs	What to Do
Initiating conversation	 Does not respond to conversations in social situations Does not start, or starts conversation by asking questions or comments slowly Pauses for a protracted period before speaking 	 Encourage person to participate by directing conversation directly to them Ask open-ended questions Allow time for individual to gather thoughts and respond Ensure the individual has your full attention until thought is completed Clarify meaning by asking questions
Tracking conversation	 Has trouble paying attention to what is being said Misinterprets what is said Does not remember what is said Forgets details of conversation 	 Ensure you have the individual's attention Remove distractions Use clear and concise speech Repeat important information and check for understanding Offer to summarize conversation and key points in writing

Common Cognitive Problems and Possible Interventions

Problem	Signs	What to Do
Attending and concentration	 Unable to focus Distractibility Does not remember things Difficulty attending to one or more tasks 	 Focus on one step or task at a time Ensure the person is attending before initiating conversation Decrease outside noises and distractions Keep changes to a minimum Ask individual to repeat back information that was shared Schedule break periods during times of extended activity to allow the individual to cognitively recharge
Remembering	 Unable to recall tasks from day-to-day Unable to remember new information Unable to remember changes to, or follow a schedule 	 Develop structured routine of daily tasks Use of memory aids such as planners or notebooks Use written communication to identify changes that may occur Review schedule and tasks frequently throughout the day Provide cues as needed for recall and to fill in gaps
Initiating Activity	 Unable to start activity Looks unmotivated Unable to finish activity 	 Develop structured routine for individual on a daily basis Offer specific choices for activity rather than leaving a choice open ended Take one step at a time in a task Work to establish time frame Develop agreed upon cues to help spur action

Common Psychosocial Problems and Possible Interventions

Problem	Signs	What to Do				
Controlling Emotions	 Mood Swings Inappropriate laughing or crying Low tolerance for frustration 	 Identify possible challenges prior to being in a setting Stay calm, lower tone of voice Allow for person to remove self from situation Provide feedback in a supportive manner after episode is over Redirect individual to another topic or activity 				
Depression	 Persistent sadness Irritability/moodiness Anxiety Loss of interest in life activities Change in sleep habits Lack of energy Feeling hopeless or despair 	 Refer person to speak to physician about mood symptoms and physical symptoms Ask individual what challenges or difficulties are contributing to the mood If someone threatens self-harm or to harm others contact a local emergency medical provider or law enforcement immediately 				
Decreased Self Control	 Acts or speaks without all information Impulsivity Verbal or physical disinhibition Makes comments that are not appropriate for situation Perseverates/gets stuck on one idea or thought 	 Work to develop alternatives Develop system to discretely cue person Slow down and walk through responses step by step Provide overview of conversation prior to starting it Develop Personal Intervention Plan to learn new skills 				

Appendix B: OSU TBI Identification Method

Name:	Curre	nt Age:	Interviewe	r Initials:	Date	e:			
Ohio State University TBI Identif	ication Method —	- Interviev	v 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	Step 2 Interviewer instruction questions in Step 1 ask about each reported in Were you knocked out of	n: If the answer is "yes the following additic njury and add details or did you lose cons	" to any of the onal questions to the chart below sciousness	v. Hav	Step 3 nterviewer inst dentify a histor somplete the ch ve you ever h	ruction: Ask the ry that may incl aart below. ad a period of	e following que ude multiple m f time in whic	stions to hel, iild TBIs and :h you	P
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	(LOC)? If yes, how long? If no, were you dazed your memory from th How old were you?	l or did you have a ne injury?	gap in	exp (e.c Wh you Ho Enc	perienced mu g. history of a lf yes, what w knocked out lf no, were yo memory fron at was the m u had an impa w old were yo ded?	Itiple, repeate buse, contact vas the typical (Loss of Conso ou dazed or di n the injury? ost severe effi act to the hea ou when these	ed impacts to sports, milita l or usual effe ciousness - LC d you have a ect from one d? e repeated in,	your head rry duty)? ct—were yr DC)? gap in your of the time juries bega	ou r 25 in?
 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 	Step 1 Cause	Step 2 Lo No LOC	ss of consciou	sness (LOC)/k 30 min-24 h	nocked out hrs > 24	hrs D	azed/Mem G	iap No	Age
 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 	If more injuries with LOC: Hov	v many?L	ongest knocke	d out?	How many	y ≥ 30 mins.?_ re Effect	You	ingest age?	?
incidents.	Cause of repeated injury	Dazed/ memory gap,	LOC n	Dazed/ nemory gap,	LOC < 30 min	LOC 30 min - 24 hrs	LOC > 24 hrs.	Began	Ended
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.						241115.			

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):318-329. © Reserved 2007, The Ohio Valley Center for Brain Injury Prevention and Rehabilitation

(Continuation f	rom reverse	side, i	if needed)
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Name:				Current Ag	ge:	_ Interview	ver Initials:
Step 1	Step 2						
	L	oss of consciou	usness (LOC)/knocl	ked out	Dazed/M	lem Gap	Age
Cause	No LOC	< 30 min	30 min-24 hrs	> 24 hrs	Yes	No	
					_	_	_

Interpreting Findings

A person may be more likely to have ongoing problems if they have any of the following:

· WORST

___ Date: ____

One moderate or severe TBI

· FIRST

TBI with loss of consciousness before age 15

MULTIPLE

2 or more TBIs close together, including a period of time when they experienced multiple blows to the head

· RECENT

A mild TBI in the last weeks or a more severe TBI in the last months

OTHER SOURCES

Any TBI combined with another way that their brain function has been impaired

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

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

For more information about TBI or the OSU TBI Identification Method visit:

