Welcome!

Closing gaps in integrated care: Brain injury in the complex addictions and mental health client

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Judith Gargaro, B.Sc., M.Ed.

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11 AM to 12 PM
Acknowledgements

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Data collection partners

[Logos for CAMH and Reconnect]
Outline

• What you might be missing

• Understand how brain injury is related to complex care needs

• Next steps
  – Accessibility: make it easier to get in and stay in service
  – Planning: aware of how existing service structures may reduce access to care
The presenters

Dr. Carolyn Lemsky - Clinical Director, Community Head Injury Resource Services (CHIRS) of Toronto
Carolyn is a neuropsychologist with over 20 years of experience working in rehabilitation settings in the U.S. and Canada. For the past six years she has been the director of the Substance Use and Brain Injury Bridging Project, a partnership with the Centre for Addictions and Mental Health and CHIRS.

Judy Gargaro - Research Coordinator, Community Head Injury Resource Services of Toronto
For the past 25 years, Judy has worked as a research coordinator and clinical program evaluator in the areas of diabetes, spinal cord injury, mental health, and in particular brain injury.
POLL 1

What percentage of your clients do you think have a history of brain injury?
CHIRS Clients
(The Motivation)

• **1 in 3** have a diagnosis of serious mental illness or were using mental health services when referred

• **1-2 in 5** have experienced some ill effects of substance use post-acute

• **1 in 5** require active support to address either or both problematic substance use or a serious mental illness

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**Serious mental illness** are diagnoses which typically involve psychosis or high levels of care, and which may require hospital treatment.
ABI and Mental Health

- As many as 80% of people living with TBI meet criteria for a primary psychiatric diagnosis within 7 years post-injury

- Patients with TBI, compared to age- and sex-matched controls, have more psychiatric illness both before and after the brain injury

- Co-morbidity is common: 50% of depressed individuals with TBI also had Generalized Anxiety Disorder.
ABI in Mental Health and Addictions Settings

• Over 20% of people seeking services for addictions have had loss of consciousness (LOC)

• 25 to 50% of all people who seek treatment for mental health issues have a history of brain injury (15% with moderate to severe injuries)

• High prevalence among marginalized populations: homeless, prison
Brain Injury is a risk factor for Mental Illness

Danish nationwide population-based register

N=113,906 people who had suffered head injury.

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Increase in Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>65%</td>
</tr>
<tr>
<td>Depression</td>
<td>59%</td>
</tr>
<tr>
<td>Bi-polar Disorder</td>
<td>28%</td>
</tr>
<tr>
<td>Organic Mental Disorders</td>
<td>339%</td>
</tr>
</tbody>
</table>

Outcomes of Childhood Injury

Increase in general risk with brain injury

- psychological distress 52%
- attempting suicide 239%
- prescribed medication for anxiety, depression, or both 145%

Gabriella Illie (2015), St. Michael’s Hospital
25-87% of inmates report having experienced a brain injury or TBI as compared to 8.5% in a general population.

Prisoners who have had head injuries are at increased risk for

- depression
- anxiety,
- substance use disorders,
- difficulty controlling anger, or
- suicidal thoughts and/or attempts
ABI and Homelessness

• lifetime incidence of 53% of any injury
• 12% moderate to severe injury
• 70% injured before becoming homeless

• seizures
• mental health problems
• drug problems
• poorer physical health status
• poorer mental health status

Hwang, Colantonio, Chiu, Tolomiczenko, Kiss, Cowan, Redelmeier, Levinson (2008)
The Gap

- People with a history of brain injury often go unidentified
- Once identified they may be ineligible for service
- Limited models of integrated care
- Very limited resources
- These clients seem to be the most complex
Closing the Gap

Integrating care

– **Identifying** those with a brain injury history.
– Systematically **evaluating** what happens in the current system/models of care.
– Developing **appropriate interventions**
– Developing **system capacity** to implement these structures
Project Goals

- Raise Awareness
  - Screening
- Reduce Stigma/Increase Knowledge
  - Training
- Develop Treatment Strategies
  - Intervention Pilots
Two sets of screening data

- Centre for Addiction and Mental Health (CAMH)
- Reconnect Community Health Services
CAMH Screening Project

• adaptation of the Ohio Valley Brain Injury Identification Method
• integrated into assessment protocol at main assessment site

1

• Total Number Approached
• N=3815

2

• Total Number Screened
• N=3389
Screened Clients

N=3389

- No Brain Injury; no LOC: 76%
- 1 injury with LOC: 19%
- 2 or more inj w LOC: 5%
## Lifetime substance use in years

<table>
<thead>
<tr>
<th>Substance</th>
<th>No ABI with LOC N=2526</th>
<th>1 ABI with LOC N=626</th>
<th>2 or more ABI with LOC N=163</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>19.11</td>
<td>22.42</td>
<td>22.60</td>
</tr>
<tr>
<td>Alcohol to intoxication</td>
<td>13.07</td>
<td>14.90</td>
<td>17.94</td>
</tr>
<tr>
<td>Cocaine</td>
<td>4.97</td>
<td>7.07</td>
<td>7.16</td>
</tr>
<tr>
<td>Cannabis</td>
<td>8.79</td>
<td>11.23</td>
<td>10.65</td>
</tr>
<tr>
<td>Lifetime DTs</td>
<td>.542</td>
<td>1.34</td>
<td>2.70</td>
</tr>
</tbody>
</table>

