Invisible Wounds: Brain Injury and Domestic Violence

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Injury Prevention Program Manager
Nebraska Department of Health and Human Services
Implementation Partners

Brain Injury Alliance Nebraska
University of Nebraska-Lincoln Center for Brain Biology and Behavior
Friendship Home-Lincoln
The Bridge- Fremont
Center for Survivors – Columbus
Rape/Domestic Abuse Program – North Platte
Women’s Center for Advancement - Omaha
What is a brain injury?

**Traumatic Brain Injury (TBI)**
- Caused by a blow to the head or neck. TBI can be a result of MVA, falls, assaults, blast injury, etc.

**Acquired Brain Injury**
- An injury to the brain which is not hereditary, congenital, or degenerative that has occurred after birth. Examples include anoxia, aneurysms, infections, stroke, etc.
ANNUAL NUMBER OF TBIs

Estimated Average Annual Number of Traumatic Brain Injury-Related Emergency Department Visits, Hospitalizations, and Deaths, United States, 2002–2006

An estimated 1.7 million TBIs occur in the United States annually.

- 52,000 Deaths
- 275,000 Hospitalizations
- 1,365,000 Emergency Department Visits
- ??? Receiving Other Medical Care or No Care*

Of the 1.7 million TBIs occurring each year in the United States, 80.7% were emergency department visits, 16.3% were hospitalizations, and 3.0% were deaths.

* Data for this category are not included in this report. See “Limitations” in Appendix B for more information.

Symptom Categories

**Physical Symptoms**
- Headache
- Fatigue
- Dizziness
- Sensitivity to light and/or noise
- Nausea
- Balance problems

**Cognitive Symptoms**
- Difficulty remembering
- Difficulty concentrating
- Feeling slowed down
- Feeling like they are “in a fog”

**Emotional Symptoms**
- Irritability
- Sadness
- Feeling more emotional
- Nervousness

**Sleep Symptoms**
- Drowsiness
- Sleeping more than usual
- Sleeping less than usual
- Trouble falling asleep
Post Concussion Syndrome (PCS)

- Concussion symptoms fail to resolve and linger for up to ten years after the injury.

- Growing body of evidence indicates a high number of concussions can cause:
  - Long term memory impairment
  - Emotional instability
  - Erratic behavior
  - Depression
  - Impulse control
  - Early onset of neurodegenerative diseases
Synergistic

Brain Injury

Environmental stressors

Substance use

Pre-existing disabilities

Anxiety

PTSD

Interpersonal difficulties
Trauma/PTSD

TBI
- Memory problems
- Difficulty concentrating
- Poor judgement
- Trouble sleeping
- Headache
- Dizziness
- Tiredness/trouble sleeping
- Depression
- Anger/aggression
- Fear and anxiety

PTSD
- Memory problems
- Difficulty concentrating
- Feeling detached
- Trouble sleeping
- Severe headaches
- Substance use/abuse
- Nervous/fearful/sad
- Irritable
- Being easily upset/agitated
- Hopelessness
The Project
The Presentation

• BI 101
• Symptomology
• Everyday support and resources

...And then what?

<table>
<thead>
<tr>
<th>Domestic violence shelter staff receiving training on brain injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Training</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>May 19, 2016</td>
</tr>
<tr>
<td>June 16, 2016</td>
</tr>
<tr>
<td>June 23, 2016</td>
</tr>
<tr>
<td>June 30, 2016</td>
</tr>
<tr>
<td>September 1, 2016</td>
</tr>
<tr>
<td>May – June, 2016</td>
</tr>
</tbody>
</table>
Why can’t she answer questions? Why do her responses change?

• Allow the person to think before responding
• Ask simple, clarifying questions
• Offer/allow “I don’t know” as an answer
• Check in for comprehension
• Communication should be direct, not subtle
• Nonjudgemental, noncritical, supportive feedback
Why is she so distracted?

- Simplify environment
- Control noise and light
- Provide clear visual prompts for environment
- Provide clear structure and predictable routine
- Remove any surprising/startling stimuli
- Check-in for comprehension

- Break larger tasks down
  - Make paperwork as simple as possible
    - Large font
    - Soft colored paper
  - Give breaks
  - Give few problems at one time
  - Shorten instructions
  - Provide quiet room to complete task
Why doesn’t she remember conversations we had yesterday?

