Addressing the Challenges: Brain Injury and Substance Use Disorders

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Alarming Facts

- Each year 1.7 million Americans sustain a brain injury that’s one every 21 second.
- More than 50,000 people die each year from brain injury.
- 43.5% of individuals having emergency room visits for brain injury were legally intoxicated at the time of their injury.
- 50 to 90% of assaults are chemically related with 35% involving the head/neck.
Alarming Facts

- Research shows that 1 in 2 individuals with a brain injury have had trouble with substance abuse.

- 10 to 20% of individuals develop problems for the first time AFTER injury.

- Problems tend to get worse 2 to 5 years after discharge from medical rehabilitation.

- 32.0% of individuals with disabilities reported drinking alcohol on their medications.
Prevalence of Disabilities

49.7 million people have a disability which is 19% of the population or 1 in 5 people.

- 400,000 with spinal cord injuries
- 500,000 with cerebral palsy
- **3 million with acquired brain injury**
- 3.5 million with learning disabilities
- 4 million with Alzheimer’s disease
- 5 million with mental illness (SPMI)
- **5.3 million with traumatic brain injury**
- 7.3 million with mental retardation
- 9.4 million with clinical depression
Traumatic Brain Injury

- **Traumatic Brain Injury** – is an injury from an insult to the brain caused by an external force that may produce an altered state of consciousness, which results in an impairment of cognitive abilities or physical functioning.
- It can also result in a disturbance of behavioral or emotional functioning.
- The injury is not congenital or degenerative in nature.
Causes of traumatic brain injury include things such as falls, motor vehicle crashes, boating accidents, snowmobile crashes, domestic assaults, battering, sports injuries and any other incident involving a **external** hit to the head.
Acquired Brain Injury

• **Acquired Brain Injury** is an injury to the brain which is not hereditary, congenital or degenerative. The injury occurs after birth. It involves an **internal** source of injury to the brain.

• Causes include heart attacks, **stroke**, carbon monoxide poisoning, airway obstruction, hemorrhages, surgery, infectious diseases, seizure disorders, vascular disruptions, overdoses and toxic exposure.
Risky behavior
ER visits involving the head

- Birth to age 4 is highest risk with 75% being a result from physical abuse
- **Age 15 to 25** is second highest due to motor vehicle accidents, assaults, gun shots and other high risk behavior
- Age 65 and older is third due to falls

Males account for 59% of injuries.

With hospitalization for brain injuries – the result is in the opposite order.
Use trends of ETOH and drugs (SAMSHA) Abuse and Dependence

<table>
<thead>
<tr>
<th>Age Categories</th>
<th>Average</th>
<th>12 to 17</th>
<th>18 to 25</th>
<th>26+</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
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<td>MN</td>
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Percentage
44 to 66% of persons with traumatic brain injury have alcohol abuse issues compared to 24% of the general population.

21 to 37% of persons with traumatic brain injury used illegal drugs compared to 15% of the general population.
Changes in Brain Function From injury

Decreased brain development from use
Brain Development

The average first age of use is 12.5
Regions of the Human Brain

- Prefrontal Cortex
- Frontal Lobe
- Parietal Lobe
- Occipital Lobe
- Temporal Lobe
- Brain Stem
- Cerebellum
- Spinal Cord
- Front
- Back
Lobes of the Brain

Temporal
✓ Memory
✓ Organization
✓ Sequencing
✓ Language
✓ Speech
  - Expressive
  - Receptive
The Frontal Area of the brain, including the frontal lobes and prefrontal cortex, are the parts of the brain that statistically sustain some level of damage regardless of the point of impact to the head.
Frontal Lobes and Prefrontal cortex

- Ability to predict outcomes and consequences
- Trouble with Sequences
- Attention and Concentration
- Organization and Planning
- Processing Speed
- Comprehension
- Decision making
- Working memory
- Mental flexibility
- Organization
- Self control
- Judgment
- Assessment of ones Environment
- Impulse Control
Prefrontal Cortex & Frontal Lobes

