Welcome to Webinar 2:

We'll get started at
10 CST
11 EST

March 13, 2025

Brain Links

Part 2: Case Studies of Brain Injury with Co-occurring Challenges: A Framework for Addressing Cognitive Changes

March 13, 2025

Using Case Studies to Highlight Best Practice and Improve Outcomes in Brain Injury webinar series

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Brain Links is supported by the Administration for Community Living (ACL) of the U.S. Department of Health and Human Services under Grant No. 90TBSG0051-01-00 and in part by the TN Department of Health, Traumatic Brain Injury Program.

Brain Links

Family-friendly educational materials

Resources for return to school and work settings

Toolkits for healthcare providers, school nurses, families and service professionals

Tennessee Brighter Futures Collaborative

Statewide team of brain injury specialists

We equip professionals to better serve people with TBI with current research-based training and tools.

Brain Links

Tennessee Brighter Futures

Housekeeping

If you have questions, please enter them in the Q & A.

At the end of the session, please complete the survey for your certificate of attendance.

Following the session, materials and recording will be posted on our website – webinar page

Agenda

- 4 Case Studies
- Highlight clinical thinking
- Protocol for Brain Injury Screening, cognitive & functional screening, strategy development
- Resources that work & how to use them

THE CASES

- Are based on two or more cases to protect privacy
- Are designed so we can address real issues and highlight key tools
- Cover different co-occurring needs areas (substance use, child welfare, domestic violence, etc).
- Will be presented as if they actually happened:
  - “Next, we….”
- We are NOT trying to be the expert in that other co-occurring need area…

James

- 32 years old
- In a substance abuse program
- Says he wants to get clean, but doesn't do what he says he's going to
- Doesn't participate when he comes to group
- Doesn't seem interested
- This is his 3rd time in treatment – court-ordered
- Inconsistently shows up for appointments
- Child welfare is involved and he is in danger of losing visitation with his 4 year-old son
- James' employer is trying to be supportive, but is losing patience

James

Substance Use:
50% in SU treatment have a prior history of brain injury

Criminal Justice:
Up to 80% of men in the Justice System have a prior history of BI

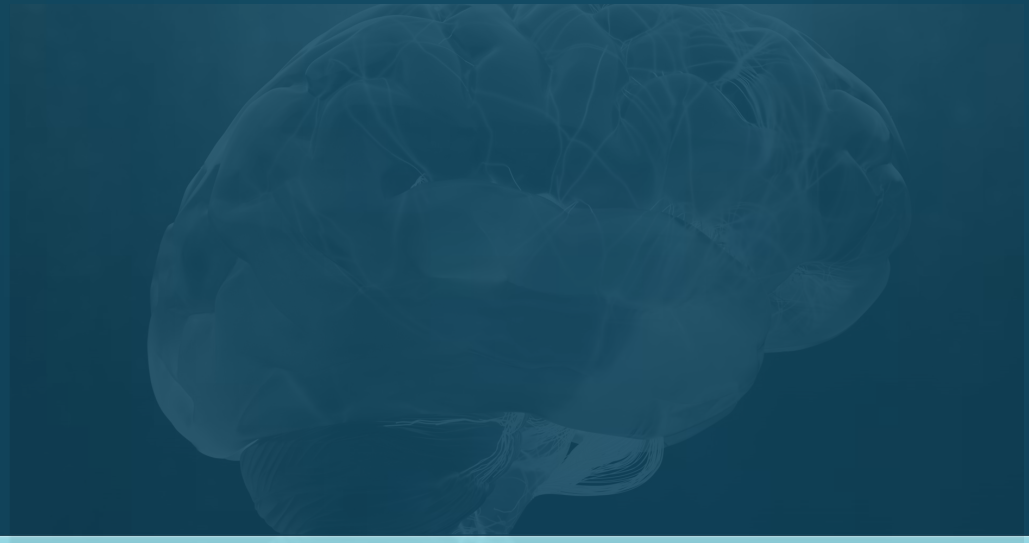
What do we know?

What are we thinking about?

Brain injuries:
Often accompanied by long-term cognitive, emotional & behavioral difficulties

Child Welfare:
Brain injuries impact relationships and can impact a parent's ability to care for a child

TOXIC Brain Injury



"The opioid epidemic has led to the creation of a new term: **Toxic Brain Injury**."

This type of brain injury occurs from prolonged substance misuse and nonfatal overdose.

The amount of time the brain is without adequate oxygen dictates the severity of injury.

BIAA, 2020
Will Dane, Dianna Fahel, and Tiffany Epley

James

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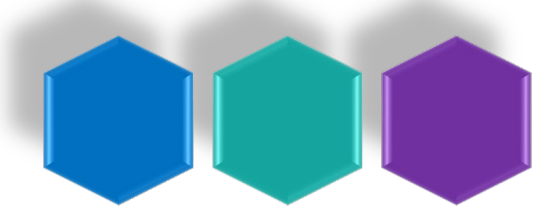
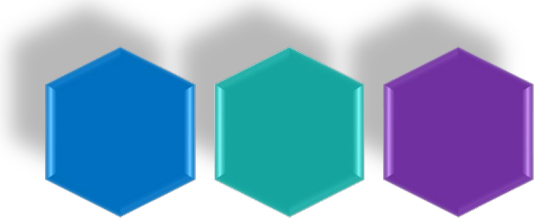
James

What to Do



- **SCREEN** for prior history of Brain Injury
- **ASSESS** Cognitive & Functional Impairment
- **EDUCATE** staff on Brain Injury
- **EDUCATE** the person about their Brain Injury
- **PROVIDE** and **TEACH** Accommodations
- **CONNECT** person served with Community Resources

Why is this Protocol Important?



People with TBI will have a harder time using services and maintaining change if they do not receive the needed accommodations.

…they'll be back in treatment again, or worse…

Screened for Prior History of Brain Injury

Name: James Current Age: 32 Interviewer Initials: TD Date: 11/9/23

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)? Maybe ~~N/A~~

If yes, how long? not long

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

How old were you? 15

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)? football

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? couldn't remember 1st ½ of game

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

How old were you when these repeated injuries began?

Ended? 14-18 yrs old

Step 1	Step 2						
	Loss of consciousness (LOC)/knocked out				Dazed/Mem Gap		Age
Cause	No LOC	< 30 min	30 min-24 hrs	> 24 hrs	Yes	No	
football	X					X	14
football		?			yes		15
football	X					X	18
football	X				yes		18

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

Step 3	Typical Effect		Most Severe Effect				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

What do we know? What are we thinking?

James did have concussions:

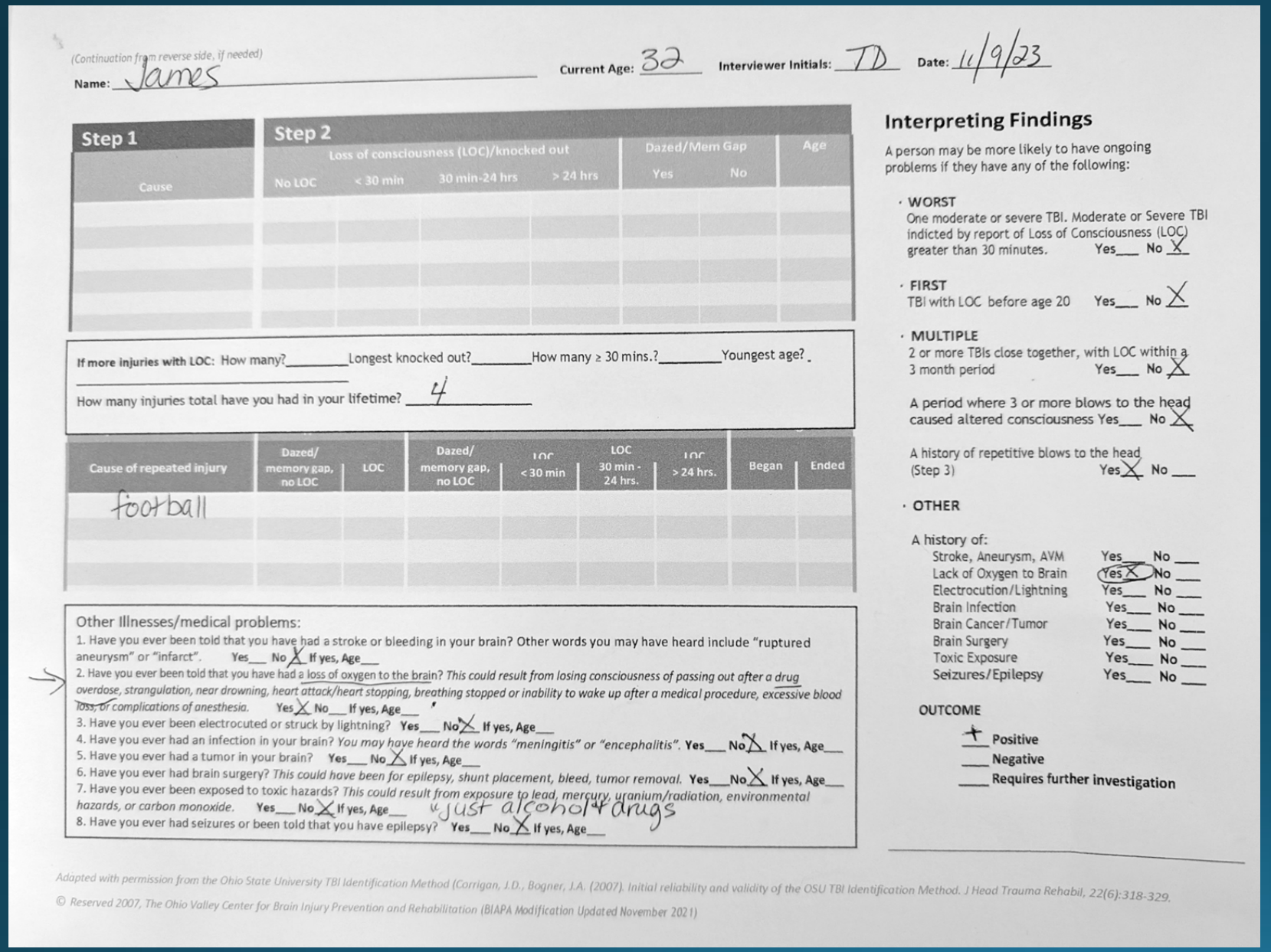
Dazed, gap in memory, balance and headache

MTBI in childhood (up to age 16), then… at age 21 – 25:

More likely to abuse substances, commit violent and property offenses

McKinlay, et al (2013)

James



(Continuation from reverse side, if needed)

Name: James Current Age: 32 Interviewer Initials: TD Date: 11/9/23

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

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

How many injuries total have you had in your lifetime? 4

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
football								

Other Illnesses/medical problems:

1. Have you ever been told that you have had a stroke or bleeding in your brain? Other words you may have heard include "ruptured aneurysm" or "infarct". Yes___ No X If yes, Age___
2. Have you ever been told that you have had a loss of oxygen to the brain? *This could result from losing consciousness of passing out after a drug overdose, strangulation, near drowning, heart attack/heart stopping, breathing stopped or inability to wake up after a medical procedure, excessive blood loss, or complications of anesthesia.* Yes X No___ If yes, Age___
3. Have you ever been electrocuted or struck by lightning? Yes___ No X If yes, Age___
4. Have you ever had an infection in your brain? *You may have heard the words "meningitis" or "encephalitis".* Yes___ No X If yes, Age___
5. Have you ever had a tumor in your brain? Yes___ No X If yes, Age___
6. Have you ever had brain surgery? *This could have been for epilepsy, shunt placement, bleed, tumor removal.* Yes___ No X If yes, Age___
7. Have you ever been exposed to toxic hazards? *This could result from exposure to lead, mercury, uranium/radiation, environmental hazards, or carbon monoxide.* Yes___ No X If yes, Age___ "just alcohol + drugs
8. Have you ever had seizures or been told that you have epilepsy? Yes___ No X If yes, Age___

Interpreting Findings

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

- **WORST**
  One moderate or severe TBI. Moderate or Severe TBI indicted by report of Loss of Consciousness (LOC) greater than 30 minutes. Yes___ No X
- **FIRST**
  TBI with LOC before age 20 Yes___ No X
- **MULTIPLE**
  2 or more TBIs close together, with LOC within a 3 month period Yes___ No X

  A period where 3 or more blows to the head caused altered consciousness Yes___ No X

  A history of repetitive blows to the head (Step 3) Yes X No___
- **OTHER**

  A history of:

Stroke, Aneurysm, AVM	Yes___	No___
Lack of Oxygen to Brain	Yes X	No___
Electrocution/Lightning	Yes___	No___
Brain Infection	Yes___	No___
Brain Cancer/Tumor	Yes___	No___
Brain Surgery	Yes___	No___
Toxic Exposure	Yes___	No___
Seizures/Epilepsy	Yes___	No___

OUTCOME

+ Positive
___ Negative
___ Requires further investigation

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.

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What do we know?
What are we thinking?

James had an overdose:

For every overdose death, there are approximately fifty overdose survivors,

90% of whom become impaired because of insufficient oxygen to the brain.

Using alcohol and/or drugs over time can lead to a "toxic brain"

2nd ASSESS Cognitive & Functional Impairment

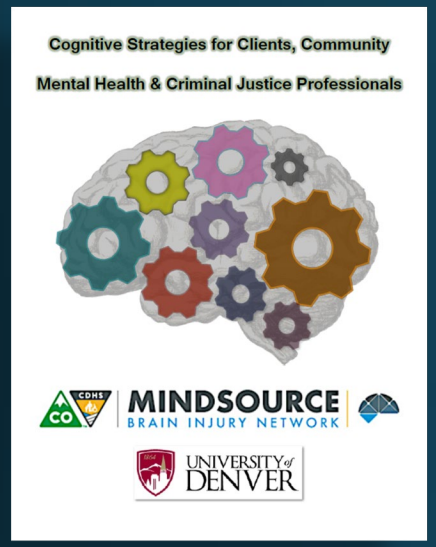
A. Symptoms Questionnaires

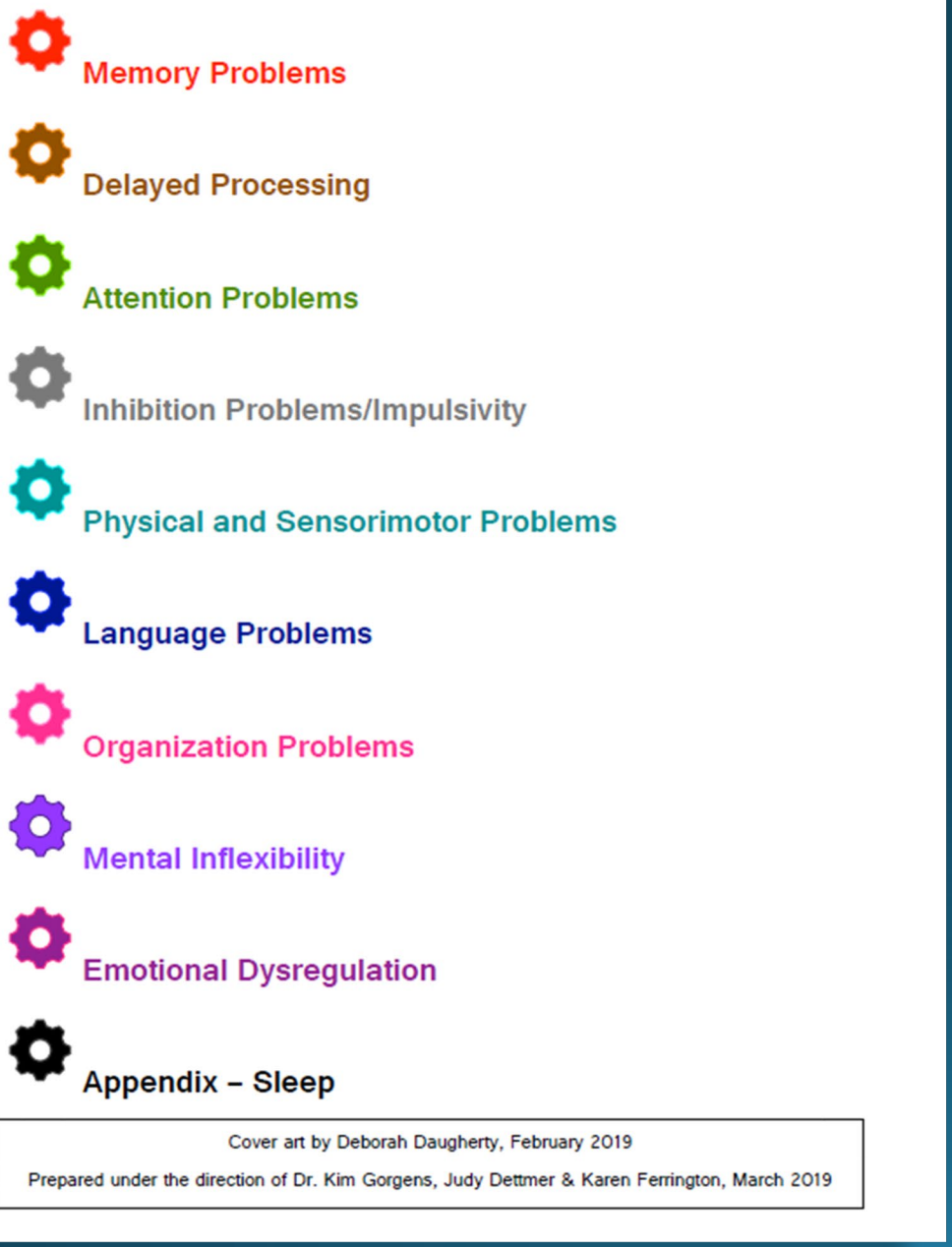
- Adult Symptom Questionnaire
- Juvenile Symptom Questionnaire

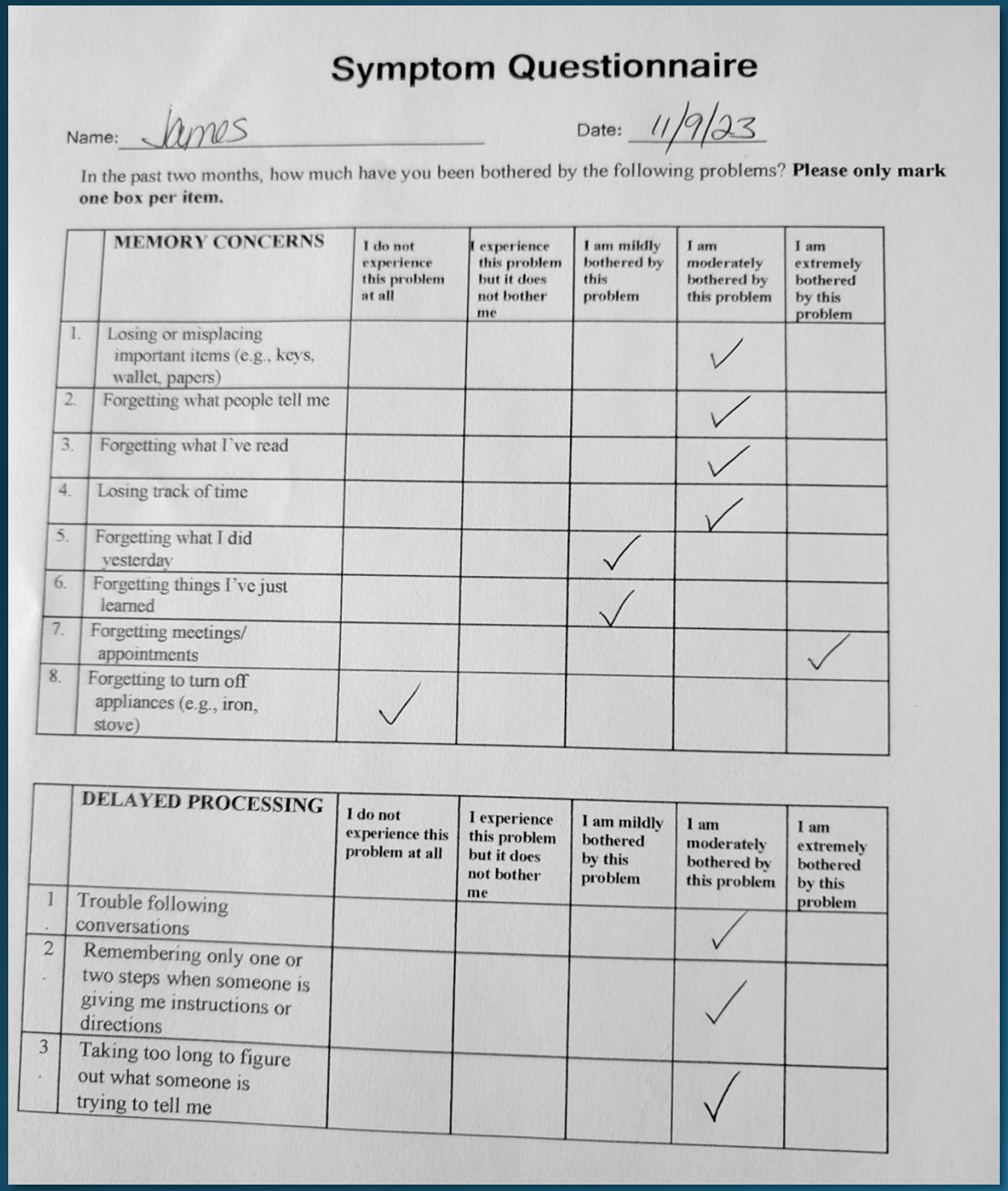
Both have an accompanying set of **accommodations** to address symptoms to improve ability to engage in learning/rehabilitation process

- Memory, concentration, delayed processing, etc.*

James


Cognitive Strategies for Clients, Community
Mental Health & Criminal Justice Professionals
MINDSOURCE
BRAIN INJURY NETWORK
UNIVERSITY of DENVER


Memory Problems
Delayed Processing
Attention Problems
Inhibition Problems/Impulsivity
Physical and Sensorimotor Problems
Language Problems
Organization Problems
Mental Inflexibility
Emotional Dysregulation
Appendix – Sleep
Cover art by Deborah Daugherty, February 2019
Prepared under the direction of Dr. Kim Gorgens, Judy Dettmer & Karen Ferrington, March 2019



Symptom Questionnaire

Name: James Date: 11/9/23

In the past two months, how much have you been bothered by the following problems? **Please only mark one box per item.**

	MEMORY CONCERNS	I do not experience this problem at all	I experience this problem but it does not bother me	I am mildly bothered by this problem	I am moderately bothered by this problem	I am extremely bothered by this problem
1.	Losing or misplacing important items (e.g., keys, wallet, papers)				✓	
2.	Forgetting what people tell me				✓	
3.	Forgetting what I've read				✓	
4.	Losing track of time				✓	
5.	Forgetting what I did yesterday			✓		
6.	Forgetting things I've just learned			✓		
7.	Forgetting meetings/ appointments					✓
8.	Forgetting to turn off appliances (e.g., iron, stove)	✓				

	DELAYED PROCESSING	I do not experience this problem at all	I experience this problem but it does not bother me	I am mildly bothered by this problem	I am moderately bothered by this problem	I am extremely bothered by this problem
1.	Trouble following conversations				✓	
2.	Remembering only one or two steps when someone is giving me instructions or directions				✓	
3.	Taking too long to figure out what someone is trying to tell me				✓	

Selected items in the areas of

Memory: "Forgetting meetings and appointments"

Delayed Processing: "Taking too long to figure out what someone is trying to tell me."

Attention: "Easily distracted."

Inhibition Problems: "Saying things without speaking."

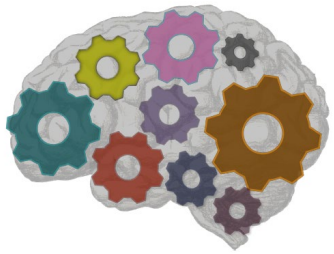
Language: "Difficulty finding the right word when speaking."

Organization: "Keeping up with time-sensitive tasks (e.g.: bill paying, work).

Nothing in the areas of
Physical and Sensorimotor Problems
Mental Flexibility
Emotional Problems – besides frustration with the current circumstances.