* Welch robust test of equality of means

Increase with greater brain injury load
Mood Symptoms Lifetime

- **Suicide Attempt**: 33.30%
  - Two or More: 33.30%
  - One: 0%
  - None: 66.70%

- **Suicidal Thoughts**: 55.20%
  - Two or More: 25%
  - One: 30%
  - None: 45%

- **Anxiety**: 80.20%
  - Two or More: 80.20%
  - One: 20%
  - None: 0%

- **Depression**: 86.50%
  - Two or More: 86.50%
  - One: 13.50%
  - None: 0%
Other Symptoms Lifetime

- Violence: 62.50%
  - Two or More: 63.50%
  - One: 42.00%
  - None: 37.50%

- Concentrating: 63.50%
  - Two or More: 63.50%
  - One: 42.00%
  - None: 37.50%
# of previous episodes of inpatient treatment

<table>
<thead>
<tr>
<th>Type of Treatment</th>
<th>No ABI with LOC N=2526</th>
<th>1 ABI with LOC N=626</th>
<th>2 or more ABI with LOC N=163</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>0.829</td>
<td>1.35</td>
<td>1.94</td>
</tr>
<tr>
<td>Drug</td>
<td>0.826</td>
<td>1.15</td>
<td>1.21</td>
</tr>
</tbody>
</table>

* Welch robust test of equality of means

Increase with greater brain injury load
Brain Injury severity load and lifetime episodes of treatment

No BI | Bl no LOC | Mild | Moderate | Severe
N=2177 | N=372 | N=517 | N=137 | N=108
Other screening: Reconnect

**HOW**
- Adaptations of the same screening tool as CAMH

**WHO**
- Current caseload and new admissions; completed by worker and client

**Inclusion**
- Everyone unless clinically inappropriate; some clients declined

**WHEN**
- Ongoing since 2011
Reconnect Screening Findings

All current and new clients from an community-based mental health service provider (all programs)

<table>
<thead>
<tr>
<th>Total approached</th>
<th>Yes TBI</th>
<th>No TBI Yes Trauma</th>
<th>No TBI No Trauma</th>
<th>Missing (N/A or refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N= 254</td>
<td>145</td>
<td>11</td>
<td>94</td>
<td>4</td>
</tr>
</tbody>
</table>

57% with TBI

<table>
<thead>
<tr>
<th>Total with TBI</th>
<th>Improbable</th>
<th>Possible</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>N= 142</td>
<td>10</td>
<td>48</td>
<td>62</td>
<td>15</td>
<td>7</td>
</tr>
</tbody>
</table>

N= 84 with some loss of consciousness

59%
Reflections on the data

- TBI history is prevalent among users of addictions and mental health services

- Brain injury is a risk factor for the development of mental health and addictions as well as a possible result of these issues

- People reporting TBI history also present with greater complex co-morbidity

- History of brain injury may be associated with invisible disability that requires specialized care
In addition to cognitive problems...

• TBI seems to be associated with emotional dysregulation
  – a brain that has to work harder, tires quicker and is less resilient
  – damaged blood-brain barrier

• TBI may affect a person's ability to read emotions

• TBI may reduce the capacity to respond to rewards and punishments

• TBI may interact with brain changes related to substance and/or medication use
• Were you surprised by the findings?

• Do you feel that you have the needed tools to effectively treat this complex group of clients?
The impact of brain injury is often subtle...

Signs may include particular difficulties with...

- Remembering appointments
- Paying attention / tolerating groups
- Retaining information
- Social skills (reading cues)

- A large gap between ‘say’ and ‘do’
- Chaotic lifestyle and relationships
- Rigid thinking
Barriers to Care

Services not designed to manage complex co-occurring disorders

Stigma

Lack of knowledge/information

Wait times/complex admissions result in lost to care

Limited Resources
camh has an operating budget of over $300 million.

CHIRS has an operating budget just under $9 million.

Average of 1,600 referrals per month (320 with a history of ABI)

Neurobehavioural program is funded to serve 24 clients per year
Screening for brain injury is an important step in motivating participation in Integrated Care
Elements of Capacity Building

Increased focus on environmental supports

Screening

Recognizing and compensating for cognitive problems
POLL 3

• What are the challenges to implementing capacity building?
What now?

- **Screening** can be done as part of intake/assessment

- **Track** clients:
  - Do they come back after assessment?
  - Do they attend the program?
  - Do they complete?
  - Do they need repeated treatment?
Next Steps

✔ Build the awareness

✔ See the potential for cognitive impairment in your clients and the need for potential accommodations

✔ Explore the need for neurobehavioural accommodations

✔ Do treatments need to be differentiated (this requires a research project)?
How to proceed

- Adopt screening and tracking within existing procedures

- Participate in cross training opportunities
  - In-person
  - Webinars
  - Distance learning

- Start the discussion of how to create integrated care models
Community of Practice (COP)

• Resource for evidence exchange via EENet

• Cooperate for the benefit of research for developing best practices and for service development and advocacy
Summary

• If you work in addictions and mental health ¼ of the people you see are affected by brain injury.
• If you work in concurrent disorders the number is much higher—1/2 to 3/4.
• Training is available to learn to:
  – Screen for brain injury
  – Recognize and accommodate cognitive impairment and social and behavioural problems
• Partnerships that enable integrated care may increase efficacy and decrease costs