Effects on Emotional Control

- Aggression and irritability
- Anger control
- Anxiety
- Lack of Self Awareness
- Apathy, flat affect or lack of spontaneity
- Difficulty regulating emotions
- Impulsive, disruptive, or socially inappropriate behavior such as swearing at work
- Inappropriate sexual behavior and statements
- Personality changes
<table>
<thead>
<tr>
<th>RIGHT SIDE</th>
<th>LEFT SIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spatial memory issues, shapes, pictures, faces</td>
<td>Understanding language (receptive) aphasia</td>
</tr>
<tr>
<td><strong>Decreased awareness of deficits</strong></td>
<td>Speaking or verbal output (expressive) aphasia</td>
</tr>
<tr>
<td>Decreased control over left side movements</td>
<td>Decreased control over right side movements</td>
</tr>
<tr>
<td>Altered music and creativity perception, visual memory issues</td>
<td>Verbal memory issues, language, reading, word recognition</td>
</tr>
<tr>
<td>Decreased control over left side of body</td>
<td>Impaired logic and inflexible thinking</td>
</tr>
<tr>
<td><strong>Loss of big picture</strong></td>
<td>Sequencing problems</td>
</tr>
<tr>
<td>Trouble with holistic thought and consequence awareness</td>
<td>Catastrophic reactions to small stimuli</td>
</tr>
</tbody>
</table>
The Brain Addicted

Remember – the pleasure reward circuit controls our need for survival and pleasure and is triggered unnaturally, by substance use. **It acts as our GO due to the reaction of the substance.**

The prefrontal cortex and Frontal Lobes contain the skills we need to **STOP – our brakes.**
Brain Injury and Chemical Use.

- Many cognitive and thinking increase in intensity and severity. Making good decisions more difficult.

- Physical symptoms of a brain injury mimic chemical use including balance, coordination and seizures.

- Many emotional issues are increase in frequency, intensity and severity including:
  - Personality changes
  - Anger, irritable, rage
  - Flat affect
  - Over emotional
  - Inappropraiate behavior changes.
Best practices in treatment

- Screening during assessment for learning issues
- Programs that teach in multiple ways – addressing learning style
- Changing the environment
- Modifying our interactions to meet clients where they are at – individually and in group
- Teaching about 12 step meetings in a clear way.
- Changes after brain injury – grief, depression
- Addressing ours and other biases – impairment verses attitude
HELPS – imbedded in the Rule 25 document used in MN in 2009

- **H** – Did you ever hit your head or were hit in the head?
- **E** – Were you ever in the emergency room?
- **L** – Did you ever lose consciousness?
- **P** – Did you have any problems after you were hit in the head?
- **S** – Any other significant sickness?

https://www.oasas.ny.gov/TBI/HELPS
Corrigan’s Screening tool

6 questions focusing on injuries to the head and neck with yes and no answers

Yes answers are recorded for further questions around age of injury and loss of consciousness

Questions focus on:
1) emergency room visits,
2) motor vehicle accidents,
3) hit by something, sports injuries,
4) fights, assaults, shaken, gun shots,
5) explosions and blasts, military incidents
6) drug overdoses, choking

More information at www.osu.edu/corrigan
Learning and change only occur when the person understands what is being taught and can apply it to their experience.
Ways we learn

- **Word/Verbal smart** – oral and written language, reading, verbal instructions, mnemonics
- **Number smart** – categorizing, making own discoveries, classifying things, logical, statistics
- **Art smart** – patterns, visual instructions, graphs, colors, pictures
- **Self smart** – best by working alone, exploring, following instructions
- **Body smart** – hands on activities, learning by doing, shadowing others, touching things, moving
- **Music smart** – lyrics, beat/rhythm, music writing, melody,
- **People smart** – sharing, relating, interaction, brainstorming, work groups, study groups, group projects

Normally a combination of these
It is hard to teach and have change if you do not know how the person learns.

- Neuropsychological testing,
- Family reports,
- Participant reports,
- Favorite subject, hobby, activities, etc. - these will give clues

Many treatment programs rely heavily on verbal learning tools such as reading, assignments, workbooks, reaction papers, etc. which can create challenges for people with TBI.

Some cannot learn this way due to speech aphasia issues, poor reading and/or writing skills.

One good resource is www.brainline.org/SUBI
In your office/environment

- Limit things (stuff in your office, group room) that can be distracting. Put it away.
- Have meetings in the same place, same day and same time.
- Have a quiet place.
- Close the blinds
- Have the client sit with back to the window
- Use non florescent lighting.
- Limit interruptions – people and phones.
- Minimize scents such as cologne or air fresheners.
- Have signs/directions in large font, with clear contrast, such as black on white.
• Shorter individual sessions with more frequency to aid in repetition and retention.

• Ask a question, then be quiet and allow the person to answer, give time for the person to think

• Ask one question at a time

• Focus on the 1 or 2 important points or goals of the meeting.