PROVIDE and **TEACH** Accommodations

Cognitive Strategies for Clients, Community Mental Health & Criminal Justice Professionals



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Memory Problems

Community Mental Health

Memory is the brain's ability to retain previously experienced sensations, information, and ideas. Memory impairment is the inability to remember bits of information or skills, and it can lead to a decreased ability to quickly process information like language and sensory input. Memory impairments can result in having trouble following conversations, taking too long to respond, or remembering only one or two steps when following instructions. People with memory impairments can appear spacey or may seem mentally foggy, slow moving, or lethargic. In community mental health settings, people with memory impairments may appear disinterested or forget important appointments. The use and repeated practice of the following suggestions can be helpful:

1. Provide your clients with a basic organization system like a folder or a calendar for important paperwork and information. Encourage them to make a habit[1] of keeping all their important materials in one location.[2]
2. Deliver important information in as many modalities as possible.[3] For example, in addition to the conversation, make paper available and encourage clients to write down information, and provide them with multiple reminders of important dates and tasks.[4]

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[1] Lally, P., & Gardner, B. (2013). Promoting habit formation. *Health Psychology Review, 7*, 137–158.

[2] Rolle, C. E., Anguera, J. A., Skinner, S. N., Voytek, B., & Gazzaley, A. (2017). Enhancing spatial attention and working memory in younger and older adults. *Journal of Cognitive Neuroscience, 29*, 1483–1497.

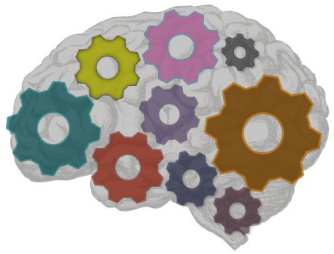
[3] Wright, M. J., & Schmitter-Edgecombe, M. (2011). The impact of verbal memory encoding and consolidation deficits during recovery from moderate-to-severe traumatic brain injury. *The Journal of Head Trauma Rehabilitation, 26*, 182–191.

[4] Kelley, P., Evans, M.D.R., & Kelley, J. (2018). Making memories: Why time matters. *Frontiers in Human Neuroscience, 12*, 400.

James

PROVIDE and **TEACH** Accommodations

Cognitive Strategies for Clients, Community Mental Health & Criminal Justice Professionals



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3. Using visual imagery techniques while reading can help increase retention. Including things like pictures or descriptions can help individuals in remembering written information.[5]
4. When having difficulty keeping track of time, setting up cues and reminders may be helpful. To help an individual keep track of time during meetings, it can be useful to develop cues that help the individual stay mindful. [6]
5. Some individuals have difficulty remembering recent events, even what they did the previous day. Provide clients with paper to take notes during events to improve memory.[7]
6. Encourage clients to complete tasks that challenge their memories, such as asking them to memorize new names. This may help them remember recent information.[8]
7. Make sure that when important meetings are scheduled, they are immediately put in your clients' calendars along with appropriate notes. Encourage them to set alarms for each appointment and correct them immediately if they repeat back information incorrectly.[9]
8. Poor sleep can contribute to memory impairment. You can review the attached sleep checklist with your client to help promote better sleep habits.
9. Consider scheduling regular appointments that fall on the same day and time of each week if possible.

Compiled by E. Goodwin, M. Parian, H. Roberts, & J. Worster March 11, 2019

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[5] Potvin, M.J., Rouleau, I., Sénéchal, G., & Giguère, J.F. (2011). Prospective memory rehabilitation based on visual imagery techniques. *Neuropsychological Rehabilitation, 21.6,* 899-924.

[6] Fish, J., Evans, J.J., Nimmo, M., Martin, E., Kersel, D., Bateman, A., Wilson, B.A., Manly, T. (2006). Rehabilitation of executive dysfunction following brain injury: "Content-free" cueing improves everyday prospective memory performance. *Neuropsychologia, 45,* 1318-1330.

[7] Leśniak, M. M., Mazurkiewicz, P., Iwański, S., Szutkowska-Hoser, J., & Seniów, J. (2018). Effects of group versus individual therapy for patients with memory disorder after an acquired brain injury: A randomized, controlled study. *Journal of Clinical and Experimental Neuropsychology, 40,* 853–864.

[8] Elliott, M., & Parente, F. (2014). Efficacy of memory rehabilitation therapy: A meta-analysis of TBI and stroke cognitive rehabilitation literature. *Brain Injury, 28,* 1610–1616.

[9] Mateer, C. A., & Sira, C. S. (2006). Cognitive and emotional consequences of TBI: Intervention strategies for vocational rehabilitation. *NeuroRehabilitation, 21,* 315–326.

James' Strategies

- Met with a point person each morning (5 minutes)
  - made sure appointments were put in his calendar,
  - reviewed the day and upcoming entries

- Notebook with sections for important areas of his life:
  - treatment,
  - his son and child welfare,
  - court,
  - and work

James' Strategies

- Take brief notes when needed
- Review calendar and notebook at the end and beginning of each day

- Use "Stop, Think, Go" when planning or before speaking
- Pair above with deep breaths to slow down

- Repeat information back
- Ask people to slow down
- Control the environment, be aware of visual and verbal distractions

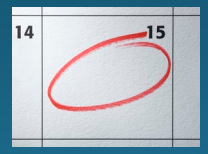
James

Some Changes the Treatment Center and Child Welfare Made

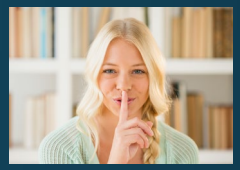
- Tried to present info in as many modalities as possible (demonstrated, written, verbal)

- Had people summarize what was said or say how it related to them….
- Put a white board in the group room and someone wrote down any important information that came up

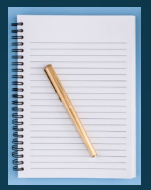
- Regular appointment days and times were made when possible



Some Changes the Treatment Center and Child Welfare Made



- Environmental distractions were eliminated where possible
- Notepads were given out to write down thoughts instead of interrupting



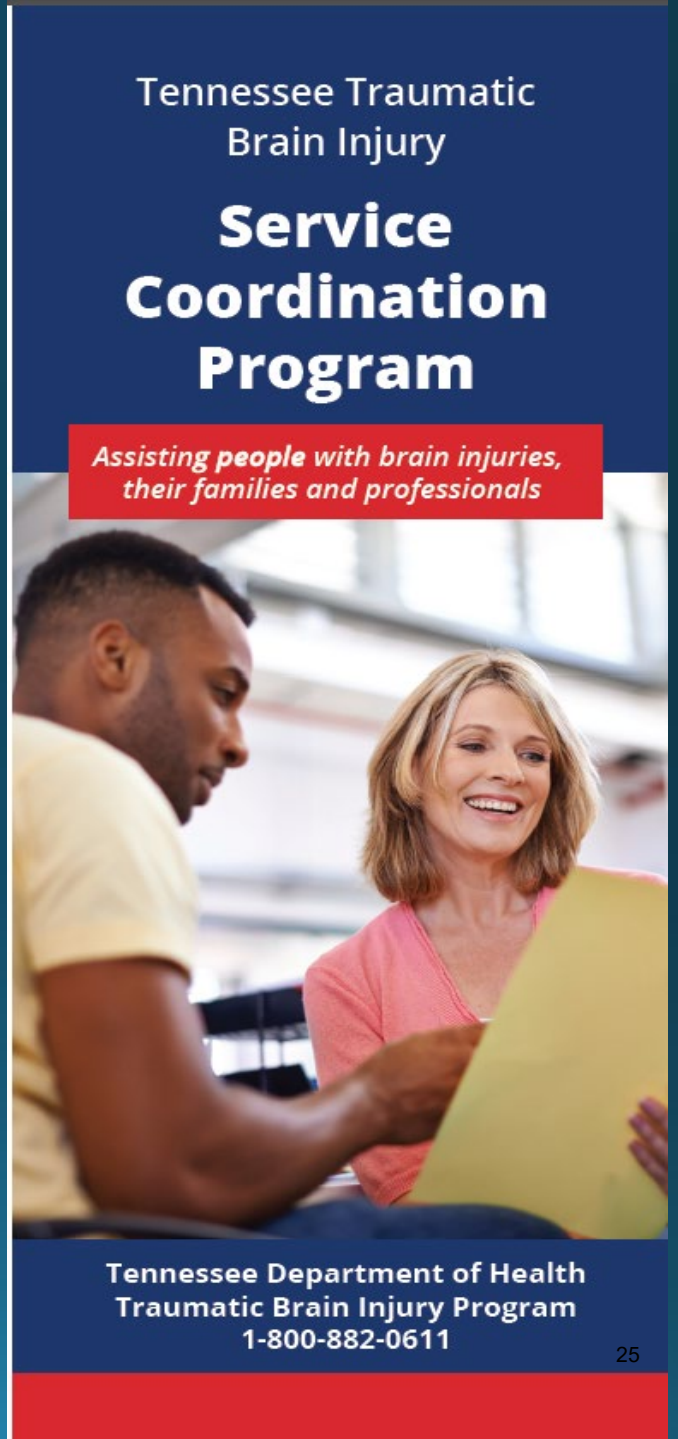
- Mindfulness and deep breathing exercises were taught to help slow down

- "Stop, Think, Act" was encouraged

James

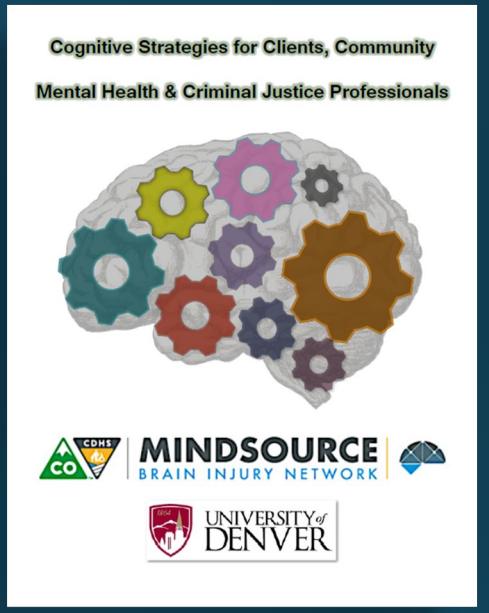
EDUCATE staff on Brain Injury

- Trainings were given to
  - Substance Use Treatment Center
  - Child Welfare Office
  - Recovery Court
- All were encouraged to adopt the protocol
  - SCREEN for prior history of Brain Injury
  - ASSESS Cognitive & Functional Impairment
  - EDUCATE staff on Brain Injury
  - EDUCATE the person about their Brain Injury
  - PROVIDE and TEACH Accommodations
  - CONNECT person served with Community Resources
- Educational materials were shared
- Service Coordinators were explained



James

EDUCATE the person about their Brain Injury



- You've had a brain injury – what does this mean?
- Strategy sheets (shown earlier) were all reviewed with him
  - James gave some modifications
- Educational materials were shared (next slide)
- James requested that we share information with his wife
- James did not want to share the brain injury with his employer (yet), but agreed to talk with his boss about the strategies/accommodations

PERSONAL GUIDE FOR EVERYDAY LIVING AFTER CONCUSSION/TRAUMATIC BRAIN INJURY

This guide was developed to help you better understand what you may be experiencing following your injury. The better you understand the conditions that can have an impact on you, what can be difficult situations for you, and which strategies to try, the more you will succeed in life.

"CONDITIONS" likely to make symptoms worse:

A. Being **TIRED**
B. Being **EMOTIONAL** – sad, frustrated, excited, angry, etc.
C. Being **UNDER PRESSURE**, being **RUSHED, STRESSED or ANXIOUS**
D. Being **DRUNK/UNDER THE INFLUENCE** of drugs (Prescription or not)
E. Being in **PAIN**
F. Being **SICK**

STRATEGIES to consider for each state:

A. **Tired**: Do not allow yourself to become tired. **Plan** things that you need to do and complete them early whenever possible. **Slow down** and **check** your work. Stick to a fairly regular sleep schedule and make sure you get enough sleep at night.

B. **Emotional**: If you become emotional, **slow down** and **think before** you speak or act. Remember that being tired can make you become more emotional. If you know that you are going into a potentially emotional situation, **plan** as much as possible so that you are ready.

C. **Stress/Pressure**: Avoid being rushed, stressed or under pressure by **planning**. Lay out things to do in a **planner** (calendar), allowing plenty of time for each task. Especially when you are rushed, **slow down** to allow yourself time to think clearly and look for missed details. Take the time to make **checklists** so nothing is missed. **Check** off each step as it is completed.

D. **Alcohol/Drugs**: Do not drink alcohol or take drugs. Many people with brain injuries report feeling out of control without adding to it with alcohol or drugs. Know that your symptoms are likely to be enhanced while you are under the influence. Know also that drugs and alcohol have been reported to lower seizure threshold, making your chances of having a seizure greater.

E. **Pain:** Avoid getting in pain when possible. When avoiding pain is not possible, attempt to relieve it as soon as possible. Do pain management exercises as recommended. Take medications as prescribed. Know that pain medications may affect your thinking ability. Use proper body mechanics, etc. Keep expectations realistic when you are in pain. **Allow more time** to do things when in pain. **Plan ahead and check** your work.

F. **Sickness:** Avoid getting sick. Keep a regular schedule. Get enough sleep. Rest when sick. Cold medications may effect thinking ability. **Allow more time** to do things when sick. **Plan ahead. Check** your work.

Note that many of the same strategies were repeated over and over. Summed up briefly, the keys to improving performance are:

1. **Slowing down**
2. **Organizing yourself**
3. **Planning ahead,** and
4. **Checking your work**

Over time, all of these strategies can become a natural part of your daily life. Most likely, they will eventually make you more efficient, accurate and thorough; although in the beginning they may feel strange, intrusive and time-consuming.
****Give the strategies – and yourself – time****

SITUATIONS that may prove difficult (Fill in the blank lines with tasks that fit your life.)

A. **Sustained Attention Tasks** – Keeping your attention focused on one thing (Fill in the blanks with situations that fit your life.)
   1. Reading a magazine, book, etc.
   2. Listening to a lecture
   3. Listening on the phone
   4. Writing a letter, report, checklist, etc.
   5. _____
   6. _____

In program: listening to who is talking
At work: listening to a customer

B. **Simultaneous/Divided Attention Tasks** – Keeping your attention on 2 or more things at a time.
   1. Cooking dinner while watching television
   2. Listening to a lecture while taking notes
   3. Talking on the phone while writing a message
   4. Counting the number of items on a conveyor while simultaneously looking for broken pieces
   5. Keeping your eye on your young child while trying to write a letter
   6. _____
   7. _____

Putting an order in the computer/ listening to the overhead speaker

C. **Alternating Attention Tasks** – Needing to switch your attention between two things.
   1. Stop typing to answer the phone, then go back to typing
   2. Stop doing your work at your desk to answer a question, then go back to work
   3. Stop making dinner to clean up a spill, then knowing where you left off
   4. Stop paying the bills to ask your spouse where some receipts are, then finishing
   5. _____
   6. _____

Working with a customer, stopping to get the phone

ATTENTION – Very often a significant problem after brain injury.

A. **Increase your Awareness of Distractors** – Try to determine what types of things tend to distract you. Are they:

1. **Internal Distractors** – your own thoughts, emotions, being tired, in pain, sick, etc.
   and/or
2. **External Distractors** – things in the environment:
   a. Auditory – any noise: people talking, machines or air conditioners humming, cars driving by, etc.
   b. Visual – people walking by, a ceiling fan spinning, miscellaneous papers on your desk, a spider crawling on the wall, etc.
   c. Tactile/Sensation – an uncomfortable chair, an itchy rash, being too hot or cold, etc.

B. **Anticipate Distractors - Learn what tends to distract you**

1. Minimize these things whenever possible (for example, sit with your back to a distracting environment)
2. Eliminate them whenever possible (see below)

C. **Eliminate Distractors – Take Control**

1. Strategies for **Internal Distractors**
   a. Try to eliminate the distractor by actually doing the thing that is distracting you (i.e.: check to see if the stove is off, go mail the letter you are afraid you'll forget, etc.)
   b. Write the distractor down, decide to put it out of your mind for now and come back to it at a more appropriate time
   c. Overtly tell yourself, "I'm distracted and I need to get back to work"
   d. Get enough sleep to increase your ability to control your attention

2. Strategies for **External Distractors**
   a. Turn off the radio, T.V., ceiling fan, air conditioner, etc.
   b. Go to a quiet room
   c. Close your door, windows, curtains
   d. Wear earplugs
   e. Ask people to quiet down
   f. Clear your desk of papers before working
   g. Overtly tell yourself, "I'm distracted and I need to get back to work."
   h. Get enough sleep to increase your ability to control your attention

USE OLD STRATEGIES to your advantage:

A. **Make a list of strategies** that you used before you were injured. Everyone uses strategies – they just don't think of them as strategies because that is the "normal" way they do things.

1. To help you in creating this list, mentally go through all of the things you do during the day
2. Next, write down all the things you do to make these things easier
   Examples:
   a. Sticking to a routine when getting ready in the morning
   b. Making a list of chores, assignments, phone calls, etc., for the day
   c. Reviewing your day over morning coffee
   d. Planning what you will say during an important meeting or confrontation
   e. Referring to your desk calendar throughout the day
   f. Setting a cooking timer to remind you when to check the oven
   g. Laying out your clothes the day before
   h. And on and on

B. Do **NOT** discard these strategies now! Now they will be more important than ever! Do not decide to "test" your memory by not writing something down. You wrote things down before from time to time, didn't you? There was a reason for it. **Do it!**

C. **Build on old strategies**. Examples:
   1. If you used a checklist to help you remember your chores, see where else in your day you can use a checklist.
   2. If you used a routine to help you get out of the house in the morning, see if you can incorporate one into your workday.
   3. If you used a calendar to keep track of your workday, maybe you can use one to organize your home life.

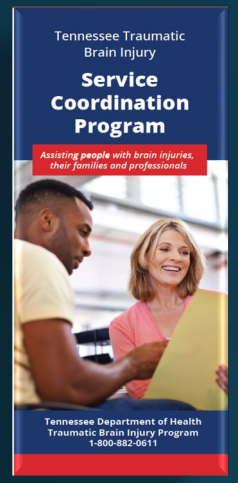
Know that in the end, things can go back to feeling "normal" again, even if that new "normal" is different than the old one. **In the meantime, know who you can go to for help and support.**

Wendy Ellmo MS CCC/SLP, BCNCDS
Brain Injury Specialist, Brain Links Revised 3/2020

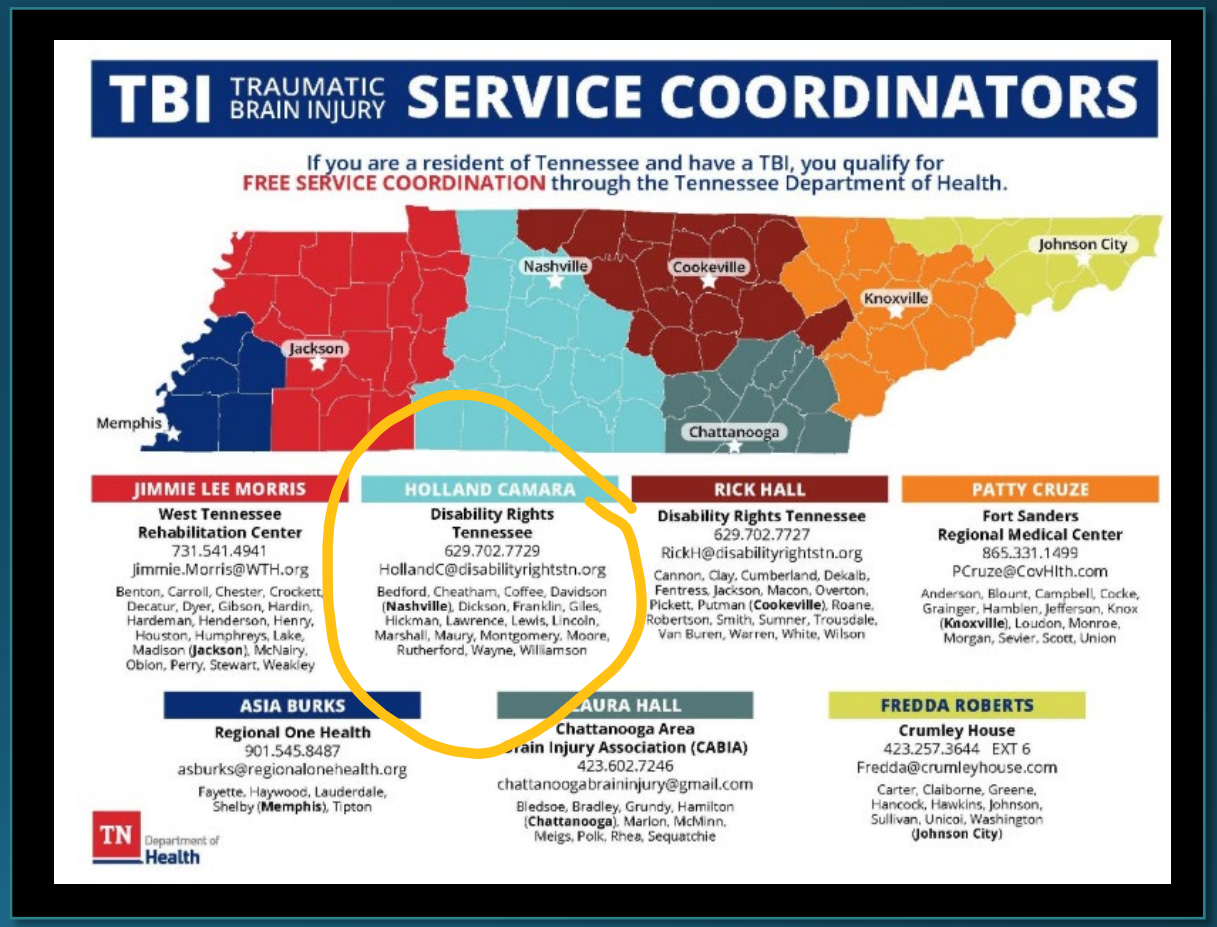
Brain Links
https://www.tndisability.org/brain
@BrainLinksTN
Brain Links is supported by the Administration for Community Living (ACL) of the U.S. Department of Health and Human Services, under Grant No. 90TBSG0032/-01-00 and in part by the TN Department of Health, Traumatic Brain Injury Program.

CONNECT person served with Community Resources

James



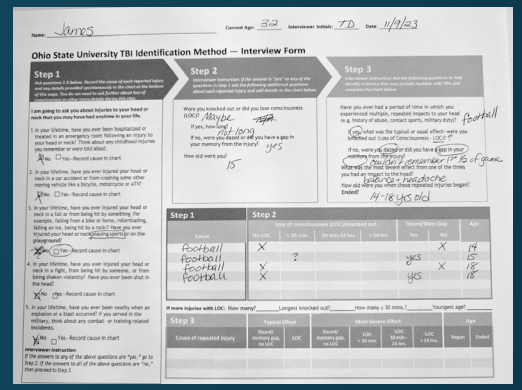
- Service Coordinators were explained in case they were needed in the future



James

Remember These Parts of the Protocol?

