FINAL REPORT

Supporting Individuals with Traumatic Brain Injury in the Ontario Criminal Justice System; Building Bridges and Creating Integrated Approaches to Care with the John Howard Society: A Pilot Study

January 18, 2021

Project Title:	Supporting Individuals with Traumatic Brain Injury in the Ontario Criminal Justice System; Building Bridges and Creating Integrated Approaches to Care with the John Howard Society: A Pilot Study
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1. Background

Individuals with traumatic brain injury (TBI) are over-represented in criminal justice systems internationally with as many as 80% of incarcerated adults having a reported history of at least one TBI [1, 2], with many reporting multiple injuries [3, 4]. Studies that focus on persons who experience TBI indicate that they are also over-represented in Ontario correctional facilities [5-7]. Research indicates that 50.4% of incarcerated males and 38% of females within Ontario had a history of traumatic brain injury, and half of the females sustained their injury before becoming involved in the criminal justice system [5]. In the context of the Criminal Justice System, TBI-related cognition, communication and behaviour challenges are often either unrecognized or misunderstood as defiance, rudeness, disengagement, substance abuse or non-compliance [8]. In addition to complicating case management and support, the negative consequences of these challenges can reverberate and compound over time and across criminal justice contexts [8, 9] (e.g., in recidivism rates). The recommended approach is an emphasis on training staff [10, 11], which is a critical step toward a justice system that is responsive to needs of those with TBI in Ontario. An additional barrier is that many of these individuals lack a formal diagnosis of TBI, and have not had access to formal care for their TBI(s) [12].

TBI-related challenges and impairments in cognition, communication and behavior can lead to outbursts and aggression, which are heightened during periods of acute stress, such as during the COVID-19 pandemic [13]. Screening is an important procedure in settings such as the criminal justice system where prevalence of TBI is high [14, 15]. Identifying individuals with TBI and understanding that TBI is a contributing factor in their challenges is important when planning and developing interventions and accessing supportive services. Using a TBI screening tool is one means of facilitating this identification process, as it can better document TBI occurrence among populations at high-risk for under-recognition [14, 15].

The John Howard Society of Toronto (JHS-T) is a non -profit organization that provides support for those at risk of coming into conflict with the law and those who are already involved in the justice system. JHS-T staff recognize that many clients have a diagnosed or suspected TBI and the challenges associated have been exacerbated due to the COVID-19 pandemic. Currently, there is a lack of education and training regarding TBI for staff of JHS-T, and there has been no formal mechanism of referral for clients who require assistance to manage their head injury and/or clinical supports. Training of frontline staff along with implementation of screening for TBI, and development of a collaborative network of care are critical steps toward a justice system that is responsive to needs of individuals with TBI in Ontario. This is even more critical during a pandemic that creates additional stressors for both staff and clients.

2. Objectives

The overarching aim of this project was to optimize outcomes for clients of the JHS-T with history of traumatic brain injury (TBI) or suspected TBI.

The project had the following objectives:

1. ***Train*** staff on the administration of a screening process using the HELPS TBI Screening tool, for JHS-T to use with all clients (with a suspected history of hits to the head/TBI) and ***implement*** routine screening across all JHS-T programs.

2. ***Develop*** and ***evaluate*** a formal education and training program regarding TBI for all JHS-T front-line staff.

3. ***Develop, implement*** and ***evaluate*** an integrated referral network of care for clients of JHS-T with TBI that includes the Brain Injury Society of Toronto, the Toronto Central and Central ABI

LHIN Navigator's, the Toronto ABI Network, and the Inner City Family Health Team. The aim of this new network is to assist JHS-T to better serve clients with TBI.

3. Study Design and Methods

This was a mixed-methods cross-sectional study.

3.1 Training Phase of Project

3.1a Recruitment

The Director of Community Initiatives, Policy, and Research at JHS-T (Amber Kellen) sent an email to all JHS-T staff informing them of the mandatory TBI training and within this email introduced the study. Potential participants were instructed to contact the research coordinator if interested in participating in the evaluation. The email from Amber Kellen provided an information sheet with a description of the research team and the study.

3.1b Training Development and Delivery

At the time of this study, JHS-T had approximately 70 staff eligible for training. Staff participated in two, one half day sessions with one day in between to give staff the time to consolidate information. A member of the research team (CWH) and staff from the Brain Injury Society Toronto and Ontario Brain Injury Society delivered the training. The first session provided basic knowledge of TBI and an introduction to community-based resources, and the second session provided training on how to utilize the HELPS TBI screening tool, as well as introducing learning strategies, communication strategies and environmental modifications to support clients with TBI during the pandemic (and afterward). Staff self-selected into the training and the evaluation. Two trainings were provided to accommodate the large number of staff. Training was delivered using a Zoom Healthcare account. Thirty-seven staff participated across the training sessions.