• Recognize the different types of memories

• Write things down
  • Provide way for individuals to record information

• Provide memory supports in the environment
  • Written and posted schedule/instructions; label cabinets/drawers/rooms

• Model tasks

• Checklists for chores/tasks
Screening for Brain Injury
HELPS Brain Injury Screening Tool and Follow-up Questions

The HELPS screening tool can:

◦ Assist in identifying an individual who may have a brain injury and need additional support
◦ Be used as a script as you talk to someone about the possibility of a brain injury and learning if they need an accommodation, adaptation, or modification during their stay.

The HELPS screening tool is *not a medical evaluation and does not provide a diagnosis*. Any individuals identified should seek professional medical advice for any concern.

The screening tool was modified based on feedback from shelter staff.
H. Have you ever had a hit to your head or been strangled?

If yes, when was your head hit or when were you strangled? Was it: (check all that apply)
  • Within the year?
  • 1-2 years ago?
  • 3-4 years ago?
  • Longer than 4 years ago?
  • As a child?
Please describe how it happened. Did it happen:
  • Playing sports?
  • Riding a bike?
  • Were you wearing a helmet?
  • From a fall?
  • From an assault or fight?
  • Were you pushed, punched, shaken, or strangled?
  • In a car accident?
  • Did you receive whiplash or have a violent shaking of your head or neck?
  • From almost drowning?
  • Did you experience lack of oxygen for a significant amount of time?

Given the questions above, how many times had your head been hit or you were strangled?
  • 1-3
  • 4-6
  • More than 6
E- Were you ever seen in the emergency room, hospital, or by a doctor because of a hit to your head or because of strangulation?

If yes, were you seen by a:
- Doctor
- Nurse
- Other medical professional

Were you given follow-up recommendations?
- Yes
- No

Did you follow the recommendations?
- Yes
- No
Did you ever lose consciousness or experience a period of being dazed and confused because of a hit to the head or due to strangulation?

If yes, for how long did you feel dazed or confused:
- Hours
- Days
- Months

How many times have you felt this way:
- 1-3
- 4-6
- More than 6
Do you experience any of these problems in your daily life because of a hit your head or due to strangulation?

If **yes**, since the injury, have you experienced or are you experiencing: (mark all that apply)

- Headaches?
- Dizziness?
- Nausea?
- Sensitivity to light?
- Blurred or double vision?
- Numbness or weakness in any of your limbs?
- Insomnia, difficulty sleeping, or changes in your sleeping patterns?
- Feeling irritable or impatient?
- Feeling anxiety or depression?
- Confusion?
- Difficulty remembering?
- Difficulty concentrating or focusing?
- Challenges with going back to school or work and performing the tasks you used to?

Do you think any of the problems are related to a head injury?

- Yes
- No
- Uncertain
Any Significant Sickness

Traumatic Brain Injury implies a physical blow to the head, but acquired brain injury can be due to medical conditions which can include:

- Brain Tumor
- Meningitis
- West Nile
- Stroke
- Seizures
- Carbon Monoxide Poisoning
Screening Results
<table>
<thead>
<tr>
<th>Questions</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>[H] Have you ever had a hit to your head or been strangled?</td>
<td>90.2%</td>
</tr>
<tr>
<td>[E] Were you ever seen in the emergency room, hospital, or by a doctor because of a hit to your head or because of strangulation?</td>
<td>45.3%</td>
</tr>
<tr>
<td>[L] Did you ever lose consciousness or experience a period of being dazed and confused because of a hit to the head or due to strangulation?</td>
<td>66.3%</td>
</tr>
<tr>
<td>[P] Do you experience any problems because of a hit to your head or due to strangulation?</td>
<td>81.2%</td>
</tr>
</tbody>
</table>

**Positive HELP Brain Injury Screenings**  
**60.2%**
<table>
<thead>
<tr>
<th>Location</th>
<th>Number of screenings</th>
<th>Number (percentage) of screenings positive for brain injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendship Home (Lincoln)</td>
<td>57</td>
<td>38 (66.7%)</td>
</tr>
<tr>
<td>The Bridge (Fremont)</td>
<td>15</td>
<td>3 (20.0%)</td>
</tr>
<tr>
<td>Center for Survivors (Columbus)</td>
<td>9</td>
<td>7 (77.8%)</td>
</tr>
<tr>
<td>Rape/Domestic Abuse Program (North Platte)</td>
<td>12</td>
<td>8 (66.7%)</td>
</tr>
<tr>
<td>Overall</td>
<td>93</td>
<td>56 (60.2%)</td>
</tr>
</tbody>
</table>
[H] Have you ever had a hit to your head or been strangled?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendship Home (Lincoln) (n=56)</td>
<td>92.9%</td>
<td>7.1%</td>
</tr>
<tr>
<td>The Bridge (Fremont) (n=15)</td>
<td>66.7%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Center for Survivors (Columbus) (n=9)</td>
<td>100%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Rape/Domestic Abuse Program (North Platte) (n=12)</td>
<td>100%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Overall (n=92)</td>
<td><strong>90.2%</strong></td>
<td>9.8%</td>
</tr>
</tbody>
</table>