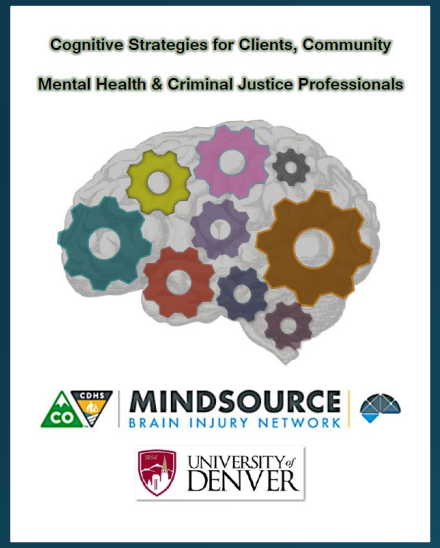
- **SCREEN** for prior history of Brain Injury
  - using the OSU TBI ID – Modified


Name: James Current Age: 32 Interviewer Initials: TD Date: 11/9/23

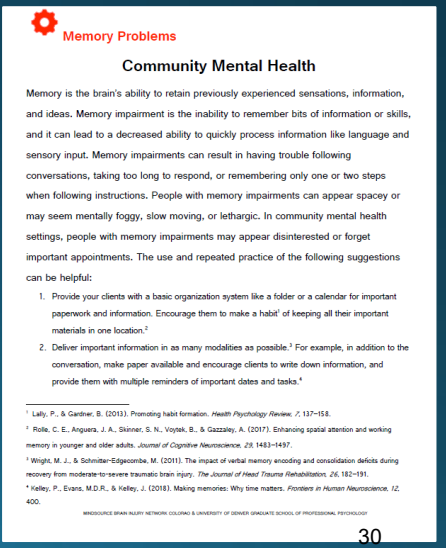
Ohio State University TBI Identification Method — Interview Form

Step 1 | Step 2 | Step 3

- **ASSESS** Cognitive & Functional Impairment
  - Using the MINDSOURCE tool



- **PROVIDE** and **TEACH** Accommodations
  - That go along with the MINDSOURCE tool


Memory Problems

Community Mental Health

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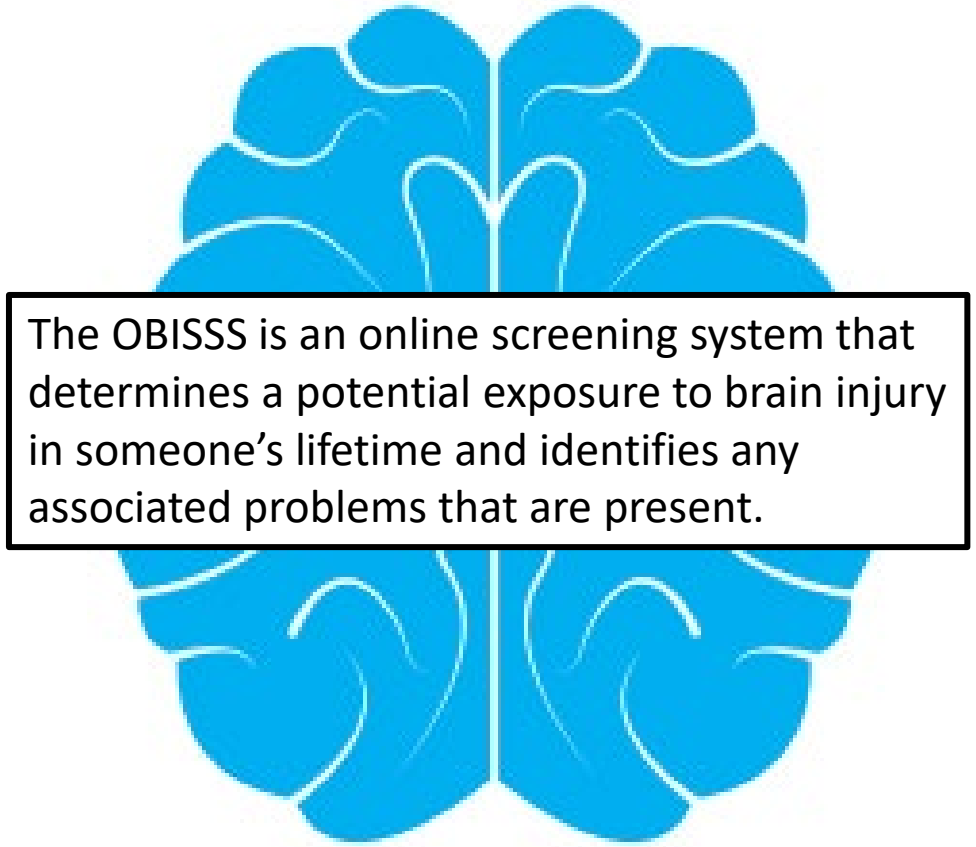
[4] Kelley, P., Evans, M.D.R., & Kelley, J. (2018). Making memories: Why time matters. *Frontiers in Human Neuroscience, 12*, 400.

MINDSOURCE BRAIN INJURY NETWORK COLORADO & UNIVERSITY OF DENVER GRADUATE SCHOOL OF PROFESSIONAL PSYCHOLOGY

NASHIA OBISSS

Online Brain Injury Screening & Support System



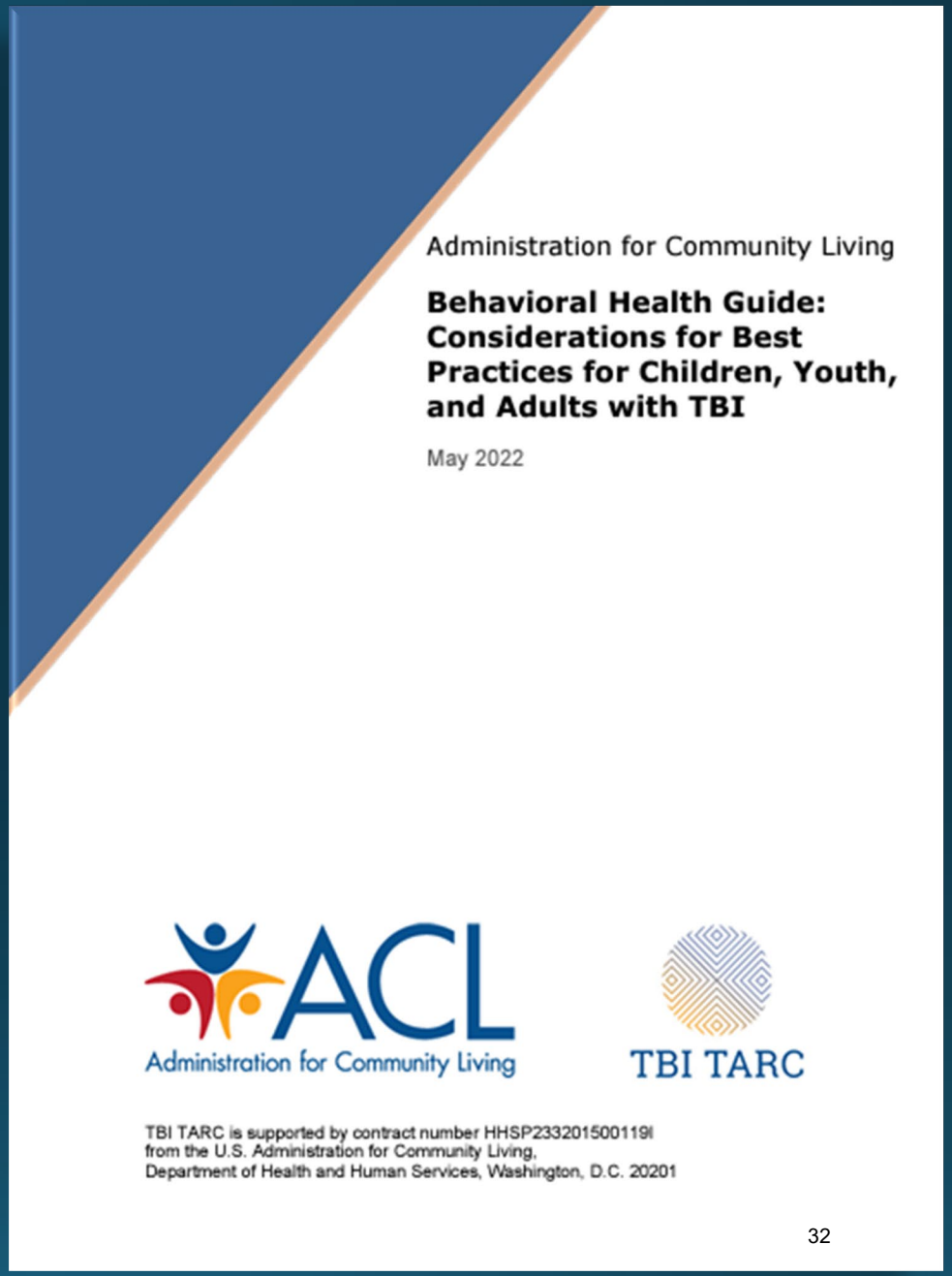
The OBISSS is an online screening system that determines a potential exposure to brain injury in someone's lifetime and identifies any associated problems that are present.

https://www.nashia.org/obisssprogram

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

- Overview of Behavioral Health & TBI
- Training Approaches
- Screening for Lifetime History of TBI
- Modifying Clinical Interventions for TBI
- Modifying Psychopharmacologic Interventions

Mentions Mental Health, Substance Use, Criminal Justice, Domestic Violence & Homelessness

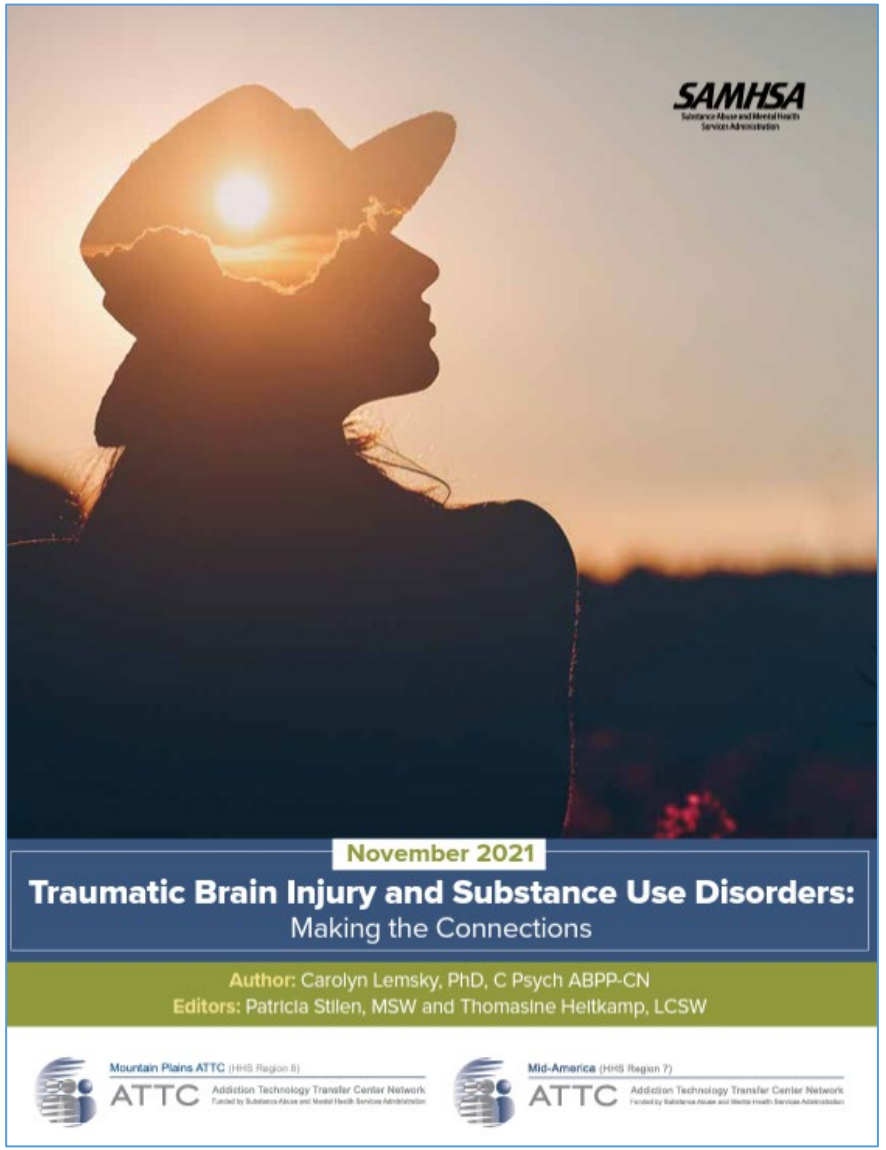


James

Traumatic Brain Injury and Substance Use Disorder: Making the Connections

Toolkit with information on both "…traumatic brain injury (TBI) and substance use disorders (SUD) to expand the capacity to address both issues in treatment."

https://attcnetwork.org/products_and_resources/traumatic-brain-injury-and-substance-use-disorders-making-the-connections/



James

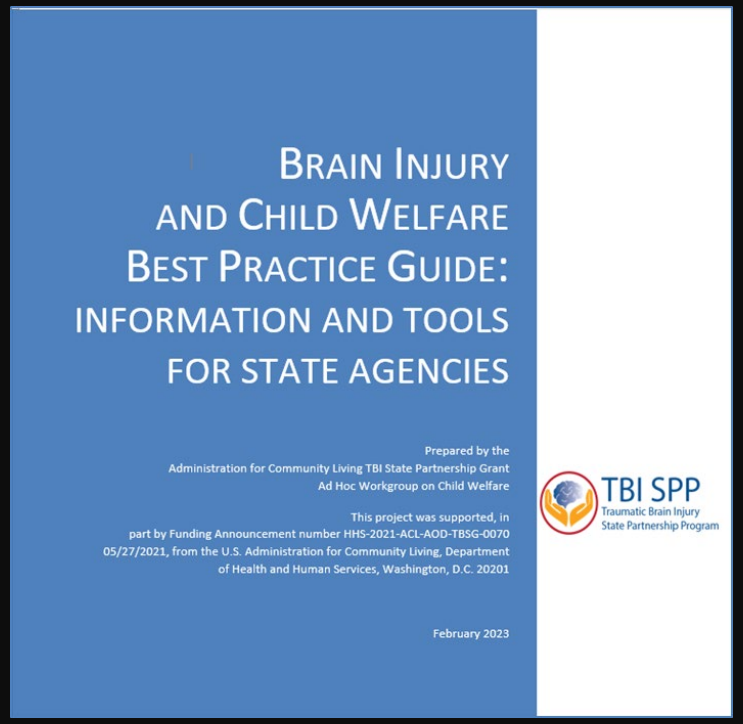
Child Welfare

Addresses both **children and caregivers** with Brain Injury

Some Topics Covered:

- Components of a Brain Injury Screening and Identification Approach
- Modifying Programming/Accommodating for Impairment
- Training and Education
- School Resources

https://www.nashia.org/acl-child-welfare



James

Resource pages by system of support

Tennessee Brighter Futures

Brain Injury

Tennessee Brighter Future

Brain Injury Resources

About Brain Injury

An acquired brain injury (ABI) occurs *after* birth. It is not hereditary, congenital, degenerative, or induced by birth trauma. There are two types of acquired brain injury: traumatic and non-traumatic. "A Traumatic Brain Injury (TBI) is caused by a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain." CDC There are 2.8 million TBIs in the US each year. Problems from a brain injury may be physical, cognitive, emotional or behavioral and may last from a few days to the rest of someone's life. Examples of non-traumatic brain injuries include stroke, infection, tumor, or anoxia (lack of oxygen from something like strangulation, near drowning or drug overdose).

Brain Injury Intersection with Other Systems of Support

Below are just some of many intersections between brain injury and other diagnoses.

Mental Health: Brain injury can create mental health issues, as well as worsen pre-existing ones. They can make coping harder. Six months to 1 year following an injury: one third will experience a mental health problem – that number will grow over time. People with BI have a 2 - 4 times increased risk of attempting or having death by suicide. As high as 75% of people seeking mental health and substance use treatment also have a brain injury.

Substance Use Disorder: People with TBI are 10 times more likely to die of accidental overdose. Approximately **HALF** of people receiving substance abuse treatment have at least one brain injury. 25% of people enter brain injury rehabilitation as a result of drugs or alcohol. Those with **childhood TBI are more likely** to abuse drugs & alcohol as adults. For every overdose death, there are approximately fifty overdose survivors, 90% of whom become impaired because of insufficient oxygen to the brain. As high as 75% of people seeking **mental health and substance use treatment** also have a brain injury.

Domestic Violence: An estimated 20 million women each year could have a TBI caused by DV. Survivors of DV with a TBI are likely to have trouble with attention, concentration, memory. These changes make it harder to assess danger, make decisions relat

Justice System: Within 5 years post injury, nearly 1/3 report some i **Juvenile Justice** System, **41% have had a TBI**. They are likely to s at a **69% higher risk of recidivism**. In the adult Justice System, **50-** less likely to achieve discretionary release. Close to **100% of wome**

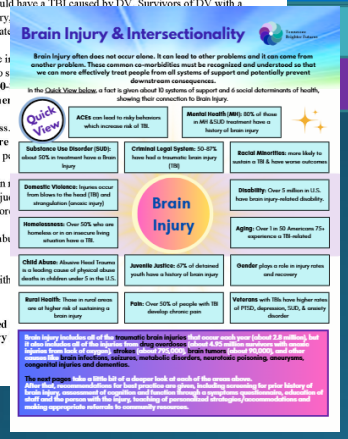
Homelessness: TBI is both a cause & consequence of homelessness. insecure living situation have a TBI (**25% were moderate to severe** population.) They have poorer general health and functioning than p

Chronic Pain: Pain is the most common chronic medical condition chronic pain. Common problems following brain injury, like poor ju harder to self-regulate substance use & make overdose 11 times mor

Child Abuse: 30 - 60% of perpetrators of domestic violence also ab includes Shaken Baby Syndrome.

ACEs/Trauma: Sustaining a brain injury in childhood or living with an ACE. Some ACEs can cause brain injury.

Screening for lifetime history of Brain Injury is recommended the pervasiveness of Brain Injury



Criminal Legal System

Tennessee Brighter Futures

Criminal Justice Resources

About Criminal Justice

Criminal justice is an umbrella term that refers to the laws, procedures, institutions, and policies at play before, during, and after the commission of a crime. https://www.law.cornell.edu

Tennessee's criminal justice system includes:

- a range of city and county law enforcement agencies,
- a prosecution arm,
- a public defense system,
- the state judiciary, local and state corrections, and
- a range of for-profit and non-profit service providers https://www.tn.gov

Criminal Justice numbers in Tennessee:

- Tennessee currently has approximately 30,000 people incarcerated in jail and approximately 20,000 people incarcerated in prison.
- Out of these, approximately 95% will be released.
- 1 in 3 Tennesseans has a criminal background.
- 1 in 2 Tennesseans has a family member that has been incarcerated. https://www.tn.gov/workforce/reentrytn/about.html
- Tennessee Department of Corrections (TDOC) supervises 79,000 offenders on probation, parole or community corrections.

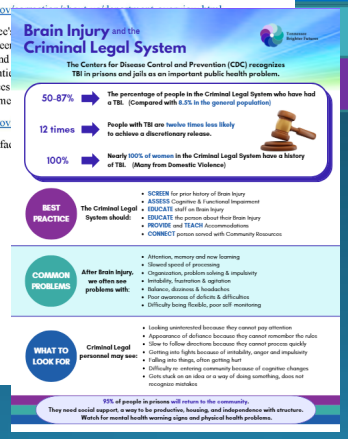
https://www.tn.gov

Like other corrections departments nationwide, Tennessee's growth. The agency has developed strategies that have bee expansion of regional drug court programs, residential and programs, sentencing reforms, and contracting with countie escalating health care costs, the Office of Clinical Services medical as well as mental health and substance use treatme

https://www.tn.gov

TDOC Reentry Services helps to address the challenges fa community. Their services include:

- Personal Document Assistance
- Employment Assistance
- Housing Support
- Education and Skill Building
- Community Support
- Veteran's Benefits



Substance Use

Tennessee Brighter Futures

Substance Use Resources

About Substance Use

- **3,032** Tennesseans died of drug overdoses in 2020
- **40,888** admissions to state-funded substance abuse treatment and recovery programs in 2019
- **294,000** estimated Tennesseans with a mental illness and substance use disorder (TAADAS)
- **7,714,521** is an estimated total of drug-related ED visits in the U.S. in 2022. The rate of drug-related ED visits was 2,153 (1,765–2,540) per 100,000 individuals. (SAMHSA, Drug Abuse Warning Network)
- More than one in four adults living with serious mental health problems also has a substance use problem. Substance use problems occur more frequently with certain mental health problems:
  - Depression
  - Anxiety Disorders
  - Schizophrenia
  - Personality Disorder (SAMHSA.gov MH & SU)

Substance use (SU) is a more comprehensive term than drug use that encompasses not only use of drugs, but excessive or illegal use or misuse of any substance. (TDMHSAS Best Practice Tool Guide)

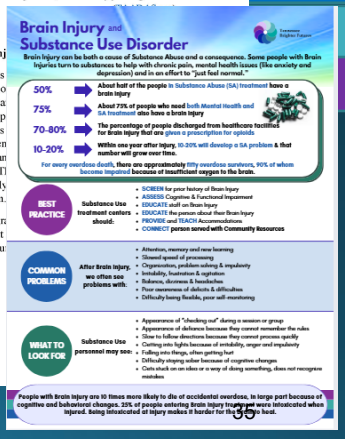
Use of recreational drugs, over the counter medications or prescription drugs can all lead to addiction. It frequently leads to problems at work, home, school, and in relationships, and leaving the user feeling isolated, helpless, or shamed. (TDMHSAS)

It is a shared belief that alcohol and drug abuse are treatable and preventable; that the availability of quality treatment and prevention services to all Tennessee citizens is important; and that by joining together, we can do more than we can do individually.

Intersectionality with Brain Inj

After brain injury, 70-80% are discharged from healthcare facilities People with traumatic brain injury are ten times more likely to die o because of cognitive and behavioral changes. Within 8-12 months a substance abuse problem and that number will grow over time. App substance abuse treatment have at least one brain injury. As high as health and substance abuse treatment also have a brain injury. Twen brain injury rehabilitation are there as a result of drugs or alcohol an injury makes it harder for the brain to heal. Those with childhood TI alcohol as adults. For every overdose death, there are approximately whom become impaired because of insufficient oxygen to the brain.

Best practice is to screen people in substance abuse treatment progra injury; screen for cognitive impairment; train SUD personnel about accommodate for changes; educate the person about their brain inju resources for support.



https://www.tndisability.org/tbf-systems-support

Aleea

- In school full time, met a guy she loved
- Somewhat controlling of her time
- Graduated, wanted her to move across country, she did
- Cut her off from everyone
- She was strangled multiple times and hit in the head too many times to count, thrown against the wall
- Had a child, when he threatened the child, she left
- She did press charges
- Trying to get on her feet in a shelter
- Misses appointments
- Difficulty following the rules
- Can’t tolerate the noise

Aleea

As many as 20 million women each year could have a TBI caused by domestic violence.

Perpetrator likely has a Brain Injury

Head, neck and face among most common targets of intimate partner assaults.

What do we know?

What are we thinking about?

Likely to experience difficulty with attention, concentration, memory, executive functioning and processing information.

Women who are abused: more likely to have repeated injuries to the head (85%) and to be strangled (83%)

Anoxic injury (memory)

Cognitive changes: harder to assess danger, make safety decisions, adapt to living in a shelter

Aleea

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Aleea

What Did We Do?