- Ohio Valley Center at OSU www.ohiovalley.org/informationeducation
- BrainLine.org
 www.brainline.org

Appendix C: Iowa Pediatric Lifetime History of TBI & other Acquired Brain Injuries

Name:	Current Age:	Interviewer Initials:	Date:	
Pediatric Lifetime History of 1 (from t	Faumatic Bi The Colorado Brain C	rain Injury & other A heck Survey Screening Tool)	cquired Brain Injurie	s .
Please think about injuries your child (ages 5-21) has had during their entire lifetime, especially those that affected their head or neck. Thinking about those injuries, has your child had any of the following:	2. Please indi by a health has any of	icate if you have ever been told acare professional that your child the following:	Has your child ever been to the department or received other related to a brain injury or as questions one or two?	he emergency medical care identified in
 Has a physician diagnosed your child with a brain injury? Yes □ No If yes, go to question #3. If not, please indicate if there is a lifetime history of any of the following: Blow to the head (from sports, playing, biking, falling, getting hit by an object, etc.) Whiplash Motor vehicle crash resulting in any degree of injury or lack of injury). Assault/violence (child abuse, fights, firearm injury) NONE OF THE ABOVE (IF NO, GO TO QUESTION 2) If yes to any of the above, indicate below if the injury resulted in any of the following: 	 Loss of oxygen a Brain tumor Cerebral palsy Loss of oxygen t stopped breathin experience or ex Infection of the b Swelling of the b Epilepsy or seizu Child maltreatme Brain bleed or he Overdose of drug prescription drug Toxic effects or p NONE OF THE A 	at birth to the brain (Examples - a time they the brain (Examples - a time they the brain (Examples - a time they they they they they the brain they they they the brain they	Yes At what age? Please explain: Please explain: No Complete this screening to determine if a p a brain injury. It is important to note that this not result in a diagnosis, is not intended to 1 determination and DOES NOT replace a fa and assessment with a trained professional should be treated as Protected Health Infor data may be analyzed for program evaluatio This screening tool is adapted from the wor	erson may have ha s screening does be used for eligibilit ce-to-face evaluatic . This information mation. De-identifie on.
Check all that apply: Concussion Concussion Confusion or altered mental state Missed school Resulted in no problem	If yes to any in quest resulted in any of the Check all that apply Loss of conso For how long Confusion or Missed schoo Resulted in n	tion 2, indicate below if the injury e following: /: ciousness ? altered mental state ol o problem	The screening tool and instructions for completion can be accessed at https://idph.iowa.gov/brain-injuries	IDWA Departme of Public Heat

PEDIATRIC SCREENING TOOL INSTRUCTIONS PEDIATRIC LIFETIME HISTORY OF TRAUMAMTIC BRAIN INJURY



&

OTHER ACQUIRED BRAIN INJURIES SCREENING TOOL INSTRUCTIONS (From the Colorado Brain Check: Screening Tool)

Definitions

Acquired brain injuries (ABI) occur when there is an event that results in damage to the brain anytime during a person's life after birth which temporarily or permanently impairs a person's physical, cognitive, or behavioral functions. Brain injuries are not primarily related to a degenerative disease or aging process.

Non-traumatic brain injuries are injuries to the brain caused by stroke, infection, anoxia, vascular lesions, or tumor of the brain.

Traumatic brain injuries (TBI) may be penetrating or non-penetrating and are from external forces causing trauma to the brain to such as from a bump, blow, jolt, blast, or hit to the body. Concussions are a type of TBI.

Administration of the Pediatric Interview Form

The Screening for Lifetime History of TBI and other Acquired Brain Injuries (from the Colorado Brain Check: Screening Tool) and other Acquired Brain Injuries is a tool to screen for an individual's lifetime history of Acquired Brain Injury (ages 5 – 21).

- Administer this screening tool, either by telephone or face-to-face.
- Complete questions 1 3 (read prompter statement/question for each section followed by each response option).

Interpretation of Screening Results

The validity of this tool is not based on elicitation of a perfect accounting of a person's lifetime history of brain injury. Instead, it provides a means to estimate the likelihood that consequences have resulted from one's lifetime exposure to brain injury.

It is recommended that additional consideration be given to the potential effects of this exposure when any of the following have occurred:

- Concussion
- Loss of consciousness
- Confusion or altered mental state
- Missed school
- Been to the ER for any of the injuries and/or conditions noted in questions #1 & #2

Next Steps

After completion Pediatric Lifetime History of Traumatic Brain Injury & other Acquired Brain Injuries, the following steps should be considered:

- Provide a copy of the completed tool to the guardian for their records (or the individual age 18-21 if he/she does not have a guardian)
- If warranted consider: A referral to, resource facilitation available through the Brain Injury Alliance of Iowa (BIA-IA) at info@biaia.org or by calling 855-444-6443. More information about BIA-IA can be found at www.biaia.org who may recommend:
- > Referring the individual to a medical professional for additional assessment(s).
- Additional steps may be recommended by your organization for further assessments or medical record requests.

The Colorado Brain Check: Screening Tool is adapted with permission from Pat Sample, Ph.D. and Colorado State University.

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For more information about the Iowa Brain Injury Services Program, visit <u>http://dph.iowa.gov/brain-injuries</u>

Complete this screening to determine if a person may have had a brain injury. It is important to note that this screening does not result in a diagnosis, is not intended to be used for eligibility determination and DOES NOT replace face-to-face evaluation and assessment with a trained professional. This information should be treated as Protected Health Information. Deidentified data may be analyzed for program identification.





Iowa Association of Community Providers