• Pictorial presentation of information.

• Give copies of information – simplify it, make it clear, leave out the addiction jargon

• Write out appointments or tasks expected before the next meeting – put a timeline on it.

• Instructions broken into smaller pieces – that are be reinforced with a checklist.
Interactions

- Use checklists to help with keeping track on what has happened or is complete
- Make sure that the person writes things down, or uses their phone, or whatever memory strategy that is working for them.
- Be quiet while the individual is writing, it is hard to listen, comprehend and write all at once
- Use concrete examples of desired, appropriate behavior
- Be specific and clear about things like court/probation or UA or treatment expectations – do not use the jargon
Group Sessions

- Shorter group sessions with repetition to address attention, fatigue and concentration
- 2 to 3 main points per group
- Speak clearly and without jargon. Use the speed that matches the group level
- Simplify and use clear language in handouts
- Use a room with no windows, or close the blinds to help with distractions
- Write key points on the board for memory and ask the members to write it down.
- Use props and other visual aides
- Use colors to help emphasize your point
Group Sessions

- Practice relapse skills in group with role plays, group shaping, drama and plays
- Limit written assignments and work together on them in the group setting.
- Develop and use memory aides to help the person “remember” to stay sober. Use pictures of things, goals, loved ones as motivators. Cards with instructions for saying no and what to do.
- Use narrative therapy
- Make a signal for an individual who tangents and needs help refocusing
Groups

- Teach STOP-THINK techniques in group, reinforce with memory aides, homework and individual sessions.
- Use multimodal group materials including DVD’s, U tube, videos, art projects, music with lyrics, handouts, charts and outlines.
- Art medium is a good way to make abstract things such as feelings concrete.
Frustrations with 12 steps

- Abstract nature
- Traditions/unwritten rules
- Isolation
- Feeling misunderstood
- Confusion over expectations
- Lack of structure in some meeting types
12 Steps

Step 1
We admitted that we were powerless over our addiction, that our lives had become unmanageable.

Admit that alcohol and drugs are not making your problems better.
Admit that if you drink and/or use drugs your life will continue to be out of control.
Is Alcohol and drugs making my problems better?

1) Who would you like off your back? Why?

2) Money issues/needs? Why?

3) Family members who want you to quit? Why?
12 Steps - STEP 2

We came to believe that a power greater than ourselves could restore us to sanity.

You start to believe that someone can help you put your life in order. This someone could be God, an AA group, counselor, sponsor, etc.

Many individuals will be angry with their higher power after an injury and may be resistant to “AA” things due to that association.
I have decided to let others help me make better choices—maybe my friend, group or a higher power.

List people who can help you with sobriety, people who will tell you the truth, no matter what:
What works

**TEACH the Basics** of what the steps are designed to help individuals understand

- What I am doing is hurting me and others and I need to stop.
- In order to stop, I need help from others.
- In order to get help, I need to get along better with others and take better care of myself.
USE the 12 steps for concrete thinkers

RESEARCH the meeting beforehand about medications and labels

DISCUSS what the meetings and terms mean before going to a meeting

www.bluidkiti.com/AAglossary

PAIR the person up with a peer mentor who can help them get comfortable and understand and WRITE down things the client should remember.

HAVE the person attend an open meeting with their mentor first
Changes were great for Bowie but...

Roles in the family can reverse where children are caring for parents. Spouses are caregivers and it is difficult to switch roles to intimate.

Role of worker can be lost resulting in changes in finances and sometimes hardship.

Work relationships and structure work brings

Loss of social support and network — work, friends, community

Transportation — can be isolated at home

Money - Having a disability is expensive

Behaviors and personality can create difficulty in maintaining friendships
Grief is a crisis and in crisis, we tend to go back to our oldest, longest held beliefs that relate to dealing with loss. This could be using.

Brain injury often results in losses which bring on normal grief feelings for what was lost including: dreams and goals that they have for the future including what was imagined and desired.

They ignore possible struggles and failures.

Individuals report that they do not discuss their feelings of grief since it is hard to explain and define since they are still alive.
Depression

Individuals with brain injury are **THREE** times more likely to develop depression.