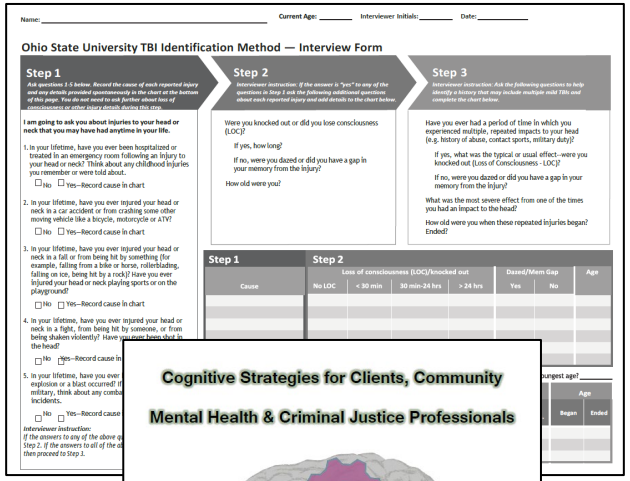
NASHIA OBISSS

Online Brain Injury Screening & Support System

Screen for Prior Brain Injury

Screen for Cognitive Problems

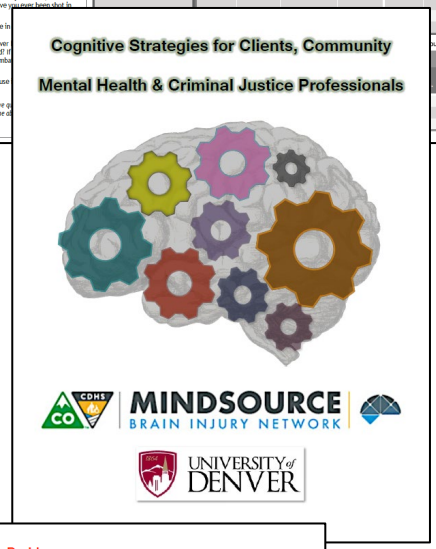
Provided Accommodations/ Strategies

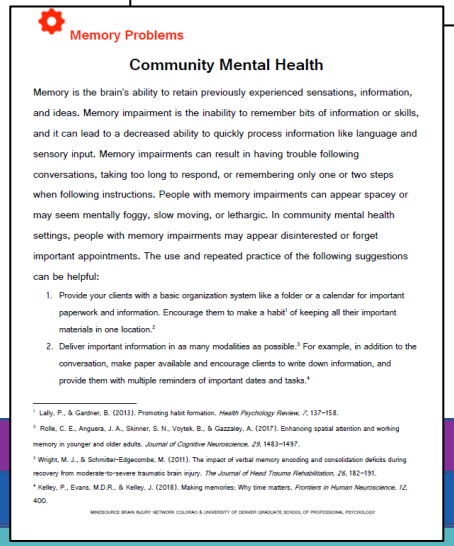

Ohio State University TBI Identification Method — Interview Form

Step 1

Step 2

Step 3




Memory Problems

Community Mental Health

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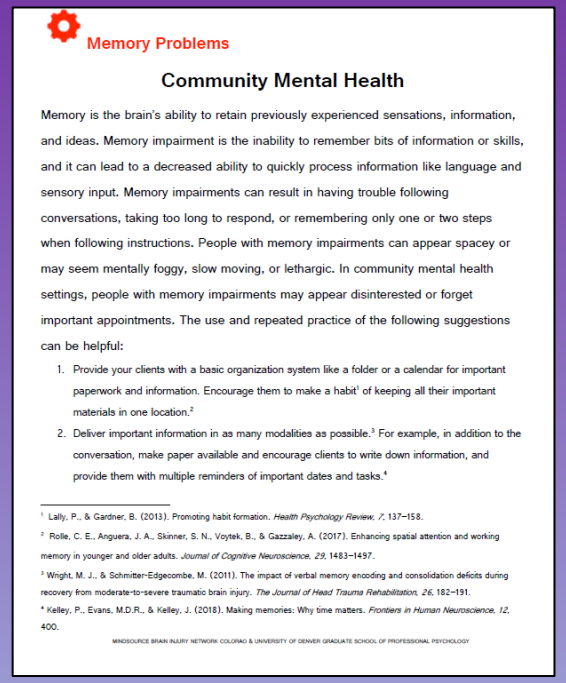
https://www.nashia.org/obisssprogram

Aleea

Memory Problems

Strategies

- Given a notebook
  - Given everything in writing (along with verbal)
  - House rules were posted in the front and reviewed regularly until she knew them
- The need for notetaking was reinforced in groups
- A schedule was posted in her room
- All appointments were put in her phone with an alarm
- She worked on sleep hygiene



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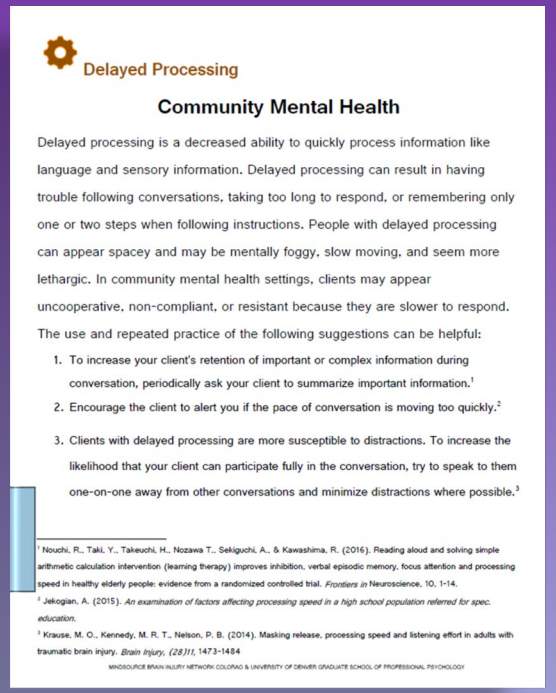
Slowed Processing

Strategies

- Staff slowed down, checked in for understanding, paused between ideas
- Taught her to be more aware of when she hadn't understood and ask the person to slow down or for repetition
- Distractions were minimized; tried to keep noise level down



Delayed Processing

Community Mental Health

Delayed processing is a decreased ability to quickly process information like language and sensory information. Delayed processing can result in having trouble following conversations, taking too long to respond, or remembering only one or two steps when following instructions. People with delayed processing can appear spacey and may be mentally foggy, slow moving, and seem more lethargic. In community mental health settings, clients may appear uncooperative, non-compliant, or resistant because they are slower to respond. The use and repeated practice of the following suggestions can be helpful:

1. To increase your client's retention of important or complex information during conversation, periodically ask your client to summarize important information.[1]
2. Encourage the client to alert you if the pace of conversation is moving too quickly.[2]
3. Clients with delayed processing are more susceptible to distractions. To increase the likelihood that your client can participate fully in the conversation, try to speak to them one-on-one away from other conversations and minimize distractions where possible.[3]

[1] Nouchi, R., Taki, Y., Takeuchi, H., Nozawa T., Sekiguchi, A., & Kawashima, R. (2016). Reading aloud and solving simple arithmetic calculation intervention (learning therapy) improves inhibition, verbal episodic memory, focus attention and processing speed in healthy elderly people: evidence from a randomized controlled trial. *Frontiers in* Neuroscience, 10, 1-14.

[2] Jekogian, A. (2015). *An examination of factors affecting processing speed in a high school population referred for spec. education.*

[3] Krause, M. O., Kennedy, M. R. T., Nelson, P. B. (2014). Masking release, processing speed and listening effort in adults with traumatic brain injury. *Brain Injury, (28)11,* 1473-1484

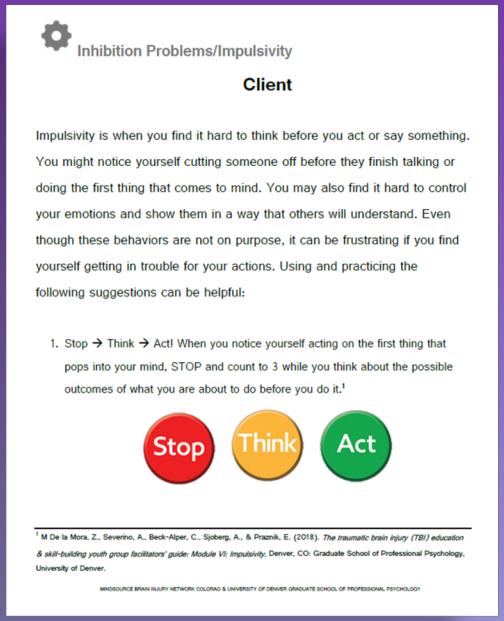
MINDSOURCE BRAIN INJURY NETWORK COLORAD & UNIVERSITY OF DENVER GRADUATE SCHOOL OF PROFESSIONAL PSYCHOLOGY

Aleea

Inhibition Problems/Impulsivity

Strategies

- Deep Breathing
- Meditation
- Counseling
- Let others finish speaking
- Stop, Think, Act



Inhibition Problems/Impulsivity

Client

Impulsivity is when you find it hard to think before you act or say something. You might notice yourself cutting someone off before they finish talking or doing the first thing that comes to mind. You may also find it hard to control your emotions and show them in a way that others will understand. Even though these behaviors are not on purpose, it can be frustrating if you find yourself getting in trouble for your actions. Using and practicing the following suggestions can be helpful:

1. Stop → Think → Act! When you notice yourself acting on the first thing that pops into your mind, STOP and count to 3 while you think about the possible outcomes of what you are about to do before you do it.[1]

Stop Think Act

[1] M De la Mora, Z., Severino, A., Beck-Alper, C., Sjoberg, A., & Praznik, E. (2018). *The traumatic brain injury (TBI) education & skill-building youth group facilitators' guide: Module VI: Impulsivity.* Denver, CO: Graduate School of Professional Psychology, University of Denver.

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Decision-Making

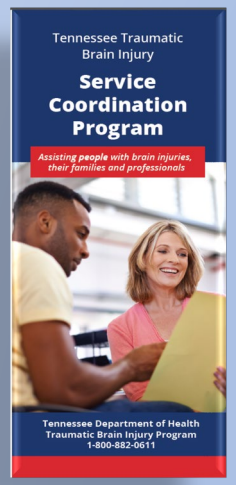
Template

* Problem
* Possible Solutions
* Pros/Cons
* Solution

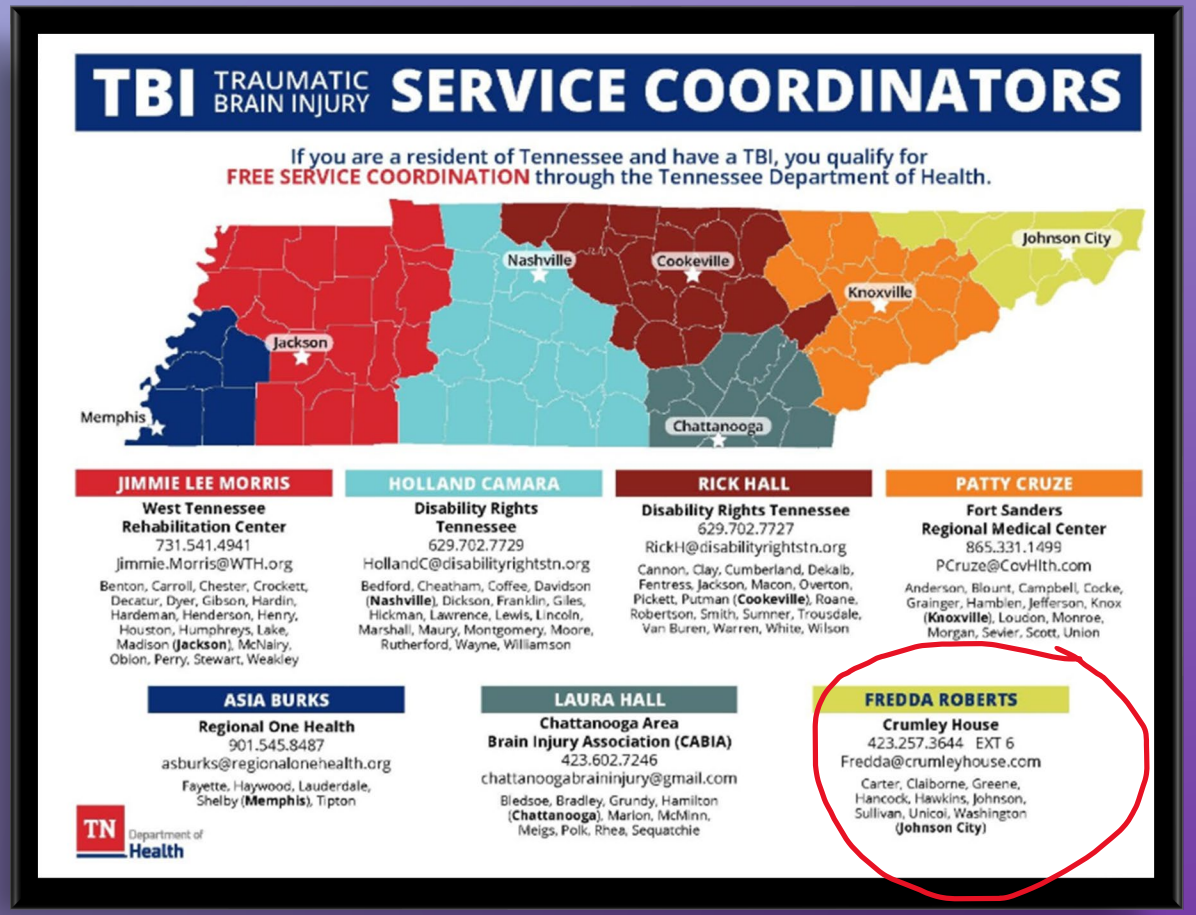
- Advocated for screening for Aleea's abuser
- Trained the Court & prison system
- Got strategies implemented for the abuser
- Got the Court to implement the protocol

Aleea

CONNECT person served with Community Resources



- Service Coordinators were explained in case they were needed in the future.
- The shelter was able to set her up with other resources she needed.



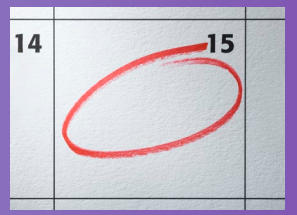
Some Changes the Shelter Made

- Tried to present info in as many modalities as possible (demonstrated, written, verbal)

- Had people summarize what was said or say how it related to them….

- Rules (quiet times, etc) were posted in each room and common spaces

- Regular appointment days and times were made when possible

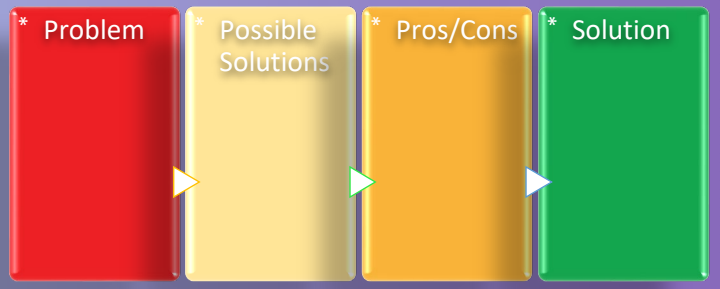


Some Changes the Shelter Made

- Mindfulness and deep breathing exercises were taught to help slow down

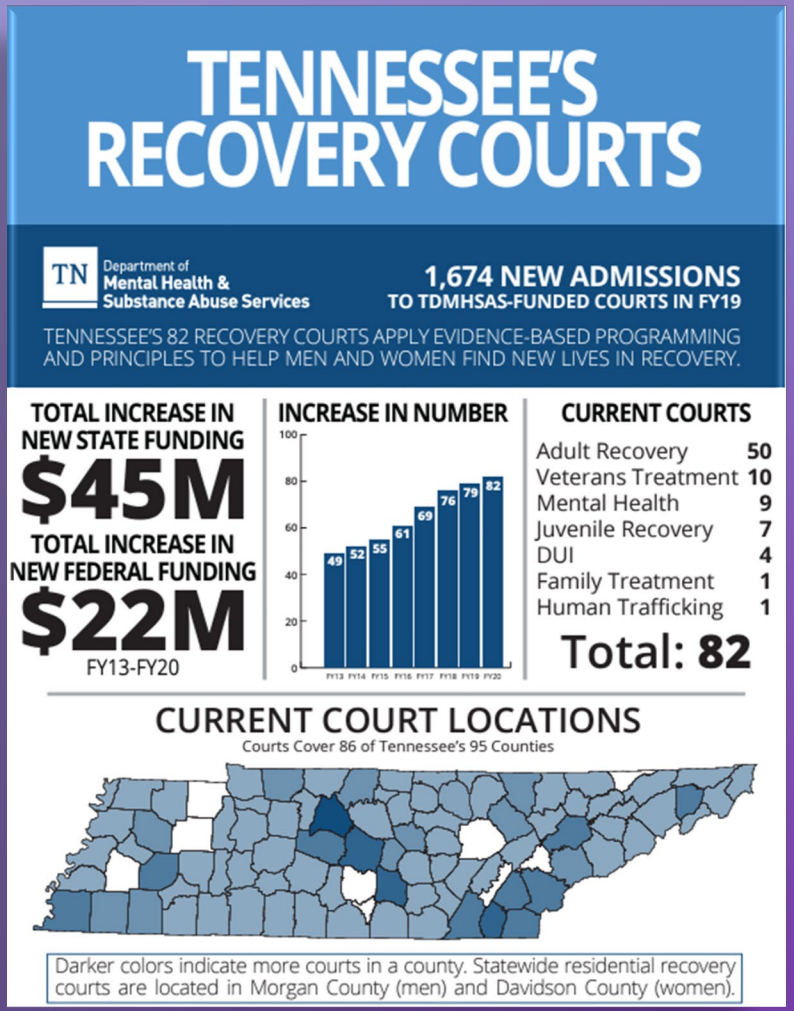
- "Stop, Think, Act" was encouraged

- The decision-making template was reinforced for all decision-making for everyone



Some Changes the Recovery Court Made

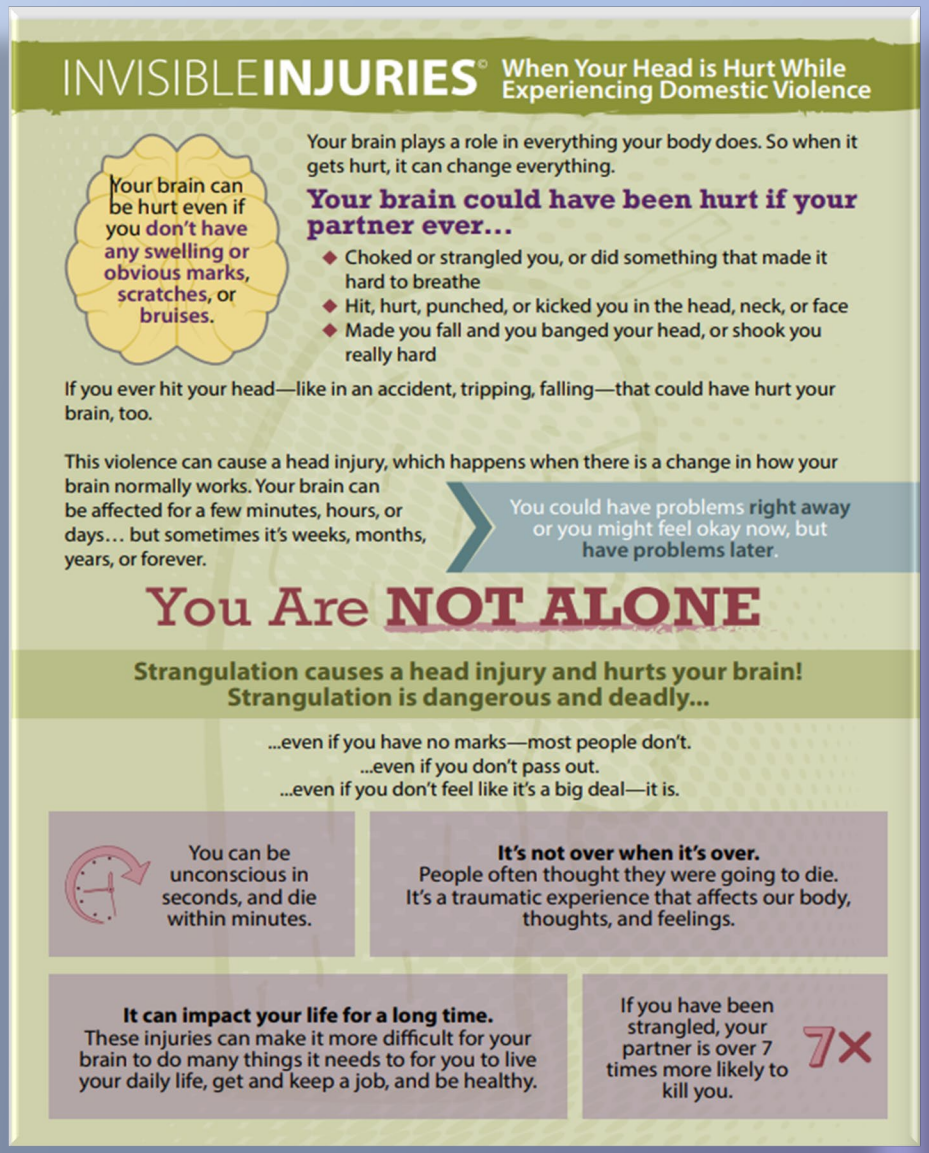
- ❑ Everything was given in writing (when possible)
- ❑ More processing time was given for responding to questions
- ❑ Notepads were given out to write down thoughts
- ❑ Lawyers summarized proceedings at each break and at the end
- ❑ Lawyers slowed down when speaking
- ❑ All people entering the system were screened for prior history of brain injury and individualized strategies were implemented

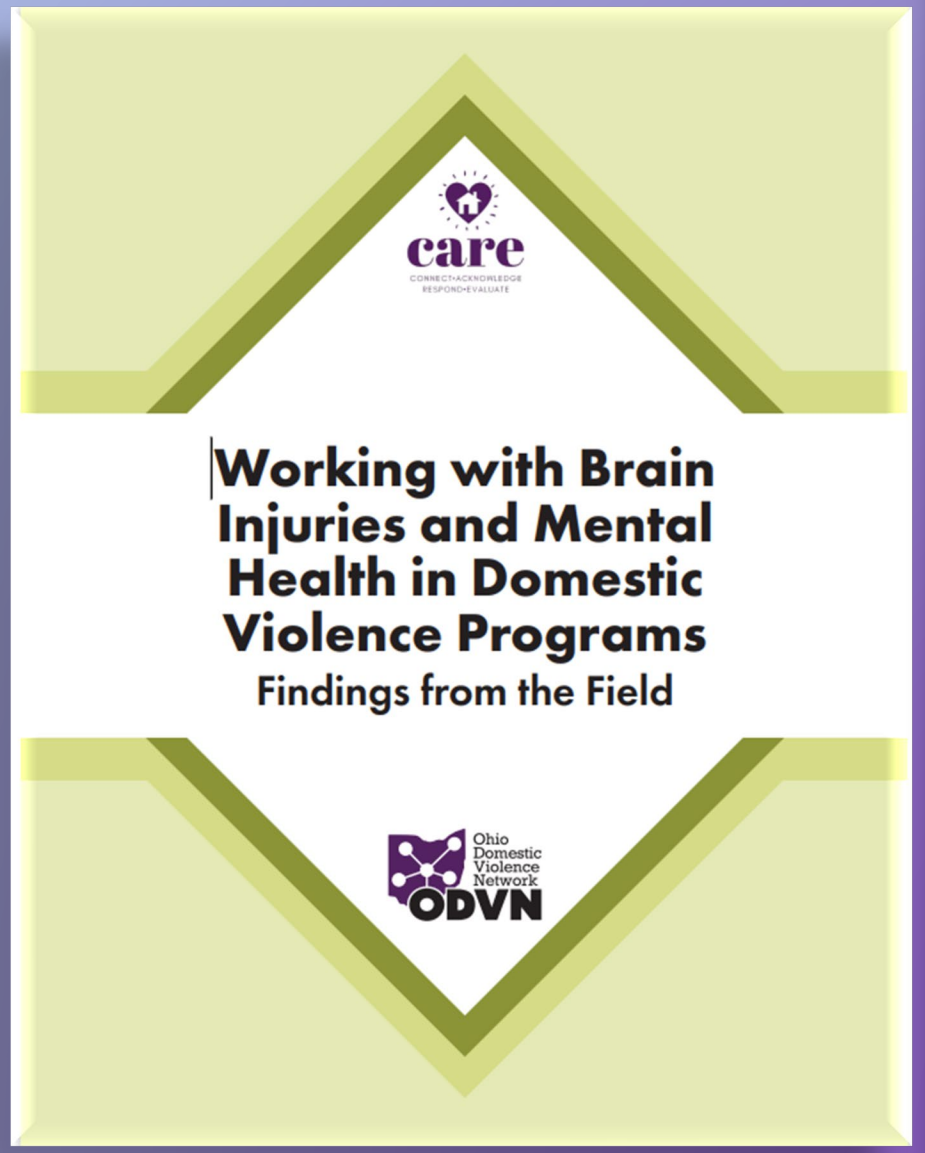


Aleea

Domestic Violence

Ohio Domestic Violence Network
odvn.org





Aleea

Resource pages by system of support

Tennessee Brighter Futures

Brain Injury

Tennessee Brighter Future

Brain Injury Resources

About Brain Injury

An acquired brain injury (ABI) occurs *after* birth. It is not hereditary, congenital, degenerative, or induced by birth trauma. There are two types of acquired brain injury: traumatic and non-traumatic. "A Traumatic Brain Injury (TBI) is caused by a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain." CDC There are 2.8 million TBIs in the US each year. Problems from a brain injury may be physical, cognitive, emotional or behavioral and may last from a few days to the rest of someone's life. Examples of non-traumatic brain injuries include stroke, infection, tumor, or anoxia (lack of oxygen from something like strangulation, near drowning or drug overdose).

Brain Injury Intersection with Other Systems of Support

Below are just some of many intersections between brain injury and other diagnoses.

Mental Health: Brain injury can create mental health issues, as well as worsen pre-existing ones. They can make coping harder. Six months to 1 year following an injury: one third will experience a mental health problem – that number will grow over time. People with BI have a 2 - 4 times increased risk of attempting or having death by suicide. As high as 75% of people seeking mental health and substance use treatment also have a brain injury.

Substance Use Disorder: People with TBI are 10 times more likely to die of accidental overdose. Approximately HALF of people receiving substance abuse treatment have at least one brain injury. 25% of people enter brain injury rehabilitation as a result of drugs or alcohol. Those with **childhood TBI are more likely** to abuse drugs & alcohol as adults. For every overdose death, there are approximately fifty overdose survivors, 90% of whom become impaired because of insufficient oxygen to the brain. As high as 75% of people seeking **mental health and substance use treatment** also have a brain injury.