The training was adapted from: (a) competencies developed by a panel of international clinician-researchers and brain injury advocacy organizations (e.g. National Association of State Head Injury Associations of America and the University of Oregon Centre for Brain Injury Research and Training) with a focus on the intersection of TBI and the criminal justice system; (b) findings from a systematic review of communication partner training for people with TBI, which showed that TBI-specific training can improve communication strategies, interactions, and outcomes; and, (c) discussions with Amber Kellen, the Director of Community Initiatives, Policy and Research, JHS-T. Examples of brain injury competencies are:

- Understands types and causes of TBI
- Has knowledge regarding the prevalence of TBI within the justice system
- Understands medical and rehabilitation terminology pertaining to TBI
- Understands that categorization of initial injuries may not predict long-term outcomes
- Understands that recovery from TBI and long-term outcomes are individualized and based on many variables
- Understands how TBI affects the following functional systems:
    - Cognition (memory, attention, executive skills, problem solving, etc.)
    - Speech, communication, language production and comprehension
    - Physical, motor, and sensory abilities (strength, endurance, range of motion, vision, perception, hearing, balance, etc.)
    - Behavior and mood regulation (awareness, adjustment, mood, interpersonal skills, etc.)
- Understands the importance of prevention of secondary, tertiary TBI

3.1c Training Evaluation

Staff who provided informed consent were administered a 30-minute post-training survey and 15-minute pre- and post-training quizzes (6.1 Post-Training Survey, 6.2.Pre- and Post-Training Quizzes). The pre- and post-training quizzes (6.2 Pre- and Post-Training Quizzes) contained the same content and tested basic knowledge of TBI. The questions were designed to determine change in knowledge at the completion of training. Participants also completed a 30-minute survey administered at the completion of the training that assessed (6.1 Post-Training Survey): a) comfort and confidence in working with clients with TBI , b) perceived value of the training and c) any additional gaps in knowledge that could be addressed with additional training (e.g., related to the pandemic or in general). All data collection was completed using REDCap with a link sent to participants via their work email. All participants provided written informed consent.

Developed specifically for this project, the 'knowledge quiz' (6.2 Pre- and Post-Training Quizzes) comprised 25 multiple choice questions, each with a single correct answer among 4 possible responses. The quiz focused on information taught during the training. The post training survey (6.1 Post-Training Survey) was designed for the project and ascertained participants' perceived levels of comfort and confidence following the training in their ability to work with clients with TBI and manage TBI-specific challenges. Response choices ranged from 'not comfortable/not confident' to 'very comfortable/very confident' with 4 levels of confidence or comfort per question. The survey also contained Likert scales, ranging from 'strongly disagree to strongly agree'.

3.1d Analysis

We used descriptive statistics (frequencies, means, proportions) to analyze the responses to the quizzes and the survey.

3.2 Network Phase of Project

3.2a Network Formation and Recruitment

We invited five agencies to participate in the network and its evaluation: the Toronto Acquired Brain Injury Association, the Ontario Brain Injury Association (OBIA), the Brain Injury Society of Toronto (BIST), the Inner-City Family Health Team (for a formal diagnosis to facilitate access to TBI-related services), and John Howard Society Toronto (JHS-T). We invited specific contacts at each agency to participate in two focus groups via an email from the research team. Seven people participated across two focus groups.

3.2b Network Evaluation

Eight participants received an email with information about the study and an invitation to participate in a focus group. Focus groups were conducted using a Zoom Healthcare Account.

3.2c Survey and Focus Group Questions

The focus group included questions regarding the need, value, efficacy, and efficiency of the network as well as perceived gaps in service delivery for clients of JHS-T with TBI (6.3 Focus Group Guide). Several questions will ask about the impact of COVID-19 on the implementation of the network and on process flow.

3.2d Analysis

We conducted preliminary thematic analysis [16, 17] to analyze the focus group data.

4. Results

4.1 Training Phase of Project: Quizzes and Survey

Fifteen people completed the pre-training quiz with an 82% average score of correct responses. Only 6 people completed the post-training quiz with an average score of 88%. Six people completed the post-training survey (6.2 Post-Training Survey). The mean score on relevance of the training to their work was

9.5/10. Mean scores on post-training confidence were generally good including; ability to recognize that a client has a brain injury (3.5), ability to recognize the challenges experienced by clients (3.7), recognizing how your own communication style affects client ability to understand (3.5), providing effective case management (3.0), knowing how and where to access resources for clients with TBI (3.8) and de-escalation of anxiety and aggression among clients (3.2) (6.9 Training Survey Summary Table). The participants were not as confident in managing behaviours of clients with TBI (2.8) (6.9 Training Survey Summary Table).