A good resource is:
Overcoming Grief and Loss After Brain Injury
by Janet Niemeier and Robert Karol
Client workbook and facilitator guide
Challenges with Professional Biases are a TWO WAY street

- Bias and attitudes about the source of the behavioral cognitive challenge – viewed as purposeful

- Biased views about addiction-viewed as lack of willpower or character deficit
# Impairment verses Attitude

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<tr>
<th>CHALLENGE</th>
<th>ATTITUDE</th>
<th>STRATEGY</th>
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</thead>
<tbody>
<tr>
<td>Poor initiation</td>
<td>Lazy, Unmotivated</td>
<td>Structured schedule, reminders</td>
</tr>
<tr>
<td>Distractible</td>
<td>Noncompliance, Non listening</td>
<td>Quiet, uncluttered, more breaks,</td>
</tr>
<tr>
<td>Inflexible</td>
<td>stubborn</td>
<td>Predicable routine without change</td>
</tr>
<tr>
<td>Impaired reasoning</td>
<td>Unreasonable behavior</td>
<td>Structure, diversions, patience, pro/con lists of facts</td>
</tr>
<tr>
<td>Impaired Memory</td>
<td>Non compliance, denial, unwillingness</td>
<td>Write things down, repeat info., tie to old memories, cues</td>
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<tbody>
<tr>
<td>Poor Judgment</td>
<td>Trouble maker</td>
<td>Concrete rules and expectations, Display</td>
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<tr>
<td></td>
<td>Rebellious</td>
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<tr>
<td>Egocentricity</td>
<td>Self-centered, selfish, entitled</td>
<td>Concrete explanation of self and others</td>
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<tr>
<td>Reduced endurance</td>
<td>Lazy</td>
<td>Consistent scheduled rest periods</td>
</tr>
<tr>
<td>Fatigue</td>
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<tr>
<td>Impaired comprehension of language</td>
<td>Bad listening, contrary, argumentative</td>
<td>Clear, concise, slow instructions, repeat, pictures, paraphrase</td>
</tr>
<tr>
<td>Visual problems</td>
<td>Disrespectful, poor boundaries, space</td>
<td>Large font, good lighting, contrast, clear pathways, tape</td>
</tr>
</tbody>
</table>
Challenge - Initiation and Interest

Initiation and interest challenges include:

- Trouble getting started
- Seems unmotivated or passive
- Needs cues, reminders and prodding to complete things or to follow up on things
- Able to identify a goal and then doesn’t act on it
- Loses interest so does not remember

Attitude - viewed as lazy, unmotivated, unwilling, non compliant, in denial and/or resistant
Strategies - Initiation and Interest

- Make sure you have attention before giving instructions - one or two pieces at a time.
- Break complex tasks down into smaller steps
- Use a check off list – steps before court, steps to get to your office, coping skills, daily skills and tasks to be completed
- Use reminder calls or help the client set up an alarm on their smart phone for memory and refocusing
- Set a structured schedule for daily things with checklists for each task in the area the task is to be completed and in a place where the person will remember to use it. Use Multiple copies as needed
Strategies - Initiation and Interest

- Use consistent structure, same day, same time for meetings
- Reminders – written, verbal, pictures, memory aids, calls, texts, emails, etc.
- Provide agenda’s and goals for groups, sessions, review after
- Use old memories, hobbies and interests to build new sober interests and hobbies
- Connect new learning to old memories and skills
- Repeat, Repeat, Repeat
- Be very clear – can be very literal
Memory Strategies

Calendars and timelines work well with helping to see the daily, weekly and monthly structure that can help with memory and relapse prevention structure.

- These can be free using wincalendars, yahoo, google and calendars on smart phones.

Physical items with pictures of the motivation to stay sober or out of legal trouble:

- Credit, debit or gift card with picture, check book cover, picture in the wallet or purse, magnets, coffee cups and mouse pads
- Can be made inexpensively at Target, Walmart, Walgreens, Shutterfly and other companies
Memory Strategies

Tasks lists in smart phones with instructions for remembering the sequence of tasks or things that need to be completed as well as for saying no strategies around use.

Alarms for meds and appointments.

Pictures to remember where they got off the bus, what door they came in, where they parked.
MEMORY STRATEGIES

😊 Index cards can be used as flash cards and check lists to help the person remember how to get to an appointment or say no to a using situation.

😊 Have them put them where they need them. Next to the phone, under the peep hole in there door, in their wallet or purse.

😊 Use note cards to list addresses, telephone numbers, title and what the person is going to the appointment for on the plan. Include maps, bus routes, cab information if needed.

😊 List support meetings with telephone numbers on note cards. Put in places that they will remember to use them and not chemicals.
Thank you!