Domestic Violence: An estimated 20 million women each year could have a TBI caused by DV. Survivors of DV with a TBI are likely to have trouble with attention, concentration, memory, These changes make it harder to assess danger, make decisions relate

Justice System: Within 5 years post injury, nearly 1/3 report some i **Juvenile Justice System, 41% have had a TBI.** They are likely to s at a **69% higher risk of recidivism**. In the adult Justice System, **50-** less likely to achieve discretionary release. Close to **100% of women**

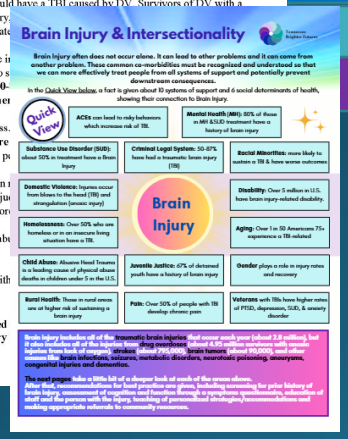
Homelessness: TBI is both a cause & consequence of homelessness. insecure living situation have a TBI (**25% were moderate to severe** population.) They have poorer general health and functioning than p

Chronic Pain: Pain is the most common chronic medical condition chronic pain. Common problems following brain injury, like poor ju harder to self-regulate substance use & make overdose 11 times mor

Child Abuse: 30 - 60% of perpetrators of domestic violence also ab includes Shaken Baby Syndrome.

ACEs/Trauma: Sustaining a brain injury in childhood or living with an ACE. Some ACEs can cause brain injury.

Screening for lifetime history of Brain Injury is recommended the pervasiveness of Brain Injury



Criminal Legal System

Tennessee Brighter Futures

Criminal Justice Resources

About Criminal Justice

Criminal justice is an umbrella term that refers to the laws, procedures, institutions, and policies at play before, during, and after the commission of a crime. https://www.law.cornell.edu

Tennessee's criminal justice system includes:

- a range of city and county law enforcement agencies,
- a prosecution arm,
- a public defense system,
- the state judiciary, local and state corrections, and
- a range of for-profit and non-profit service providers https://www.tn.gov

Criminal Justice numbers in Tennessee:

- Tennessee currently has approximately 30,000 people incarcerated in jail and approximately 20,000 people incarcerated in prison.
- Out of these, approximately 95% will be released.
- 1 in 3 Tennesseans has a criminal background.
- 1 in 2 Tennesseans has a family member that has been incarcerated.
  https://www.tn.gov/workforce/reentrytn/about.html
- Tennessee Department of Corrections (TDOC) supervises 79,000 offenders on probation, parole or community corrections.

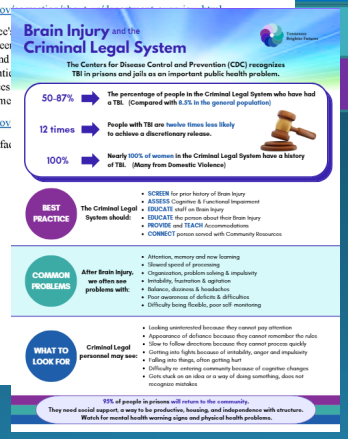
https://www.tn.gov

Like other corrections departments nationwide, Tennessee's growth. The agency has developed strategies that have bee expansion of regional drug court programs, residential and programs, sentencing reforms, and contracting with countie escalating health care costs, the Office of Clinical Services medical as well as mental health and substance use treatme

https://www.tn.gov

TDOC Reentry Services helps to address the challenges fa community. Their services include:

- Personal Document Assistance
- Employment Assistance
- Housing Support
- Education and Skill Building
- Community Support
- Veteran's Benefits



Domestic Violence

Tennessee Brighter Futures

Domestic Violence Resources

About Domestic Violence

Domestic violence is any pattern of behaviors that attempts to control and intimidate a partner or family member through fear, manipulation, isolation, financial abuse, physical abuse, sexual abuse and/or verbal abuse. Domestic violence does not discriminate. It cuts across all ethnic, racial, and socio-economic backgrounds. Domestic violence does not always manifest as physical abuse. Emotional and psychological abuse can often be just as extreme as physical violence. Lack of physical violence does not mean the abuser is any less dangerous to the victim, nor that the victim is any less trapped by the abuse. YWCA Nashville & Middle Tennessee

In the United States

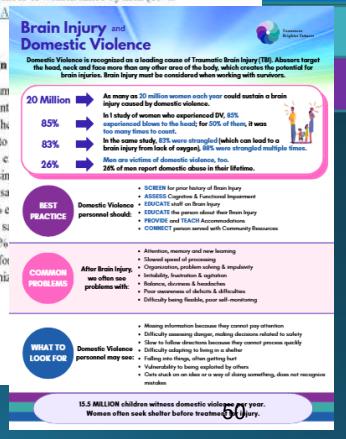
- 1 in 4 women will be a victim of domestic violence in her lifetime.
- 3 women are killed each day by a man who says he loves her.
- 15.5 million children witness domestic violence each year.

In Tennessee

- More than half of crimes against persons are domestic violence-related.
- Tennessee ranks 7th overall in the nation for the number of women killed by men (TN is the 16th most populous state in the U.S.). YWCA

Intersectionality with Brain

As many as 20 million women each year could have a traum violence. The head, neck and face are common targets of int are abused are more likely to have repeated injuries to the he undetected and untreated because women are more likely to Bullock, et al. 2018) Survivors of DV with a TBI are likely to e concentration, memory, executive functioning and processin make it harder to assess danger, make decisions related to sa shelter. In one study of women who experienced DV, 85% e of those experienced them too many times to count. In the st strangulation (which can lead to anoxic brain injuries), 88% times. Survivors of domestic violence should be assessed fo brain injury, undergo cognitive screening, be given customiz community resources as needed.



https://www.tndisability.org/tbf-systems-support

John

24 years old

- Recently released from prison
- Had a brain injury in middle school playing football
- Started shoplifting; went to a juvenile detention center where he sustained another injury
- Fell in with a bad crowd and started stealing cars for joy rides
- Works for his uncle as an auto mechanic
- Has a high ACE score

John

High ACE score: More likely a TBI will occur later on in life

What do we know?

What are we thinking about?

Juvenile Justice: 40-50% have a prior history of brain injury – likely to sustain more

People with TBI: attention concentration, memory, executive functioning and processing information.

Executive functioning changes: make poor decisions, poor judgment, impulsive

Criminal Justice System: 50-80% have a prior history of brain injury

What Did We Do?

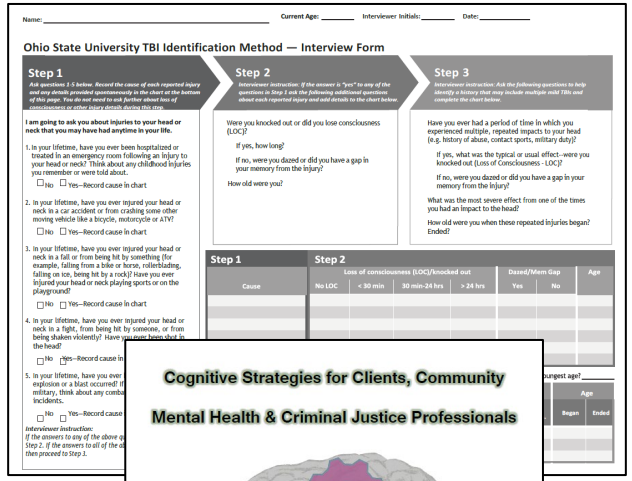
NASHIA OBISSS

Online Brain Injury Screening & Support System

Screen for Prior Brain Injury

Screen for Cognitive Problems

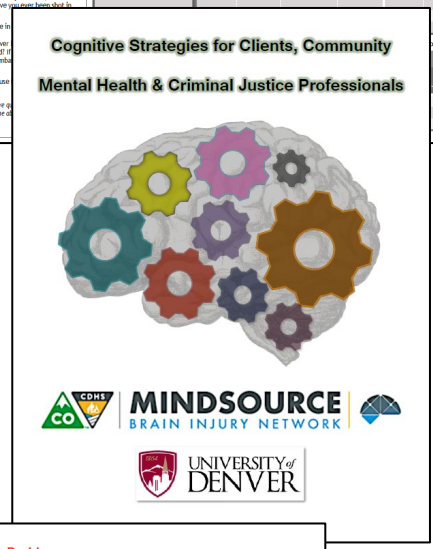
Provided Accommodations/ Strategies

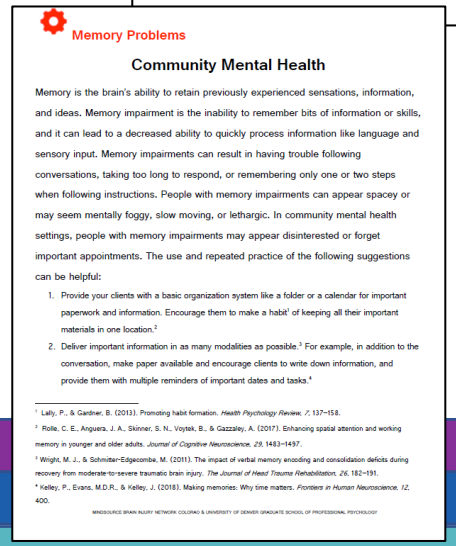

Ohio State University TBI Identification Method — Interview Form

Step 1

Step 2

Step 3




Memory Problems

Community Mental Health

Memory is the brain's ability to retain previously experienced sensations, information, and ideas. Memory impairment is the inability to remember bits of information or skills, and it can lead to a decreased ability to quickly process information like language and sensory input. Memory impairments can result in having trouble following conversations, taking too long to respond, or remembering only one or two steps when following instructions. People with memory impairments can appear spacey or may seem mentally foggy, slow moving, or lethargic. In community mental health settings, people with memory impairments may appear disinterested or forget important appointments. The use and repeated practice of the following suggestions can be helpful:

1. Provide your clients with a basic organization system like a folder or a calendar for important paperwork and information. Encourage them to make a habit[1] of keeping all their important materials in one location.[2]
2. Deliver important information in as many modalities as possible.[3] For example, in addition to the conversation, make paper available and encourage clients to write down information, and provide them with multiple reminders of important dates and tasks.[4]

https://www.nashia.org/obisssprogram

John

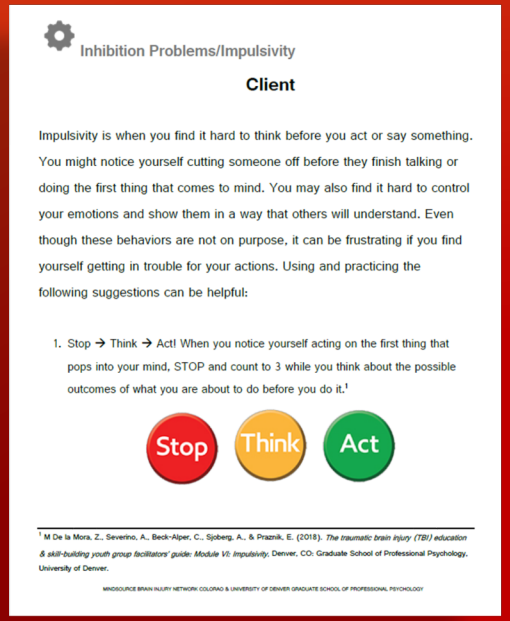
	INHIBITION PROBLEMS	I do not experience this problem at all	I experience this problem but it does not bother me	I am mildly bothered by this problem	I am moderately bothered by this problem	I am extremely bothered by this problem
1.	Saying things without thinking				✓	
2.	Doing things without thinking				✓	
3.	Not following directions				✓	
4.	Dominating conversations				✓	
5.	Interrupting when others are speaking				✓	

John

Inhibition Problems/Impulsivity

Strategies

- Deep Breathing
- Meditation
- Counseling
- Let others finish speaking
- Stop, Think, Act



Inhibition Problems/Impulsivity

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John

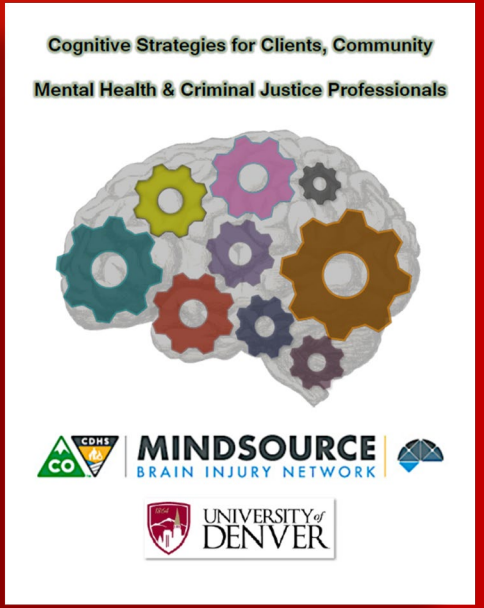
Decision-Making

Template

* Problem
* Possible Solutions
* Pros/Cons
* Solution

EDUCATE the person about their Brain Injury

- You've had a brain injury – what does this mean?
    - Eye-opening for John
- Strategy sheets were all reviewed with him
- Educational materials were shared (next slide)
- John asked us to talk with his uncle to help him understand his impulsivity



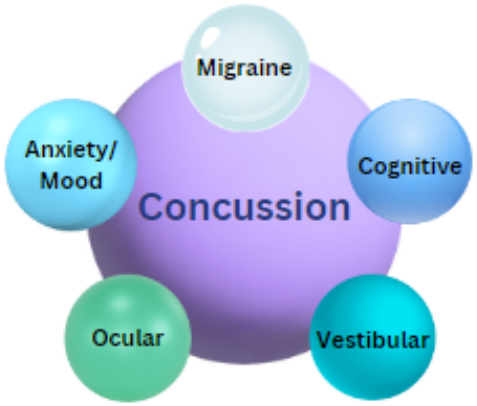
John

5 TYPES OF CONCUSSION

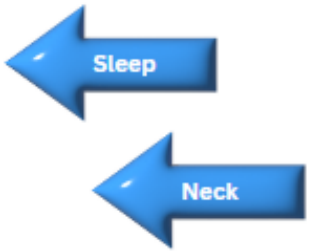
with 2 Modifying Factors

"Concussions are characterized by diverse symptoms and impairments in function resulting in different clinical profiles and recovery trajectories."

5 Concussion Types



2 Modifying Factors



CONCUSSION FACTS

- Symptoms will be broad and generalized during the first week following a concussion and will generally include symptoms like headache and fatigue.
- After the first week, if symptoms persist, they will tend to fall into one of the 5 clinical trajectories.
- There could be more than one trajectory type present.
- Specific trajectory and outcome depends on several factors:
  - Direction of force (linear vs. rotational)
  - Location of impact
  - Amount of force involved
  - Pre-injury risk factors

ACTIVE TREATMENT

Research is showing that active, specialized treatment - focused on specific symptoms - helps the brain recover from injury. These treatments include:

- Neuropsychology
- Vestibular Physical Therapy
- Exertional Physical Therapy
- Physical Medicine and Rehabilitation
- Neuro-optometry/ Neuro-ophthalmology
- Orthopedist
- Neurosurgery
- Neuroradiology
- Chiropractic
- Cognitive Therapy/ Speech Language Pathology

RISK FACTORS (which may delay recovery)

- History of prior concussions
- Motion sickness
- Visual problems
- Learning or attention issues
- Migraine history
- Gender (female)
- Age (younger children tend to take longer to recover)

CONCUSSION CLINICAL TRAJECTORIES

A model for understanding assessment, treatment and rehabilitation.

COGNITIVE
"Cognitive difficulties include decreased concentration, increased distractibility, difficulty learning/retaining new information or decreased multitasking abilities. Sometimes accompanied by increased fatigue as the day progresses."

VESTIBULAR
"Impairments of the vestibular system - the balance center of the brain - affects one's ability to interpret motion, coordinate head and eye movements, or stabilize vision upon head movement."

OCULAR
"Ocular dysfunction occurs when the movement of the eyes in tandem, or binocular movement, is affected. This may result in difficulties bringing the eyes together, or moving one's eyes to track motion."

POST-TRAUMATIC MIGRAINE
"Post-traumatic migraine symptoms include headaches, nausea, and/or sensitivity to light or noise."

ANXIETY/MOOD
"This occurs when someone has a hard time turning his or her thoughts off, being particularly ruminative, or suffering from excessive worry or concern."

TWO MODIFYING FACTORS: The presence of modifiers impacts the concussion symptoms.

SLEEP	NECK
The sleep modifier involves sleeping more or less than usual and having difficulty falling or staying asleep.	The neck modifier includes neck pain, stiffness or difficulty moving the neck.

The information on this infographic is from the University of Pittsburgh Medical Center's *TREAT Sport-related Concussion Conference* on April 20-21, 2024. It was based on research from: Collins, Kontos, Reynolds, Murawski, fu. KSSTA; 2014. Kontos & Collins, APA Books; 2018. Kontos et al. *Curr Sports Med Rep*; 2019. This *5 Types of Concussion and 2 Modifying Factors* information reflects an update from the original *6 Types of Concussion*.

Brain Links

ACL TBI SPP https://www.tndisability.org/brain @BrainLinksTN kidcentral tn

Brain Links is supported by the Administration for Community Living (ACL) of the U.S. Department of Health and Human Services under Grant No. 90TBSG0051-01-00 and in part by the TN Department of Health, Traumatic Brain Injury Program.

PERSONAL GUIDE FOR EVERYDAY LIVING AFTER CONCUSSION/TRAUMATIC BRAIN INJURY

This guide was developed to help you better understand what you may be experiencing following your injury. The better you understand the conditions that can have an impact on you, what can be difficult situations for you, and which strategies to try, the more you will succeed in life.

"CONDITIONS" likely to make symptoms worse:

A. Being **TIRED**
B. Being **EMOTIONAL** – sad, frustrated, excited, angry, etc.
C. Being **UNDER PRESSURE**, being **RUSHED, STRESSED or ANXIOUS**
D. Being **DRUNK/UNDER THE INFLUENCE** of drugs (Prescription or not)
E. Being in **PAIN**
F. Being **SICK**

STRATEGIES to consider for each state:

A. **Tired**: Do not allow yourself to become tired. **Plan** things that you need to do and complete them early whenever possible. **Slow down** and **check** your work. Stick to a fairly regular sleep schedule and make sure you get enough sleep at night.

B. **Emotional**: If you become emotional, **slow down** and **think before** you speak or act. Remember that being tired can make you become more emotional. If you know that you are going into a potentially emotional situation, **plan** as much as possible so that you are ready.

C. **Stress/Pressure**: Avoid being rushed, stressed or under pressure by **planning**. Lay out things to do in a **planner** (calendar), allowing plenty of time for each task. Especially when you are rushed, **slow down** to allow yourself time to think clearly and look for missed details. Take the time to make **checklists** so nothing is missed. **Check** off each step as it is completed.

D. **Alcohol/Drugs**: Do not drink alcohol or take drugs. Many people with brain injuries report feeling out of control without adding to it with alcohol or drugs. Know that your symptoms are likely to be enhanced while you are under the influence. Know also that drugs and alcohol have been reported to lower seizure threshold, making your chances of having a seizure greater.

E. **Pain:** Avoid getting in pain when possible. When avoiding pain is not possible, attempt to relieve it as soon as possible. Do pain management exercises as recommended. Take medications as prescribed. Know that pain medications may affect your thinking ability. Use proper body mechanics, etc. Keep expectations realistic when you are in pain. **Allow more time** to do things when in pain. **Plan ahead and check** your work.

F. **Sickness:** Avoid getting sick. Keep a regular schedule. Get enough sleep. Rest when sick. Cold medications may effect thinking ability. **Allow more time** to do things when sick. **Plan ahead. Check** your work.

Note that many of the same strategies were repeated over and over. Summed up briefly, the keys to improving performance are:

1. **Slowing down**
2. **Organizing yourself**
3. **Planning ahead,** and
4. **Checking your work**

Over time, all of these strategies can become a natural part of your daily life. Most likely, they will eventually make you more efficient, accurate and thorough; although in the beginning they may feel strange, intrusive and time-consuming.
****Give the strategies – and yourself – time****

SITUATIONS that may prove difficult (Fill in the blank lines with tasks that fit your life.)

A. **Sustained Attention Tasks** – Keeping your attention focused on one thing (Fill in the blanks with situations that fit your life.)
1. Reading a magazine, book, etc.
2. Listening to a lecture
3. Listening on the phone
4. Writing a letter, report, checklist, etc.
5. _
6. _ Working on a car _____

B. **Simultaneous/Divided Attention Tasks** – Keeping your attention on 2 or more things at a time.
1. Cooking dinner while watching television
2. Listening to a lecture while taking notes
3. Talking on the phone while writing a message
4. Counting the number of items on a conveyor while simultaneously looking for broken pieces
5. Keeping your eye on your young child while trying to write a letter
6. _
7. _ Having a conversation/Trying to write a note

C. **Alternating Attention Tasks** – Needing to switch your attention between two things.
1. Stop typing to answer the phone, then go back to typing
2. Stop doing your work at your desk to answer a question, then go back to work
3. Stop making dinner to clean up a spill, then knowing where you left off
4. Stop paying the bills to ask your spouse where some receipts are, then finishing
5. _
6. _ Thoughts interrupting _____
Checking his phone

John

ATTENTION – Very often a significant problem after brain injury.

A. **Increase your Awareness of Distractors** – Try to determine what types of things tend to distract you. Are they:

1. **Internal Distractors** – your own thoughts, emotions, being tired, in pain, sick, etc.
   and/or
2. **External Distractors** – things in the environment:
   a. Auditory – any noise: people talking, machines or air conditioners humming, cars driving by, etc.
   b. Visual – people walking by, a ceiling fan spinning, miscellaneous papers on your desk, a spider crawling on the wall, etc.
   c. Tactile/Sensation – an uncomfortable chair, an itchy rash, being too hot or cold, etc.

B. **Anticipate Distractors - Learn what tends to distract you**

1. Minimize these things whenever possible (for example, sit with your back to a distracting environment)
2. Eliminate them whenever possible (see below)

C. **Eliminate Distractors – Take Control**

1. Strategies for **Internal Distractors**
   a. Try to eliminate the distractor by actually doing the thing that is distracting you (i.e.: check to see if the stove is off, go mail the letter you are afraid you'll forget, etc.)
   b. Write the distractor down, decide to put it out of your mind for now and come back to it at a more appropriate time
   c. Overtly tell yourself, "I'm distracted and I need to get back to work"
   d. Get enough sleep to increase your ability to control your attention

2. Strategies for **External Distractors**
   a. Turn off the radio, T.V., ceiling fan, air conditioner, etc.
   b. Go to a quiet room
   c. Close your door, windows, curtains
   d. Wear earplugs
   e. Ask people to quiet down
   f. Clear your desk of papers before working
   g. Overtly tell yourself, "I'm distracted and I need to get back to work."
   h. Get enough sleep to increase your ability to control your attention

USE OLD STRATEGIES to your advantage:

A. **Make a list of strategies** that you used before you were injured. Everyone uses strategies – they just don't think of them as strategies because that is the "normal" way they do things.

1. To help you in creating this list, mentally go through all of the things you do during the day
2. Next, write down all the things you do to make these things easier
   Examples:
   a. Sticking to a routine when getting ready in the morning
   b. Making a list of chores, assignments, phone calls, etc., for the day
   c. Reviewing your day over morning coffee
   d. Planning what you will say during an important meeting or confrontation
   e. Referring to your desk calendar throughout the day
   f. Setting a cooking timer to remind you when to check the oven
   g. Laying out your clothes the day before
   h. And on and on

B. Do **NOT** discard these strategies now! Now they will be more important than ever! Do not decide to "test" your memory by not writing something down. You wrote things down before from time to time, didn't you? There was a reason for it. **Do it!**

C. **Build on old strategies**. Examples:
   1. If you used a checklist to help you remember your chores, see where else in your day you can use a checklist.
   2. If you used a routine to help you get out of the house in the morning, see if you can incorporate one into your workday.
   3. If you used a calendar to keep track of your workday, maybe you can use one to organize your home life.