Please describe how it happened (multiple responses possible)

<table>
<thead>
<tr>
<th></th>
<th>Sports</th>
<th>Bike Accident</th>
<th>Fall</th>
<th>Assault or fight</th>
<th>Car accident</th>
<th>Lack of oxygen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendship Home (Lincoln) (n=52)</td>
<td>0.0%</td>
<td>1.9%</td>
<td>5.8%</td>
<td>94.2%</td>
<td>11.5%</td>
<td>3.8%</td>
</tr>
<tr>
<td>The Bridge (Fremont) (n=10)</td>
<td>10.0%</td>
<td>0.0%</td>
<td>10.0%</td>
<td>100.0%</td>
<td>10.0%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Center for Survivors (Columbus) (n=9)</td>
<td>0.0%</td>
<td>0.0%</td>
<td>22.2%</td>
<td>100.0%</td>
<td>11.1%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Rape/Domestic Abuse Program (North Platte) (n=12)</td>
<td>8.3%</td>
<td>8.3%</td>
<td>33.3%</td>
<td>83.3%</td>
<td>33.3%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Overall (n=83)</td>
<td>2.4%</td>
<td>2.4%</td>
<td>12.0%</td>
<td><strong>94.0%</strong></td>
<td>14.5%</td>
<td>14.5%</td>
</tr>
<tr>
<td>Location</td>
<td>1-3</td>
<td>4-6</td>
<td>6+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-----</td>
<td>-----</td>
<td>----</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friendship Home (Lincoln) (n=53)</td>
<td>37.7%</td>
<td>17.0%</td>
<td>45.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Bridge (Fremont) (n=10)</td>
<td>40.0%</td>
<td>10.0%</td>
<td>50.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center for Survivors (Columbus) (n=9)</td>
<td>55.6%</td>
<td>11.1%</td>
<td>33.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rape/Domestic Abuse Program (North Platte) (n=12)</td>
<td>41.7%</td>
<td>25.0%</td>
<td>33.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Overall (n=84)</strong></td>
<td><strong>40.5%</strong></td>
<td><strong>16.7%</strong></td>
<td><strong>42.9%</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**[E] Were you ever seen in the emergency room, hospital, or by a doctor because of a hit to your head or because of strangulation?**

<table>
<thead>
<tr>
<th>Location</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendship Home (Lincoln) (n=53)</td>
<td>47.2%</td>
<td>52.8%</td>
</tr>
<tr>
<td>The Bridge (Fremont) (n=13)</td>
<td>15.4%</td>
<td>84.6%</td>
</tr>
<tr>
<td>Center for Survivors (Columbus) (n=8)</td>
<td>62.5%</td>
<td>37.5%</td>
</tr>
<tr>
<td>Rape/Domestic Abuse Program (North Platte) (n=12)</td>
<td>58.3%</td>
<td>41.7%</td>
</tr>
<tr>
<td><strong>Overall (n=86)</strong></td>
<td><strong>45.3%</strong></td>
<td><strong>54.7%</strong></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Friendship Home (Lincoln) (n=53)</td>
<td>69.8%</td>
<td>30.2%</td>
</tr>
<tr>
<td>The Bridge (Fremont) (n=13)</td>
<td>38.5%</td>
<td>61.5%</td>
</tr>
<tr>
<td>Center for Survivors (Columbus) (n=9)</td>
<td>66.7%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Rape/Domestic Abuse Program (North Platte) (n=11)</td>
<td>81.8%</td>
<td>18.2%</td>
</tr>
<tr>
<td><strong>Overall (n=86)</strong></td>
<td><strong>66.3%</strong></td>
<td><strong>33.7%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How many times have you felt this way?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Friendship Home (Lincoln) (n=34)</td>
</tr>
<tr>
<td>The Bridge (Fremont) (n=3)</td>
</tr>
<tr>
<td>Center for Survivors (Columbus) (n=6)</td>
</tr>
<tr>
<td>Rape/Domestic Abuse Program (North Platte) (n=9)</td>
</tr>
<tr>
<td><strong>Overall (n=52)</strong></td>
</tr>
</tbody>
</table>
**Do you experience any problems because of a hit to your head or due to strangulation?**