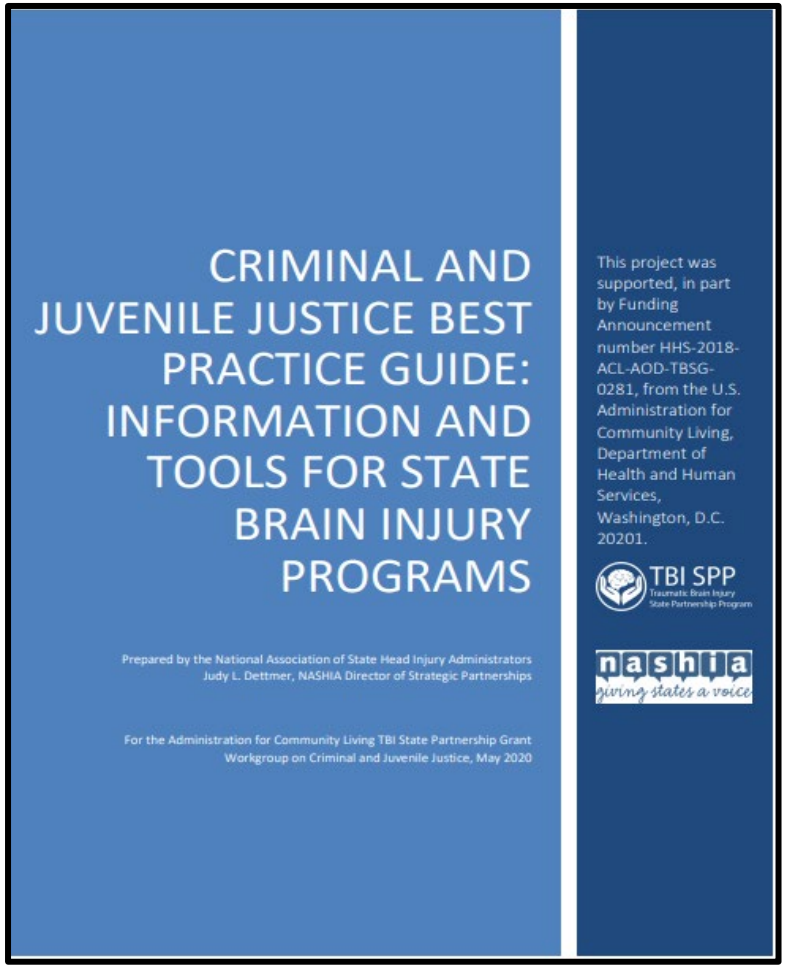
Know that in the end, things can go back to feeling "normal" again, even if that new "normal" is different than the old one. **In the meantime, know who you can go to for help and support.**

Wendy Ellmo MS CCC/SLP, BCNCDS
Brain Injury Specialist, Brain Links Revised 3/2020

Decide if it was worth doing at all; use the Decision-making template later.

Brain Links
https://www.tndisability.org/brain
@BrainLinksTN
Brain Links is supported by the Administration for Community Living (ACL) of the U.S. Department of Health and Human Services under Grant No. 90TBSG0002/-01-00 and in part by the TN Department of Health, Traumatic Brain Injury Program.

Justice System



https://www.nashia.org/cj-best-practice-guide-attachments-resources-copy

https://www.nashia.org/resource-library

Disability Rights of NC's TBI Justice Database

- The country's first **national database** on TBI and Justice

- Centralizing information on criminal legal system-related brain injury screening and supportive service programs, including pilots, academic studies, and projects from the past 30 years.

- Search based on population type:
  - Juvenile Justice
  - Adult Men
  - Adult Women
  - Adult Corrections
  - Segregation Units
  - Law Enforcement
  - CIT
  - Public Education
  - Veterans
  - Domestic Violence
  - Mental Health Court
  - Problem Solving Courts

https://disabilityrightsnc.org/tbi-justice-database/

Aleea

Resource pages by system of support

Tennessee Brighter Futures

Brain Injury

Tennessee Brighter Future

Brain Injury Resources

About Brain Injury

An acquired brain injury (ABI) occurs *after* birth. It is not hereditary, congenital, degenerative, or induced by birth trauma. There are two types of acquired brain injury: traumatic and non-traumatic. "A Traumatic Brain Injury (TBI) is caused by a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain." CDC There are 2.8 million TBIs in the US each year. Problems from a brain injury may be physical, cognitive, emotional or behavioral and may last from a few days to the rest of someone's life. Examples of non-traumatic brain injuries include stroke, infection, tumor, or anoxia (lack of oxygen from something like strangulation, near drowning or drug overdose).

Brain Injury Intersection with Other Systems of Support

Below are just some of many intersections between brain injury and other diagnoses.

Mental Health: Brain injury can create mental health issues, as well as worsen pre-existing ones. They can make coping harder. Six months to 1 year following an injury: one third will experience a mental health problem – that number will grow over time. People with BI have a 2 - 4 times increased risk of attempting or having death by suicide. As high as 75% of people seeking mental health and substance use treatment also have a brain injury.

Substance Use Disorder: People with TBI are 10 times more likely to die of accidental overdose. Approximately HALF of people receiving substance abuse treatment have at least one brain injury. 25% of people enter brain injury rehabilitation as a result of drugs or alcohol. Those with **childhood TBI are more likely** to abuse drugs & alcohol as adults. For every overdose death, there are approximately fifty overdose survivors, 90% of whom become impaired because of insufficient oxygen to the brain. As high as 75% of people seeking **mental health and substance use treatment** also have a brain injury.

Domestic Violence: An estimated 20 million women each year could have a TBI caused by DV. Survivors of DV with a TBI are likely to have trouble with attention, concentration, memory. These changes make it harder to assess danger, make decisions relat

Justice System: Within 5 years post injury, nearly 1/3 report some i **Juvenile Justice System, 41% have had a TBI**. They are likely to s at a **69% higher risk of recidivism**. In the adult Justice System, **50-** less likely to achieve discretionary release. Close to **100% of wome**

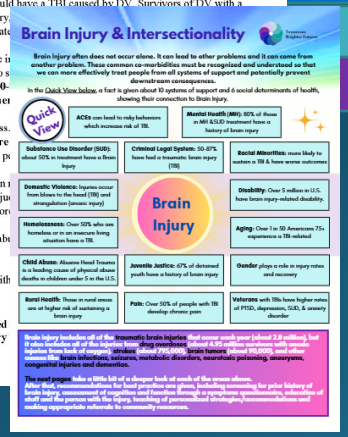
Homelessness: TBI is both a cause & consequence of homelessness. insecure living situation have a TBI (**25% were moderate to severe** population.) They have poorer general health and functioning than p

Chronic Pain: Pain is the most common chronic medical condition chronic pain. Common problems following brain injury, like poor ju harder to self-regulate substance use & make overdose 11 times mor

Child Abuse: 30 - 60% of perpetrators of domestic violence also ab includes Shaken Baby Syndrome.

ACEs/Trauma: Sustaining a brain injury in childhood or living with an ACE. Some ACEs can cause brain injury.

Screening for lifetime history of Brain Injury is recommended the pervasiveness of Brain Injury



Criminal Legal System

Tennessee Brighter Futures

Criminal Justice Resources

About Criminal Justice

Criminal justice is an umbrella term that refers to the laws, procedures, institutions, and policies at play before, during, and after the commission of a crime. https://www.law.cornell.edu

Tennessee's criminal justice system includes:

- a range of city and county law enforcement agencies,
- a prosecution arm,
- a public defense system,
- the state judiciary, local and state corrections, and
- a range of for-profit and non-profit service providers https://www.tn.gov

Criminal Justice numbers in Tennessee:

- Tennessee currently has approximately 30,000 people incarcerated in jail and approximately 20,000 people incarcerated in prison.
- Out of these, approximately 95% will be released.
- 1 in 3 Tennesseans has a criminal background.
- 1 in 2 Tennesseans has a family member that has been incarcerated. https://www.tn.gov/workforce/reentrytn/about.html
- Tennessee Department of Corrections (TDOC) supervises 79,000 offenders on probation, parole or community corrections.

https://www.tn.gov

Like other corrections departments nationwide, Tennessee's growth. The agency has developed strategies that have bee expansion of regional drug court programs, residential and programs, sentencing reforms, and contracting with countie escalating health care costs, the Office of Clinical Services medical as well as mental health and substance use treatme

https://www.tn.gov

TDOC Reentry Services helps to address the challenges fa community. Their services include:

- Personal Document Assistance
- Employment Assistance
- Housing Support
- Education and Skill Building
- Community Support
- Veteran's Benefits

ACEs

Tennessee Brighter Futures

Adverse Childhood Experiences and Opportunities for Improving Child Development Outcomes

Adverse Childhood Experiences (ACEs)

Adverse childhood experiences (ACEs) are stressful or traumatic events, including abuse and neglect. They may also include household dysfunction such as witnessing domestic violence or growing up with family members who have substance use disorders. ACEs are strongly related to the development and prevalence of a wide range of health problems throughout a person's lifespan, including those associated with substance misuse.

Prevalence of ACEs:

- 61% of adults have experienced at least 1 ACE[1]
- 16% of adults have experienced 4 or more ACEs[1]
- ACEs occur across all demographic groups[1]

ACEs are preventable. To prevent ACEs, we must understand and address the factors that put people at risk for or protect them from violence. Creating and sustaining safe, stable, nurturing relationships and environments for all children and families can prevent ACEs and help all children reach their full potential.

Raising awareness of ACEs can help[2]:

- Change how people think about the causes of ACEs and who could help prevent them.
- Shift the focus from individual responsibility to community solutions.
- Reduce stigma around seeking help with parenting challenges or substance misuse, depression, or suicidal thoughts.
- Promote safe, stable, nurturing relationships and environments where children live, learn, and play.

Positive Childhood Experi

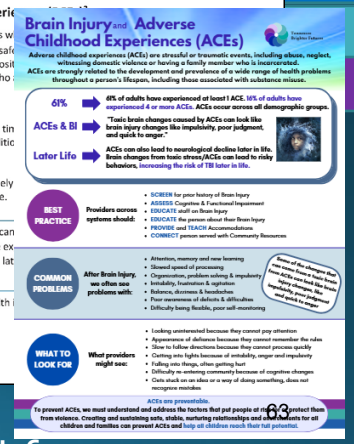
Increasing positive childhood experiences builds resilience in kids w the future. Children and families thrive when they have access to saf These relationships and environments are essential to creating posit childhood experiences. Children with PCEs become adults who

7 Positive Childhood Experiences[4]:

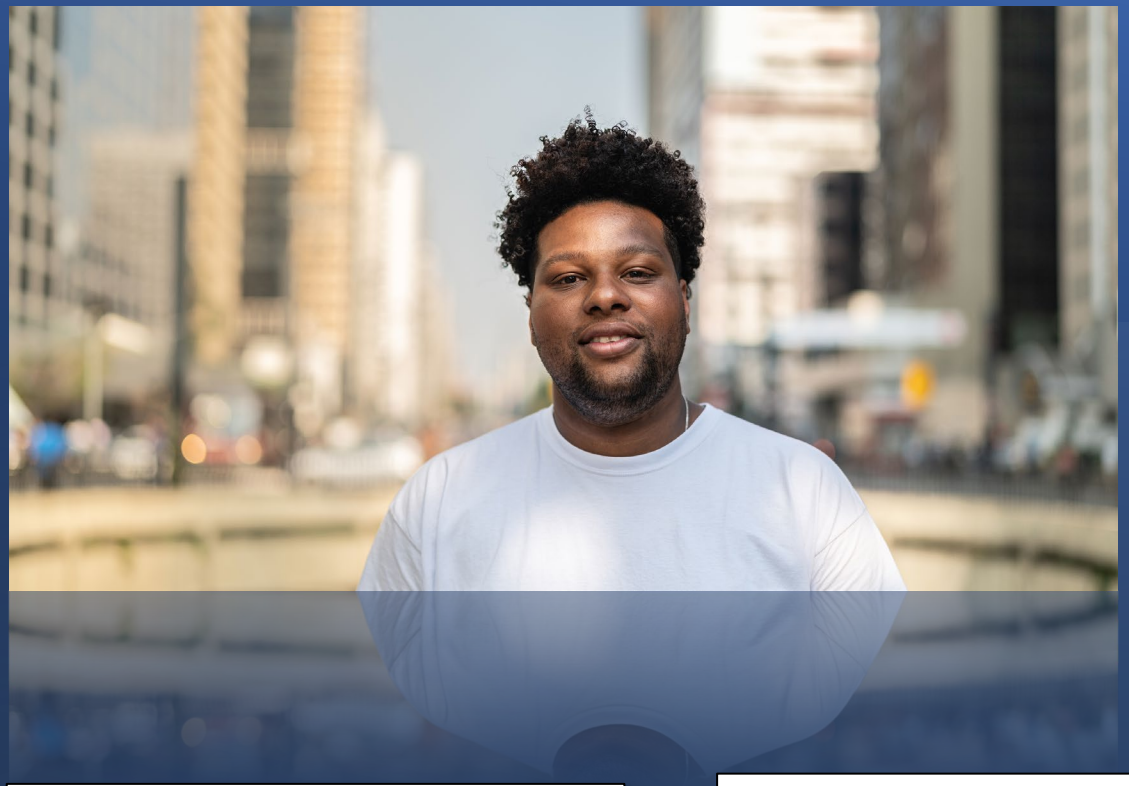
1. The ability to talk with family about feelings.
2. The sense that family is supportive during difficult tin
3. The enjoyment of participation in community traditic
4. Feeling a sense of belonging in high school.
5. Feeling supported by friends.
6. Having at least two non-parent adults who genuinely
7. Feeling safe and protected by an adult in the home.

Intersectionality with Brain Injury: Some ACEs (i.e. child abuse) can childhood or living with someone with a brain injury may also be ex stress/ACEs can lead to risky behaviors, increasing the risk of TBI lat later in life.

The relationship between PCEs in childhood and good mental health **gets, the better their adult mental health is likely to be.**

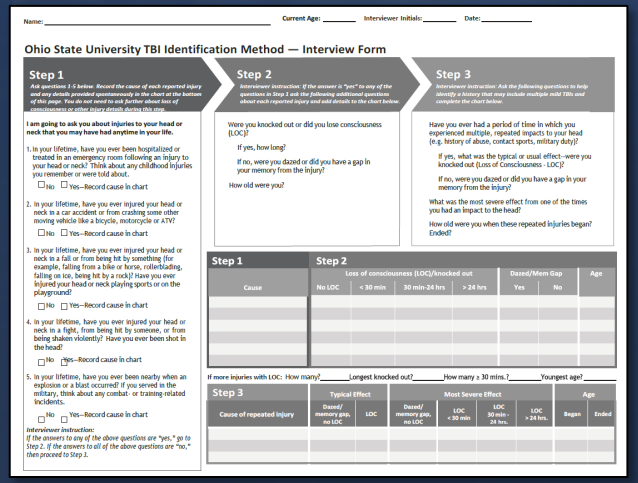


https://www.tndisability.org/tbf-systems-support



Rudy
27 years old

- Homeless
- Had a severe brain injury when he was 12
- Car accident
- Didn’t know much about it



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?

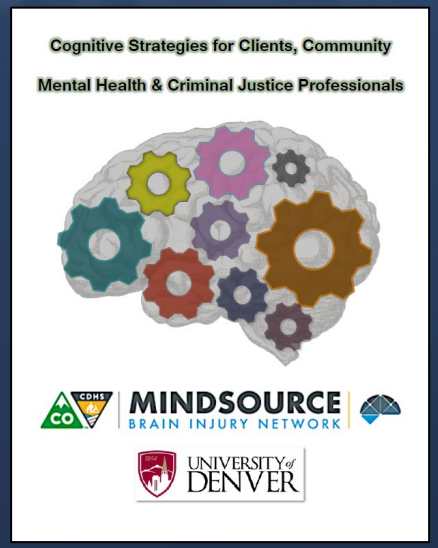
What was the most severe effect from one of the times you had an impact to the head?

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

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

If more injuries with LOC: How many?_____Longest knocked out?_____How many ≥ 30 mins.?_____Youngest age?_____

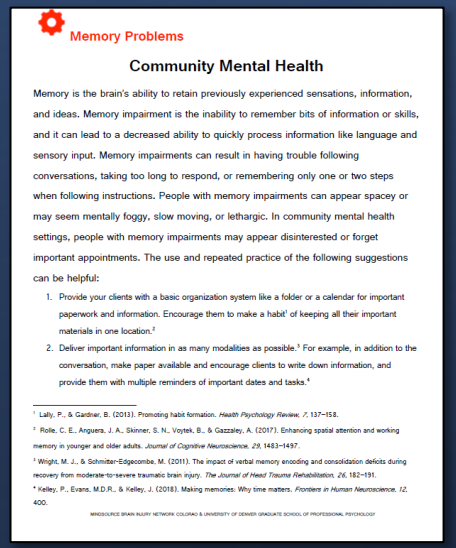
Step 3								
	Typical Effect		Most Severe Effect				Age	
Cause of repeated injury	Dazed/ memory gap, no LOC	LOC	Dazed/ memory gap, no LOC	LOC < 30 min	LOC 30 min - 24 hrs.	LOC > 24 hrs.	Began	Ended



Cognitive Strategies for Clients, Community Mental Health & Criminal Justice Professionals

MINDSOURCE BRAIN INJURY NETWORK

UNIVERSITY of DENVER



Memory Problems

Community Mental Health

Memory is the brain’s ability to retain previously experienced sensations, information, and ideas. Memory impairment is the inability to remember bits of information or skills, and it can lead to a decreased ability to quickly process information like language and sensory input. Memory impairments can result in having trouble following conversations, taking too long to respond, or remembering only one or two steps when following instructions. People with memory impairments can appear spacey or may seem mentally foggy, slow moving, or lethargic. In community mental health settings, people with memory impairments may appear disinterested or forget important appointments. The use and repeated practice of the following suggestions can be helpful:

1. Provide your clients with a basic organization system like a folder or a calendar for important paperwork and information. Encourage them to make a habit[1] of keeping all their important materials in one location.[2]
2. Deliver important information in as many modalities as possible.[3] For example, in addition to the conversation, make paper available and encourage clients to write down information, and provide them with multiple reminders of important dates and tasks.[4]

[1] Lally, P., & Gardner, B. (2013). Promoting habit formation. *Health Psychology Review, 7*, 137–158.

[2] Rolle, C. E., Anguera, J. A., Skinner, S. N., Voytek, B., & Gazzaley, A. (2017). Enhancing spatial attention and working memory in younger and older adults. *Journal of Cognitive Neuroscience, 29*, 1483–1497.

[3] Wright, M. J., & Schmitter-Edgecombe, M. (2011). The impact of verbal memory encoding and consolidation deficits during recovery from moderate-to-severe traumatic brain injury. *The Journal of Head Trauma Rehabilitation, 26*, 182–191.

[4] Kelley, P., Evans, M.D.R., & Kelley, J. (2018). Making memories: Why time matters. *Frontiers in Human Neuroscience, 12*, 400.

MINDSOURCE BRAIN INJURY NETWORK COLORADO & UNIVERSITY OF DENVER GRADUATE SCHOOL OF PROFESSIONAL PSYCHOLOGY

Rudy

- Severe car accident when Rudy was 12
  - Family member driving
  - Rarely talked about
  - Happened over the summer
  - In hospital 5 days, “tubes were everywhere”
  - Recovered well and discharged to home with no follow up

- Rudy was a “big teddy bear” before injury
- Lovable, fun, funny, lots of friends

School

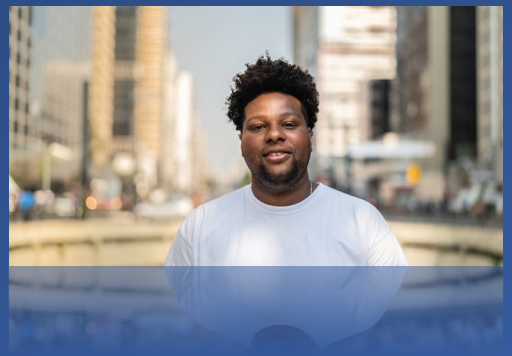
- Didn’t notify the school – “the doctor was so pleased with his recovery”
- “Thinking back…” his grades slowly dropped that year
- Started getting in trouble for wandering around the classroom, being a distraction, not finishing work
- Getting in trouble in the lunchroom and recess – at this point his behavior became the focus – not his schoolwork or grades

Rudy

School

- Seemed to be alone a lot by 9th grade
- Stopped liking school by high school
- Dropped out in 11th grade, “became too much to handle”, lots of fights with mother and left home 6 months later
- She lost track of him

Case Worker at the Homeless Shelter



- Got Rudy into a group home
- Scheduled a neuropsychological exam – 4 months out
  - Gold standard for brain injury
- Had a cognitive-linguistic evaluation by a Speech Language Pathologist with experience with neurological disorders
- Used SLP info, along with staff observations to fill out the Brainstorming Solutions Tool (BST)

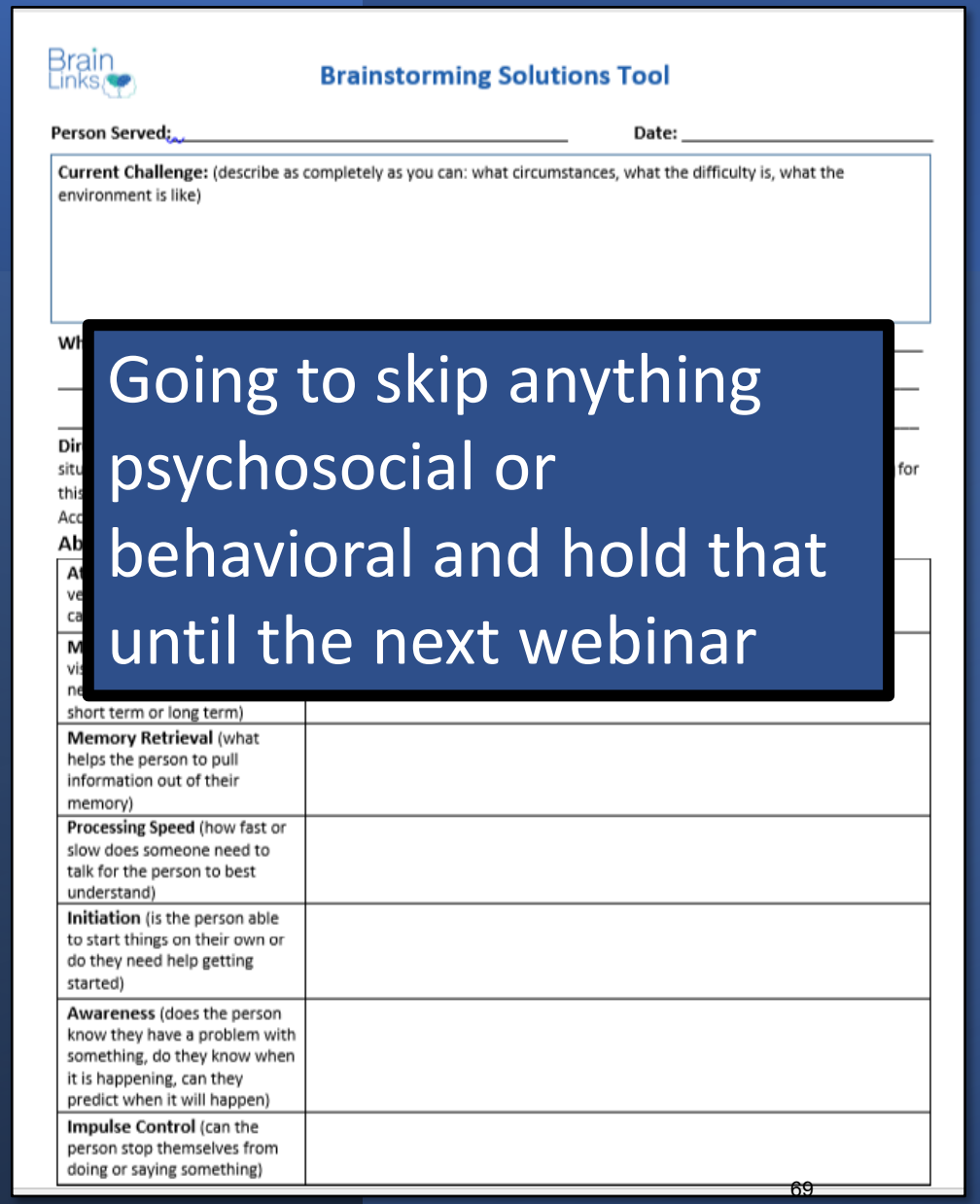
Rudy

Determining Strengths & Weaknesses

Brainstorming Solutions Tool (BST)

- Staff observations
- SLP evaluation
- Neuropsychological evaluation
- Any records

See more on YouTube



Brain Links

Brainstorming Solutions Tool

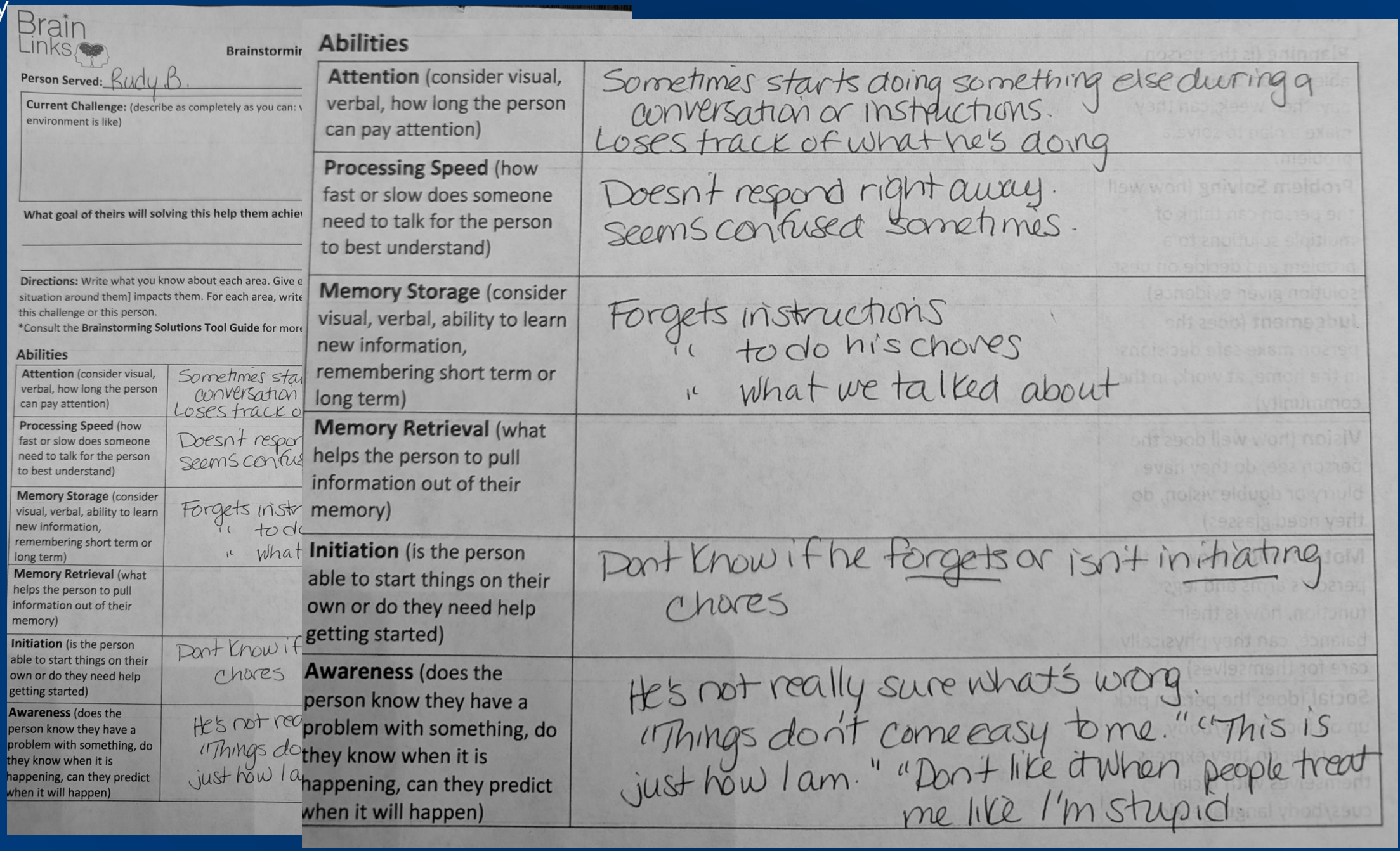
Person Served: _____ **Date:** _____

Current Challenge: (describe as completely as you can: what circumstances, what the difficulty is, what the environment is like)

Going to skip anything psychosocial or behavioral and hold that until the next webinar

short term or long term)	
Memory Retrieval (what helps the person to pull information out of their memory)	
Processing Speed (how fast or slow does someone need to talk for the person to best understand)	
Initiation (is the person able to start things on their own or do they need help getting started)	
Awareness (does the person know they have a problem with something, do they know when it is happening, can they predict when it will happen)	
Impulse Control (can the person stop themselves from doing or saying something)	

Rudy



Brain Links

Brainstormin

Person Served: Rudy B.

Current Challenge: (describe as completely as you can: v
environment is like)

What goal of theirs will solving this help them achie

Directions: Write what you know about each area. Give e
situation around them] impacts them. For each area, write
this challenge or this person.
*Consult the **Brainstorming Solutions Tool Guide** for more

Abilities

Attention (consider visual, verbal, how long the person can pay attention)	Sometimes sta conversation Loses track o
Processing Speed (how fast or slow does someone need to talk for the person to best understand)	Doesn't respor seems confus
Memory Storage (consider visual, verbal, ability to learn new information, remembering short term or long term)	Forgets instr " to d " what
Memory Retrieval (what helps the person to pull information out of their memory)	
Initiation (is the person able to start things on their own or do they need help getting started)	Dont know if chores
Awareness (does the person know they have a problem with something, do they know when it is happening, can they predict when it will happen)	He's not rea "Things do just how I a

Abilities

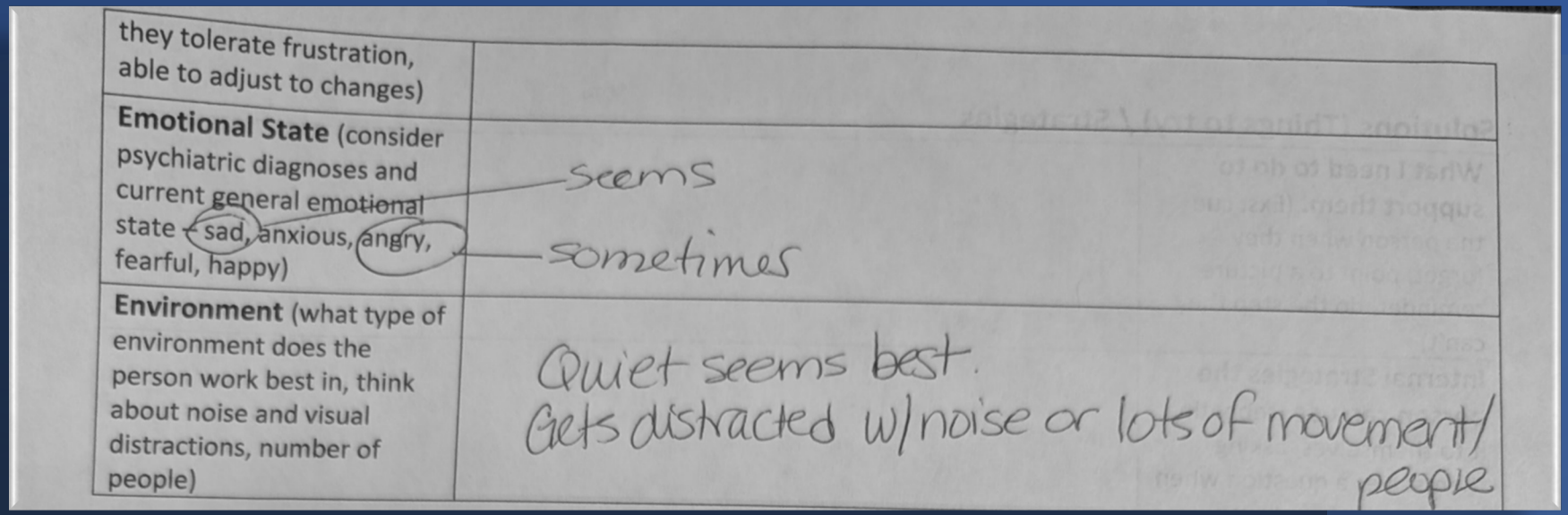
Attention (consider visual, verbal, how long the person can pay attention)	Sometimes starts doing something else during a conversation or instructions. Loses track of what he's doing
Processing Speed (how fast or slow does someone need to talk for the person to best understand)	Doesn't respond right away. seems confused sometimes.
Memory Storage (consider visual, verbal, ability to learn new information, remembering short term or long term)	Forgets instructions " to do his chores " what we talked about
Memory Retrieval (what helps the person to pull information out of their memory)	
Initiation (is the person able to start things on their own or do they need help getting started)	Dont know if he forgets or isn't initiating chores
Awareness (does the person know they have a problem with something, do they know when it is happening, can they predict when it will happen)	He's not really sure what's wrong. "Things don't come easy to me." "This is just how I am." "Don't like it when people treat me like I'm stupid.

Rudy

Impulse Control (can the person stop themselves from doing or saying something)	Gets angry quickly. Yells, sometimes throws something. He says- not trying to hurt anyone. "I'm just mad all of a sudden." "I'm bad sometimes."
Flexibility (does the person get stuck on a word, thought or behavior or can they easily shift)	
Understanding Language (does the person have difficulty understanding when it's too fast, too complex, too long)	←
Speaking (how well does the person convey their ideas, do they speak clearly, do they have trouble finding words)	Speaks si
Organization (how well does the person organize their things, their room, their workspace)	messy, (things ar
Planning (is the person able to plan their task, their day, their week; can they make a plan to solve a problem)	unclear.
person's arms and legs function, how is their balance, can they physically care for themselves)	Good
Social (does the person pick up on facial cues/body language, do they express themselves with facial cues/body language, do	(Hold for wek

Problem Solving (how well the person can think of multiple solutions to a problem and decide on best solution given evidence)	often only thinks of 1 solution.
Judgement (does the person make safe decisions in the home, at work, in the community)	Mostly good
Vision (how well does the person see, do they have blurry or double vision, do they need glasses)	Good? Doesn't complain
Motor Ability (how do the person's arms and legs function, how is their balance, can they physically care for themselves)	Good
Social (does the person pick up on facial cues/body language, do they express themselves with facial cues/body language, do	(Hold for webinar 3)

Rudy



they tolerate frustration, able to adjust to changes)	
Emotional State (consider psychiatric diagnoses and current general emotional state - sad, anxious, angry, fearful, happy)	seems sometimes
Environment (what type of environment does the person work best in, think about noise and visual distractions, number of people)	Quiet seems best. Gets distracted w/ noise or lots of movement/ people

Lots and Lots of

EDUCATION

Rudy

PERSONAL GUIDE FOR EVERYDAY LIVING AFTER CONCUSSION/TRAUMATIC BRAIN INJURY

This guide was developed to help you better understand what you may be experiencing following your injury. The better you understand the conditions that can have an impact on you, what can be difficult situations for you, and which strategies to try, the more you will succeed in life.

"CONDITIONS" likely to make symptoms worse:

A. Being **TIRED**
B. Being **EMOTIONAL** – sad, frustrated, excited, angry, etc.
C. Being **UNDER PRESSURE**, being **RUSHED, STRESSED or ANXIOUS**
D. Being **DRUNK/UNDER THE INFLUENCE** of drugs (Prescription or not)
E. Being in **PAIN**
F. Being **SICK**

STRATEGIES to consider for each state:

A. **Tired**: Do not allow yourself to become tired. **Plan** things that you need to do and complete them early whenever possible. **Slow down** and **check** your work. Stick to a fairly regular sleep schedule and make sure you get enough sleep at night.

B. **Emotional**: If you become emotional, **slow down** and **think before** you speak or act. Remember that being tired can make you become more emotional. If you know that you are going into a potentially emotional situation, **plan** as much as possible so that you are ready.

C. **Stress/Pressure**: Avoid being rushed, stressed or under pressure by **planning**. Lay out things to do in a **planner** (calendar), allowing plenty of time for each task. Especially when you are rushed, **slow down** to allow yourself time to think clearly and look for missed details. Take the time to make **checklists** so nothing is missed. **Check** off each step as it is completed.

D. **Alcohol/Drugs**: Do not drink alcohol or take drugs. Many people with brain injuries report feeling out of control without adding to it with alcohol or drugs. Know that your symptoms are likely to be enhanced while you are under the influence. Know also that drugs and alcohol have been reported to lower seizure threshold, making your chances of having a seizure greater.

E. **Pain:** Avoid getting in pain when possible. When avoiding pain is not possible, attempt to relieve it as soon as possible. Do pain management exercises as recommended. Take medications as prescribed. Know that pain medications may affect your thinking ability. Use proper body mechanics, etc. Keep expectations realistic when you are in pain. **Allow more time** to do things when in pain. **Plan ahead and check** your work.

F. **Sickness:** Avoid getting sick. Keep a regular schedule. Get enough sleep. Rest when sick. Cold medications may effect thinking ability. **Allow more time** to do things when sick. **Plan ahead. Check** your work.

Note that many of the same strategies were repeated over and over. Summed up briefly, the keys to improving performance are:

1. **Slowing down**
2. **Organizing yourself**
3. **Planning ahead,** and
4. **Checking your work**

Over time, all of these strategies can become a natural part of your daily life. Most likely, they will eventually make you more efficient, accurate and thorough; although in the beginning they may feel strange, intrusive and time-consuming.
****Give the strategies – and yourself – time****

SITUATIONS that may prove difficult (Fill in the blank lines with tasks that fit your life.)

A. **Sustained Attention Tasks** – Keeping your attention focused on one thing (Fill in the blanks with situations that fit your life.)
   1. Reading a magazine, book, etc.
   2. Listening to a lecture
   3. Listening on the phone
   4. Writing a letter, report, checklist, etc.
   5. _____
   6. _____

B. **Simultaneous/Divided Attention Tasks** – Keeping your attention on 2 or more things at a time.
   1. Cooking dinner while watching television
   2. Listening to a lecture while taking notes
   3. Talking on the phone while writing a message
   4. Counting the number of items on a conveyor while simultaneously looking for broken pieces
   5. Keeping your eye on your young child while trying to write a letter
   6. _____
   7. _____

C. **Alternating Attention Tasks** – Needing to switch your attention between two things.
   1. Stop typing to answer the phone, then go back to typing
   2. Stop doing your work at your desk to answer a question, then go back to work
   3. Stop making dinner to clean up a spill, then knowing where you left off
   4. Stop paying the bills to ask your spouse where some receipts are, then finishing
   5. _____
   6. _____

Rudy

A GUIDE TO POSSIBLE CHANGES AFTER BRAIN INJURY

FOR SCHOOL-AGED CHILDREN AND ADULTS

This guide was designed to help people watch for changes that *may* follow a brain injury.

Changes after brain injury may happen even years after the person's treatment ends, whether they completed rehabilitation, hospitalization, etc. This guide gives ideas about how to address these changes. It will also give tips for keeping your brain healthy throughout your life.

Keep this guide handy in case there are questions or concerns.

OUTCOMES AFTER BRAIN INJURY REHAB ARE DIFFERENT FOR EVERYONE

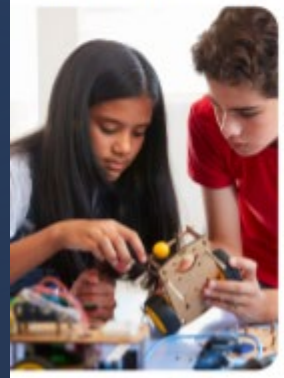
THEY WILL DEPEND ON MANY THINGS INCLUDING:

- Injury severity/Types of changes
- Support from family and friends
- Motivation to improve and ability to adapt to changes
- Mental health (ie depression, anxiety)
- Age at the time of injury
- Complications (things like infections, seizures, other injuries, etc.)
- Supports for transitioning to home or work (employer, transportation, etc.)
- Funding for rehab/Length of rehab/Willingness or ability to participate in rehab

There is no cut-off date for brain injury recovery. Positive change can continue for years. Improvement happens quickly for some people and more slowly for others. Some people may have negative changes over time or as they age. Some negative changes can be prevented by the choices you make today.

THINGS TO WATCH FOR IN CHILDREN

Your child's immediate physical injuries may heal quickly, but they may continue to struggle in other areas. The changes in these other areas can be hard to see if you don't know what you are looking for. Consider whether the following types of problems may be related to the injury.



Academic (School) Changes: Falling behind in class, difficulty learning new information, putting off school work, forgetting assignments, leaving items behind at school, trouble saying or writing what they mean

Social Changes: Losing friends, difficulty making new friends, not knowing how to act or speak in different situations, not understanding facial cues or social skills (like knowing it is time to end a conversation or that they are making someone uncomfortable), acting younger than their friends, laughing or crying too easily

Behavior Changes: Not acting like themselves, getting into fights, acting without thinking first, making poor decisions, making inappropriate sexual comments, using abusive words or tone, letting friends talk them into doing the wrong things, letting others mistreat or abuse them, alcohol use disorder, drug use disorder, trouble with the law

Physical Changes: Pain, a physical change from the injury that gets worse, reaching developmental milestones more slowly, sleep changes

Mental Health Changes: Becoming depressed or anxious, difficulty coping with change or handling stress, worrying at night and not sleeping, pushing friends and family away, spending too much time alone, doing things to hurt yourself, feeling stuck or unmotivated, developing addictive behaviors

See Suicide Warning Signs: https://www.tn.gov/health/health-program-areas/fhw/vipp/suicide-prevention/warning-signs.html

THINGS TO WATCH FOR IN ADULTS

See the list for children. Most are the same for adults, too.
Watch for those and other changes:

Work: Trouble at work, unable to complete tasks as before, being fired from jobs, moving from one job to another

Finances: Making poor money decisions, buying before thinking, borrowing money, making late payments

Relationships: Struggling to keep healthy relationships with family, friends and co-workers, being verbally, physically, emotionally or sexually abusive in a relationship, being taken advantage of in a relationship, being very needy

There is no cut-off date for brain injury recovery

What To Do If You See Changes In Yourself or Family Members

What you do depends on what you see happening.

Teach A Skill: The person may just need to learn or relearn how to do the things that are difficult (tying a shoe, using an escalator, starting or stopping a conversation, learning how to do a type of math problem or learning how to use a computer or device, learning a new task at work).

Teach A Strategy: A strategy is a way to do something that is difficult in a different way. For example: using a thick pen to help handwriting, using an outline to organize writing, using a checklist to remember steps or items, using a brace to help with pain or weakness, using a notebook, telephone app or post-it notes to help memory.

Talk To The Teacher: The teacher can help figure out what to try in the classroom or next steps within the school. Options might be extra help, a tutor, a 504 Plan or an IEP (Individualized Education Program). Even if your child had an IEP in the past and "graduated" from it, it may be a good choice again now. If the child doesn't qualify for the services in school, you can look to get help privately.

Talk To Your Human Resource Specialist, Your Work Supervisor or Co-Worker: Dealing with problems at work can be tricky. First you need to decide if and how to disclose (tell someone about) your injury. Meet with your Human Resource Specialist (HR) to get started. HR can help communicate with your supervisor. The supervisor may not know how to help or may not understand brain injury. HR can educate your supervisor on brain injury and your needs. You are entitled to "reasonable accommodations" for your disability under the Americans with Disabilities Act. These accommodations might include: installing a ramp, providing screen reader software, adjusting a work schedule, providing written instructions, noise cancelling earplugs. In some jobs, you can make changes without asking the employer. Maybe you can turn off your private office light, turn down the brightness on your computer, or close the door. Make any changes that you know you can make on your own. Work with your employer to make other changes. Set up your work environment so you can be successful. See askjan.org for more brain injury accommodations.

Seek Symptom-Specific Treatment: Take control of your own health. Keep a list of things that help you and things that worsen your symptoms. Sharing this list may also help a symptom specialist. Treatment can be helpful even years after an injury. Demands in your life can change. These changes can make it a good time to get a "tune-up" that fits your symptoms. If you are not sure who to go to for your issues, you can ask your doctor. It will probably be best to see someone who understands brain injury.

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SPECIALISTS & THEIR SYMPTOM-SPECIFIC TREATMENT

Specialist	Symptoms
Physical Therapist	Pain and tightness, balance changes, weakness, reduced stamina
Occupational Therapist	Difficulty with a life task like cooking or budgeting, fine motor changes like trouble writing or texting, vision changes
Speech Language Pathologist	Difficulty communicating in a new environment, poor social skills, difficulty with thinking skills, changes in swallowing
Neurologist	Migraines, dizziness, pain management, sleep disorders, seizures
Neuro-ophthalmologist	Vision issues related to the injury
Counselor	Depression, anxiety, help adjusting to new circumstances, feeling overwhelmed or alone, behavioral problems
Neuropsychologist	Difficulty with cognitive (thinking) abilities, depression, anxiety, and behavioral issues (may provide counseling or work with a counselor and other specialists)
Chiropractor	Back and neck pain, headaches
Support Groups	Find support from other people who understand brain injury. For support groups in Tennessee, see: https://www.tn.gov/content/dam/tn/health/program-areas/tbi/Brain_Injury_Suppt_Groups.pdf There are also in-person and virtual support groups for specific symptoms like seizures, decreased balance and migraines.
Medical Doctor	Your doctor can help with sudden medical issues that come up and can help you figure out who to go to for your symptoms. When going to *any* doctor for *any* reason, tell them about the brain injury. The new problem could be related.
Vocational Therapist or State Vocational Rehab Counselor	Help with work issues, including the return to work and keeping a job. TN Vocational Rehab: https://www.tn.gov/humanservices/ds/vocational-rehabilitation.html Benefits to Work: https://www.tndisability.org/benefits-work

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KEEP YOUR BRAIN HEALTHY

Keeping our brains healthy is important for everyone, and it is extra important for people who have had a brain injury. Proven things you can do to keep your brain healthy:

- Eat healthy foods like fruits, vegetables, whole grains, nuts, seeds, and beans. Use healthy fats like avocado and olive oil. Avoid or limit dairy, meat and processed (junk) foods.
- Get regular exercise that raises your heart rate like fast walking, running or dancing.
- Get enough sleep for your age. Children, including teens, need more sleep than adults.
- Use natural cleaning and health care products.
- Do not smoke, vape, drink alcohol or use drugs.
- Be social - stay connected to friends and family.
- Continue to learn new things that interest you.
- Take care of your mental health.
- Avoid another injury - see below.

For more information on Brain Health, see https://www.tndisability.org/resources-o

PREVENTION

It is very important to prevent another injury from happening. People who have had a brain injury are more likely to have another. Make good decisions about social interactions and safety. Avoid rough sports and activities. With any activity, think first about how to avoid another injury. **Always** wear a helmet when needed and **always** wear a seatbelt.

EXPECT THE BEST, PLAN FOR THE BEST...BUT BE ARMED WITH KNOWLEDGE

FREE RESOURCES

Tennessee Resources

Tennessee Traumatic Brain Injury Program Service Coordination: https://www.tn.gov/health/health-program-areas/fhw/vipp/tbi.html
help with referrals, insurance issues and more

TN Statewide Crisis Phone Line at 855-CRISIS-1 (855-274-7471)

Return to Learn/Return to Play: Concussion Management Guideline https://www.tn.gov/content/dam/tn/health/program-areas/tbi/2020%20Tennessee%20Department%20of%20Health%20Return%20to%20Learn.Return%20to%20Play%20Guidelines.pdf

Empower Tennessee: https://empowertennessee.org/

Brain Links: https://www.tndisability.org/brain

Family Voices of Tennessee: https://www.tndisability.org/family-voices-tennessee
families supporting families of children with special healthcare needs, chronic illnesses or disabilities

kidcentral tn - https://www.kidcentraltn.com

School and Work Resources

Support and Training for Exceptional Parents: https://tnstep.org/
help parents with support and training for a child's educational needs

Benefits to Work: https://www.tndisability.org/benefits-work

Center on Brain Injury Research and Training (CBIRT): https://cbirt.org/

Job Accommodations Network: https://askjan.org/

National Resources

BrainLine Website: https://www.brainline.org/
information on living with brain injury

Brain Injury Associations of America: https://www.biausa.org/
national resource on brain injury

Psychology Today: https://www.psychologytoday.com/us/therapists/traumatic-brain-injury
to get help or find a local counselor/therapist

Brain Links

ACL | TBI SPP | https://www.tndisability.org/brain | @BrainLinksTN | kidcentral tn

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Brain Health
Prevention
Free Resources

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BRAIN HEALTH

HOW TO HAVE A HEALTHY BRAIN THROUGHOUT LIFE

Our brain controls everything about us: our moods and emotions, our movements, thoughts and words. Some habits, like eating junk food, not exercising, smoking and drinking alcohol can harm our brain. Unhealthy habits can lead to early loss of memory and thinking skills and sometimes dementia - a disorder that effects memory, personality and reasoning.