<table>
<thead>
<tr>
<th></th>
<th>Friendship Home (n=48)</th>
<th>The Bridge (n=5)</th>
<th>Rape/Domestic Abuse Program (n=5)</th>
<th>Center for Survivors (n=9)</th>
<th>Overall (n=69)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Headaches</strong></td>
<td>87.5%</td>
<td>80.0%</td>
<td>87.5%</td>
<td>75.0%</td>
<td><strong>85.8%</strong></td>
</tr>
<tr>
<td><strong>Dizziness</strong></td>
<td>64.6%</td>
<td>60.0%</td>
<td>62.5%</td>
<td>37.5%</td>
<td><strong>60.9%</strong></td>
</tr>
<tr>
<td><strong>Nausea</strong></td>
<td>52.1%</td>
<td>60.0%</td>
<td>37.5%</td>
<td>37.5%</td>
<td><strong>49.3%</strong></td>
</tr>
<tr>
<td><strong>Sensitivity to light</strong></td>
<td>56.3%</td>
<td>40.0%</td>
<td>25.0%</td>
<td>25.0%</td>
<td><strong>47.8%</strong></td>
</tr>
<tr>
<td><strong>Blurred or double vision</strong></td>
<td>45.8%</td>
<td>20.0%</td>
<td>37.5%</td>
<td>37.5%</td>
<td><strong>42.0%</strong></td>
</tr>
<tr>
<td><strong>Numbness or weakness in any of your limbs</strong></td>
<td>41.7%</td>
<td>40.0%</td>
<td>12.5%</td>
<td>37.5%</td>
<td><strong>37.7%</strong></td>
</tr>
<tr>
<td><strong>Insomnia, difficulty sleeping, or changes in your sleeping patterns</strong></td>
<td>70.8%</td>
<td>60.0%</td>
<td>75.0%</td>
<td>62.5%</td>
<td><strong>69.6%</strong></td>
</tr>
<tr>
<td><strong>Feeling irritable or impatient</strong></td>
<td>68.8%</td>
<td>40.0%</td>
<td>25.0%</td>
<td>37.5%</td>
<td><strong>58.0%</strong></td>
</tr>
<tr>
<td><strong>Feeling anxiety or depression</strong></td>
<td>91.7%</td>
<td>100%</td>
<td>87.5%</td>
<td>75.0%</td>
<td><strong>89.9%</strong></td>
</tr>
<tr>
<td><strong>Confusion</strong></td>
<td>50.0%</td>
<td>20.0%</td>
<td>62.5%</td>
<td>50.0%</td>
<td><strong>49.3%</strong></td>
</tr>
<tr>
<td><strong>Difficulty remembering</strong></td>
<td>60.4%</td>
<td>0.0%</td>
<td>50.0%</td>
<td>75.0%</td>
<td><strong>56.5%</strong></td>
</tr>
<tr>
<td><strong>Difficulty concentrating or focusing</strong></td>
<td>77.1%</td>
<td>60.0%</td>
<td>75.0%</td>
<td>37.5%</td>
<td><strong>71.0%</strong></td>
</tr>
<tr>
<td><strong>Challenges with going back to school or work and performing tasks you used to</strong></td>
<td>58.3%</td>
<td>40.0%</td>
<td>50.0%</td>
<td>25.0%</td>
<td><strong>52.2%</strong></td>
</tr>
</tbody>
</table>
What’s next?

Brain Injury Allliance Nebraska was able to use the pilot project to secure funding from Women Investing in Nebraska (local funder)

- Individuals who screen positive for brain injury are being offered brief neuropsych assessments provided by the University of Nebraska Medical Center
- Lincoln Police Department’s Domestic Violence Program--screening when possible
- Training has been provided at Clinic with a Heart, St. Elizabeth Regional Medical Center Emergency Room, CenterPoint, and the Family Violence Council.
In partnership with the University of Nebraska Omaha (UNO) School of Criminal Justice and Criminology, training was provided focusing on what the legal system needs to know about domestic violence and brain injury.

- Partnered with the UNO School of Social Work to conduct training to a varied audience (probation, foster care, behavioral health, etc.)
- Additional training will be provided to One Health Center and the Administrative Office of the Courts and Probation.
• Partnering with University of Nebraska Medical Center’s College of Public Health to conduct evaluation interviews with individuals.
  • Technical assistance being provided by CDC
• Additional partnerships are being developed with:
  • Nebraska Bar Association
  • Nebraska Office of Probation
  • Nebraska Office of Parole
Questions?

Peg Ogea-Ginsburg
Nebraska Department of Health and Human Services
Injury Prevention Program
Peg.ogeaginsburg@nebraska.gov