We can make changes right now - no matter what age we are - that will improve our brains and the quality of our lives.

HERE'S WHERE TO START:

Suggestions are based on current research.

EAT WELL

- The best diet for a healthy brain includes lots of vegetables, fruits, whole grains, healthy fats (avocados, nuts and seeds), and legumes (beans, peas and lentils) and NO eggs, meat or dairy. This is a **vegan diet.**
- If you feel that you can't be a vegan, the next best choice for brain health is **vegetarian**, which is no meat or fish. If you can't be a vegetarian, eat as many healthy, meatless meals as you can.
- Beware of trendy diets. They can often help you lose weight in the short term, but may not be good for your body in the long term.

Avoid junk food, fast food restaurants and most processed (man-made, factory-made) **foods.**
These foods often contain a lot of sugar, salt and fat.

Guidelines for the Prevention of Alzheimer's Disease: "Vegetables, legumes (beans, peas, lentils), fruits, and whole grains should replace meats and dairy products as primary staples of the diet."

Journal of Neurobiology of Aging, 2014

GREEN TEA: Did you know that **green tea** is both **neuro-protective (protects the brain)** and **neuro-restorative (heals the brain)**?
That means if you drink green tea and have an accident that hurts your brain, it will help protect your brain from injury. Even if you begin to drink the tea *after* the injury, it will help.

PLANT FOODS VS ANIMAL FOODS: Did you know that **plant foods have 64 times more antioxidants** than animal foods? Antioxidants help protect cells in your body from damage, including brain cells.

DR. GREGER'S DAILY DOZEN APP: This free app helps you **keep track of the healthy foods** that you eat and helps you figure out what you are missing.

EXERCISE

Cardiovascular exercise - **any exercise that raises your heart rate** - is good for your whole body, including your brain. Other exercise, like yoga, is very good for your body and for relaxation. To really benefit your brain, add cardiovascular exercise which will **increase blood flow to your brain.** Examples of this type of exercise are **walking quickly, jogging, dancing and riding a bike.**
Too little exercise actually hurts the brain.
Cardiovascular exercise has been proven to:

- Fight Depression
- Manage Stress
- Control Blood Sugar Levels
- Help Fight Colds and Diseases
- Increase Focus
- Lower Blood Pressure
- Maintain a Healthy Weight
- Improve Memory

Exercise and better food choices can help you to keep a healthy weight. Studies have shown that having a heavier body makes us have a smaller brain. **So keep your weight down and your brain healthy!**

Food

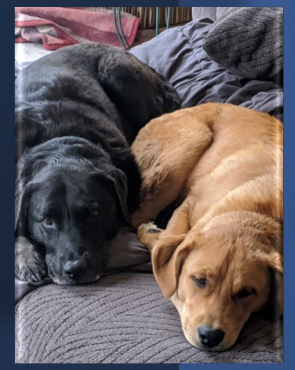
Exercise

Mental Health

Learn

Socialize

Avoid Toxins



Sleep

Purpose & Joy

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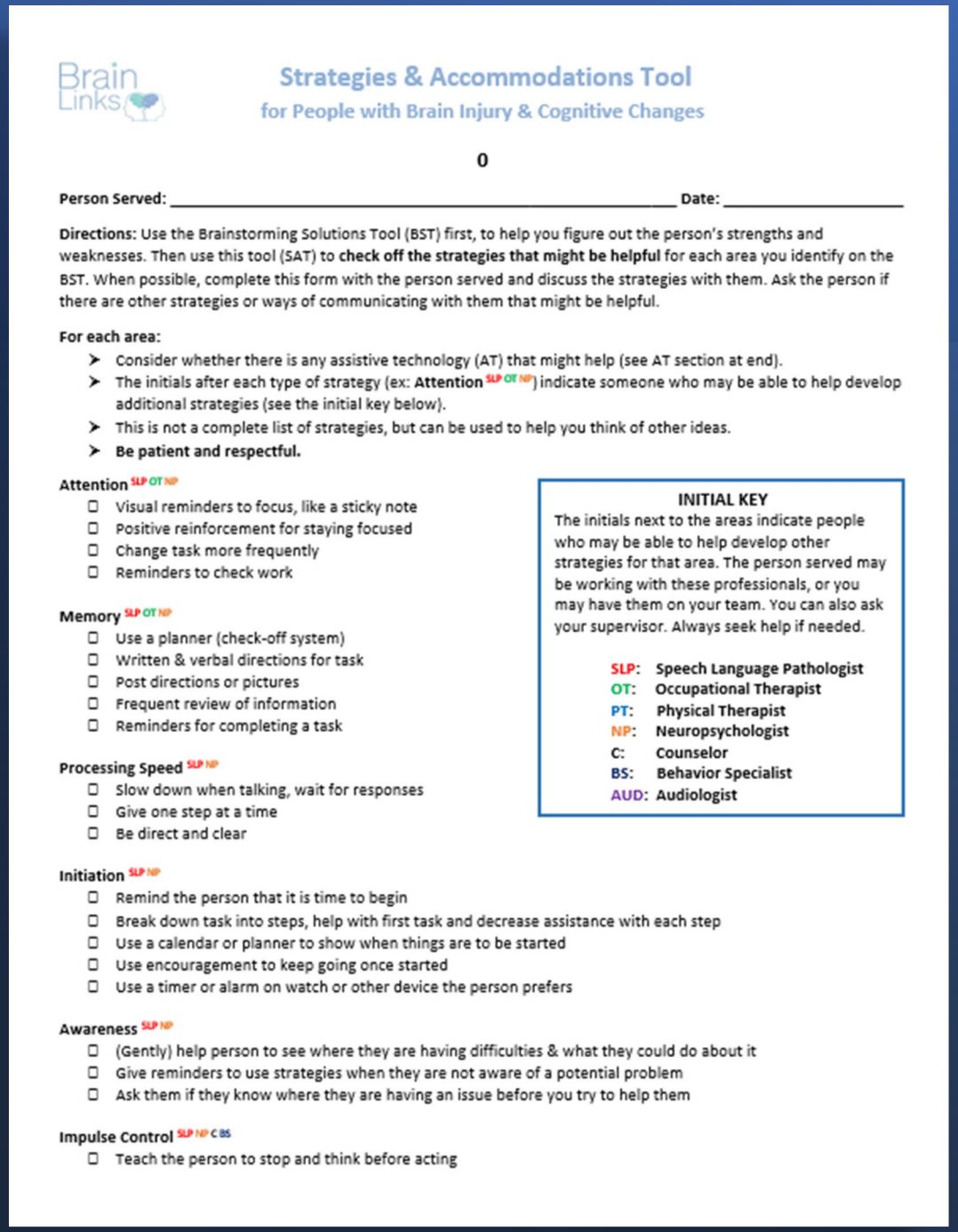

Brain Links

Strategies & Accommodations Tool

for People with Brain Injury & Cognitive Changes

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Person Served: _____ **Date:** _____

Directions: Use the Brainstorming Solutions Tool (BST) first, to help you figure out the person's strengths and weaknesses. Then use this tool (SAT) to **check off the strategies that might be helpful** for each area you identify on the BST. When possible, complete this form with the person served and discuss the strategies with them. Ask the person if there are other strategies or ways of communicating with them that might be helpful.

For each area:

- Consider whether there is any assistive technology (AT) that might help (see AT section at end).
- The initials after each type of strategy (ex: **Attention** SLP OT NP) indicate someone who may be able to help develop additional strategies (see the initial key below).
- This is not a complete list of strategies, but can be used to help you think of other ideas.
- **Be patient and respectful.**

Attention SLP OT NP

- ☐ Visual reminders to focus, like a sticky note
- ☐ Positive reinforcement for staying focused
- ☐ Change task more frequently
- ☐ Reminders to check work

Memory SLP OT NP

- ☐ Use a planner (check-off system)
- ☐ Written & verbal directions for task
- ☐ Post directions or pictures
- ☐ Frequent review of information
- ☐ Reminders for completing a task

Processing Speed SLP NP

- ☐ Slow down when talking, wait for responses
- ☐ Give one step at a time
- ☐ Be direct and clear

INITIAL KEY

The initials next to the areas indicate people who may be able to help develop other strategies for that area. The person served may be working with these professionals, or you may have them on your team. You can also ask your supervisor. Always seek help if needed.

- SLP: Speech Language Pathologist
- OT: Occupational Therapist
- PT: Physical Therapist
- NP: Neuropsychologist
- C: Counselor
- BS: Behavior Specialist
- AUD: Audiologist

Initiation SLP NP

- ☐ Remind the person that it is time to begin
- ☐ Break down task into steps, help with first task and decrease assistance with each step
- ☐ Use a calendar or planner to show when things are to be started
- ☐ Use encouragement to keep going once started
- ☐ Use a timer or alarm on watch or other device the person prefers

Awareness SLP NP

- ☐ (Gently) help person to see where they are having difficulties & what they could do about it
- ☐ Give reminders to use strategies when they are not aware of a potential problem
- ☐ Ask them if they know where they are having an issue before you try to help them

Impulse Control SLP NP C BS

- ☐ Teach the person to stop and think before acting

Developed Strategies

- Strategies & Accommodations Tool (SAT)
- Team brainstorming
- Input from Rudy
- Modifying as needed

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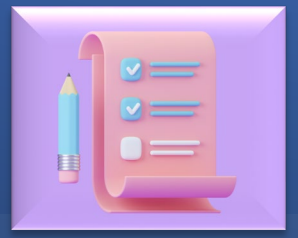
Communication

Slow down when talking
Shorten sentences and information
Careful not to talk down to Rudy
Use visuals whenever possible
Demonstrate
Rudy: ask questions



Chores

Hung up a chore chart
Put on his calendar
Put chores into his phone with a reminder alarm
For messiness – set up systems of where things go;
Put pictures of what goes where

Planning

Calendar
Involved Rudy in developing steps for chores (1st, 2nd, 3rd)

Work – Volunteering at a Food Bank

- Makes boxes
  - Station has pictures and general steps written
- Restocks them for sorters
  - Puts them in a taped off square at each restocking area
- Uses the pallet jack to move loaded boxes
- As he masters one job, he then adds another
- Goal: to get a paid job at the food bank

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ADAPTING YOUR PRACTICE

Recommendations for the Care of
Patients Who Are Homeless or Unstably Housed
Living with the Effects of Traumatic Brain Injury

National Health Care for the Homeless Council
October 2018

https://nhchc.org/clinical-practice/adapted-clinical-guidelines/tbi/

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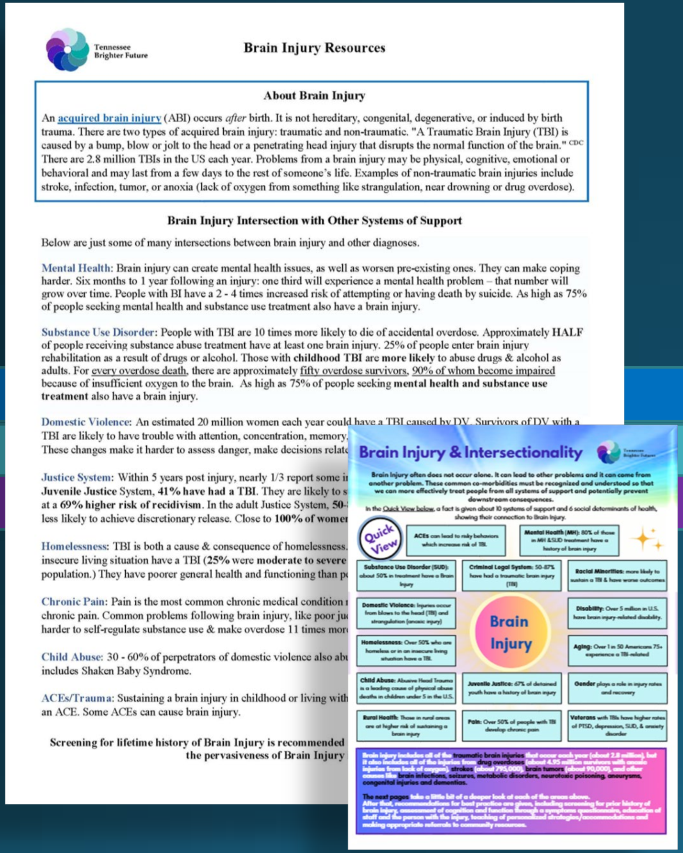
Resource pages by system of support

Tennessee Brighter Futures

Brain Injury


Tennessee Brighter Future

Brain Injury Resources

About Brain Injury

An acquired brain injury (ABI) occurs *after* birth. It is not hereditary, congenital, degenerative, or induced by birth trauma. There are two types of acquired brain injury: traumatic and non-traumatic. "A Traumatic Brain Injury (TBI) is caused by a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain." CDC There are 2.8 million TBIs in the US each year. Problems from a brain injury may be physical, cognitive, emotional or behavioral and may last from a few days to the rest of someone's life. Examples of non-traumatic brain injuries include stroke, infection, tumor, or anoxia (lack of oxygen from something like strangulation, near drowning or drug overdose).

Brain Injury Intersection with Other Systems of Support

Below are just some of many intersections between brain injury and other diagnoses.

Mental Health: Brain injury can create mental health issues, as well as worsen pre-existing ones. They can make coping harder. Six months to 1 year following an injury: one third will experience a mental health problem – that number will grow over time. People with BI have a 2 - 4 times increased risk of attempting or having death by suicide. As high as 75% of people seeking mental health and substance use treatment also have a brain injury.

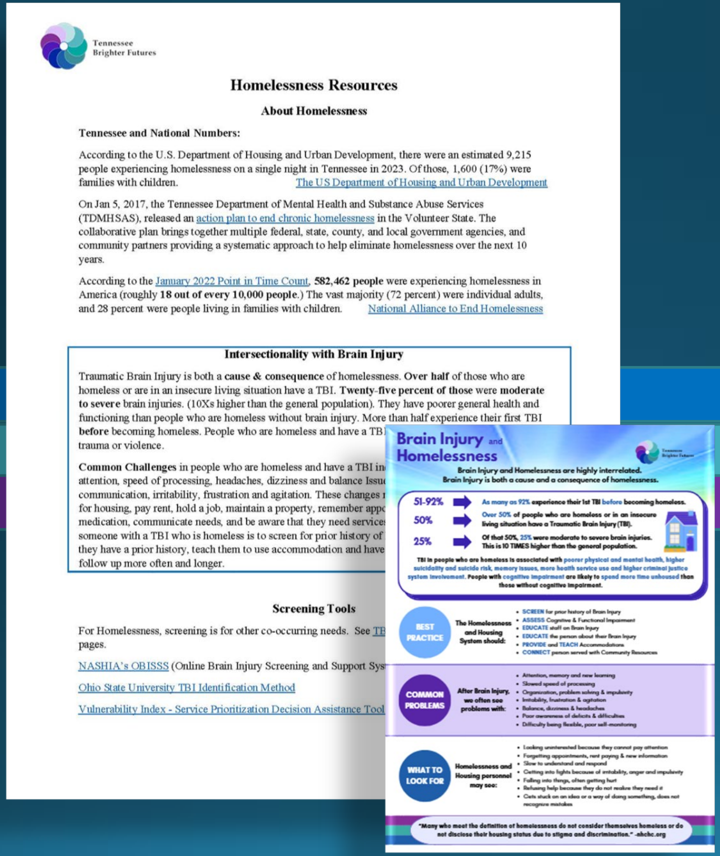
Substance Use Disorder: People with TBI are 10 times more likely to die of accidental overdose. Approximately HALF of people receiving substance abuse treatment have at least one brain injury. 25% of people enter brain injury rehabilitation as a result of drugs or alcohol. Those with childhood TBI are more likely to abuse drugs & alcohol as adults. For every overdose death, there are approximately fifty overdose survivors, 90% of whom become impaired because of insufficient oxygen to the brain. As high as 75% of people seeking mental health and substance use treatment also have a brain injury.

Domestic Violence: An estimated 20 million women each year could have a TBI caused by DV. Survivors of DV with a TBI are likely to have trouble with attention, concentration, memory...

Brain Injury & Intersectionality

Brain Injury

Homelessness


Tennessee Brighter Futures

Homelessness Resources

About Homelessness

Tennessee and National Numbers:

According to the U.S. Department of Housing and Urban Development, there were an estimated 9,215 people experiencing homelessness on a single night in Tennessee in 2023. Of those, 1,600 (17%) were families with children. The US Department of Housing and Urban Development

On Jan 5, 2017, the Tennessee Department of Mental Health and Substance Abuse Services (TDMHSAS), released an action plan to end chronic homelessness in the Volunteer State. The collaborative plan brings together multiple federal, state, county, and local government agencies, and community partners providing a systematic approach to help eliminate homelessness over the next 10 years.

According to the January 2022 Point in Time Count, 582,462 people were experiencing homelessness in America (roughly 18 out of every 10,000 people.) The vast majority (72 percent) were individual adults, and 28 percent were people living in families with children. National Alliance to End Homelessness

Intersectionality with Brain Injury

Screening Tools

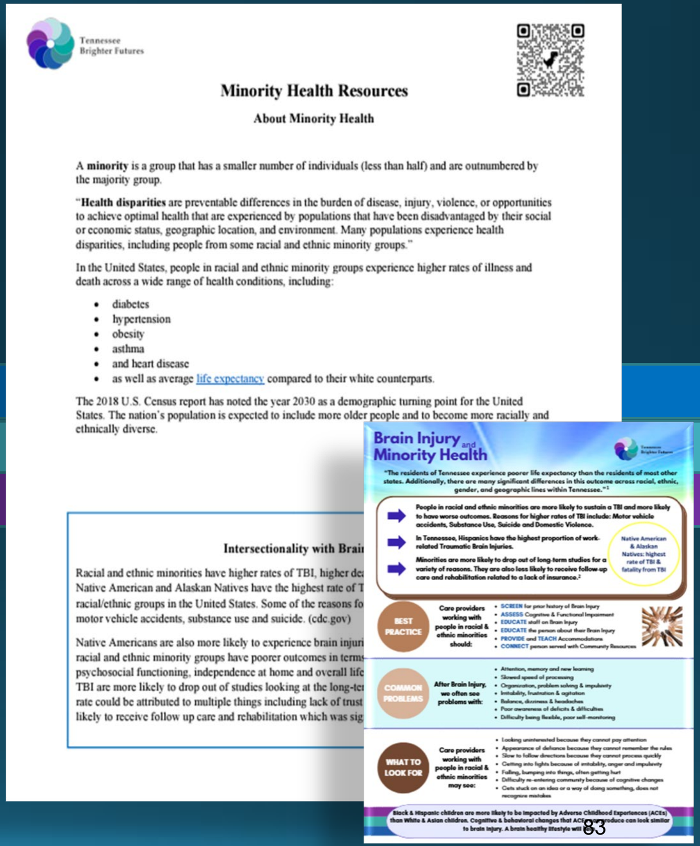
NASHIA's OBISSS (Online Brain Injury Screening and Support System)

Ohio State University TBI Identification Method

Vulnerability Index - Service Prioritization Decision Assistance Tool

Brain Injury and Homelessness

Minority Health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Minority Health Resources

About Minority Health

A minority is a group that has a smaller number of individuals (less than half) and are outnumbered by the majority group.

"Health disparities are preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by populations that have been disadvantaged by their social or economic status, geographic location, and environment. Many populations experience health disparities, including people from some racial and ethnic minority groups."

In the United States, people in racial and ethnic minority groups experience higher rates of illness and death across a wide range of health conditions, including:

- diabetes
- hypertension
- obesity
- asthma
- and heart disease
- as well as average life expectancy compared to their white counterparts.

The 2018 U.S. Census report has noted the year 2030 as a demographic turning point for the United States. The nation's population is expected to include more older people and to become more racially and ethnically diverse.

Brain Injury and Minority Health

https://www.tndisability.org/tbf-systems-support

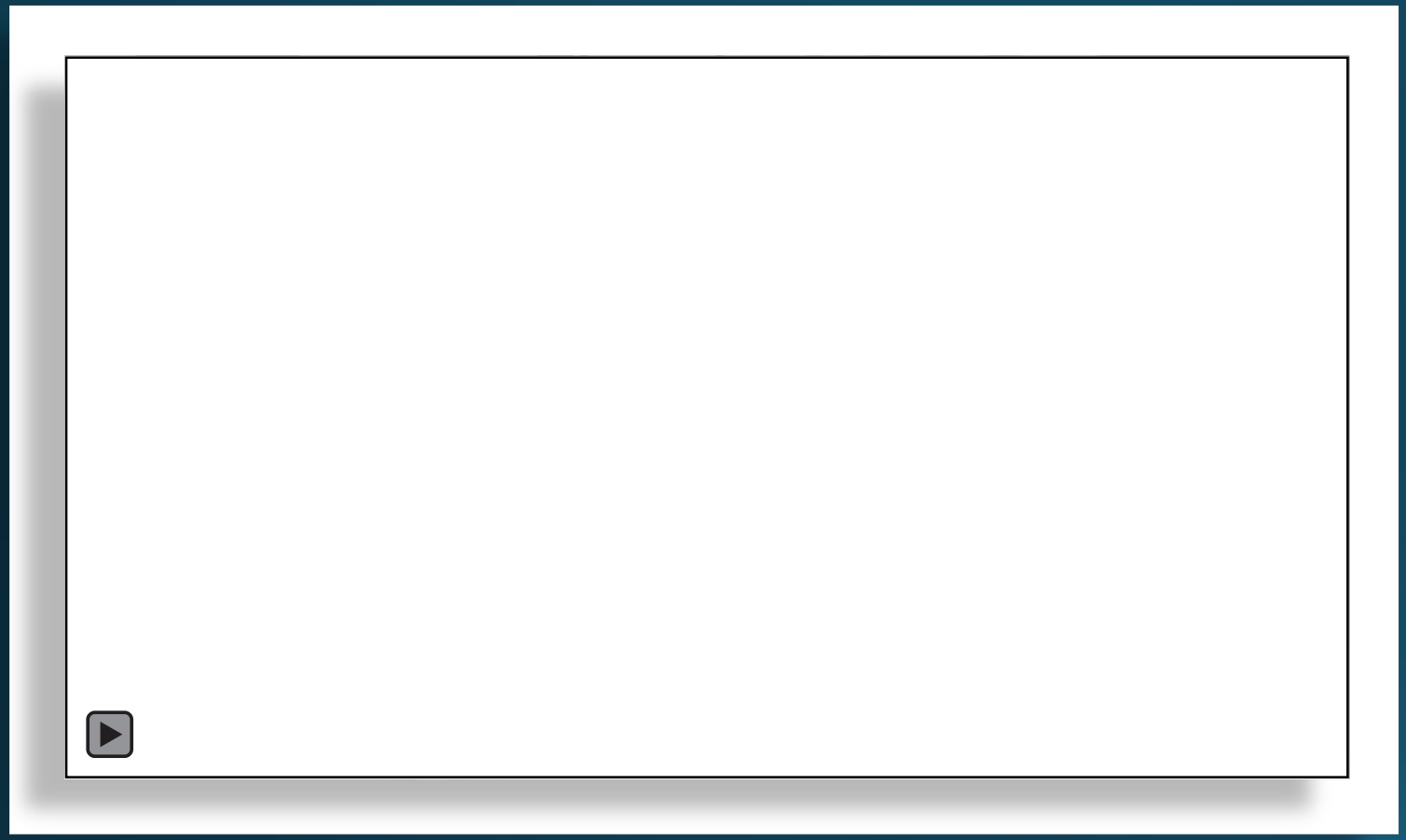
Join us again!

Using Case Studies to Highlight Best Practice and Improve Outcomes in Brain Injury

April 3 **10**-11:30 CST/11-12:30 EST

Case Studies of Psychosocial and Behavioral Changes after Brain Injury: Practical Recommendations

https://www.tndisability.org/training-webinars-and-podcasts



Questions?

March 13, 2025

Thank you!

Materials and recording will be posted on our website
www.tndisability.org/brain

Wendy_e@tndisability.org

Take the 1 minute survey!
Help us improve.

Certificate of Attendance Training Survey:
https://form.jotform.com/213424332750144