With respect to post-training comfort with responding to clients with TBI (3.0), managing conflict between clients (2.8), and supporting clients in everyday activities (3.2) participants were lower on the scale (6.9 Training Survey Summary Table). The majority of participants reported they did not have clear expectations for the training, that the content was easy to understand, and that two training sessions were sufficient to absorb the information covered. Participants agreed that the training was helpful in teaching them what they needed to know about TBI. Participants found that learning from three instructors was valuable and that the speakers presented the material in an interesting way. With the exception of one individual, participants also agreed that they had sufficient opportunities to ask questions and have discussions during the training sessions. All but one participant stated that they would recommend this training to their colleagues. One participant suggested that more concrete examples specific to the JHS-T context would have been helpful. Participants listed a number of takeaways from the training such as hearing about available community resources, improving understanding of TBI, providing an opportunity to hear from a person with lived experience of TBI, and being more comfortable and confident in their work. Participants expressed a need for more training on effective case management with clients with TBI and managing behaviours of clients with TBI (e.g., hyper-verbal, poor impulse control, difficulty remembering, as well as anger and anxiety.

4.2 Network Phase of Project: Preliminary Findings

We conducted two focus groups with members of the Collaborative Network of Care to understand their perspectives on the need, value, efficacy, and efficiency of the network. Data analysis focused on barriers and gaps that currently exist in Traumatic Brain Injury (TBI) service delivery, as well as agency and system level recommendations for improvement. The preliminary analysis revealed five themes.

Education

Participants suggested the need for more education for people working in the Acquired Brain Injury community and in the Criminal Justice System. They felt there is insufficient knowledge about TBI in the criminal justice system, specifically with respect to the needs of individuals with TBI, and the additional complexities experienced by them. For example, the functional role of courthouse "accessibility coordinators" provides an opportunity for TBI identification and opportunities to provide supports. Participants explained that, in their experience, they observed a gap in education, as the accessibility coordinators they had spoken to did not recognize that they had worked with anyone with a TBI previously and had a focus on physical barriers rather than cognitive barriers to participating in the judicial process. Accessibility coordinators could help individuals navigate the judicial system by connecting them with services such as a communication intermediary to help process and understand legal language, or a rehabilitation support worker to assist with court preparation and necessary reminders. Individuals with TBI require support and understanding surrounding cognition (ex. memory and executive functions) and communication to avoid misunderstandings related to behavior that could be interpreted as defiance. A recognition of the cognitive difficulties experienced by people with TBI and the impact these can have on their ability to meet bail or probation conditions could lead to better outcomes for these individuals. The ABI community including local Brain Injury Associations requires education on the specific and complex needs of individuals with TBI that intersect with the CJS to be able to better support them. Participants recommended cross training and collaboration between the

ABI community and the CJS to enable people from each sector to learn from each other. They also suggested that the training be recurrent to maintain staff competencies and provide training to new incoming staff.

Cross-Sector Collaboration

The theme of cross-sector collaboration emerged from the focus groups. Participants felt that silos between sectors such as the criminal justice system and ABI services created barriers to care. Services and sectors that serve individuals with TBI that intersect with the CJS, such as John Howard Society Toronto, need to learn about available services and supports for clients with TBI that are provided across the various sectors. For example, previous to this project, JHS-T staff were largely unaware of the landscape of TBI specific services to which they could refer their clients. This highlights the importance of the connection and collaboration this project facilitated between sectors and organizations and reinforces the need that these collaborations are implemented province-wide. Participants also recommended specialized navigation systems between sectors that would help service providers understand the specialty services within each sector.

Diagnosis

The focus group discussions emphasized that the inability of the target population to attain a formal TBI diagnosis denies them access to Ontario Health Insurance Program funded TBI services and treatment. Participants reported that some individuals were aware that they had a brain injury, however they were not believed by medical personnel. In contrast, an additional complexity is that many of these individuals may be unaware that they have a TBI. Additionally, even if individuals suspect they have a TBI, they may not know how to obtain a diagnosis. Screening for TBI and implementing a pathway to retrospective TBI diagnosis is an imperative aspect of the network (e.g., like the Inner-City Family Health

Team). Participants also felt that individuals should be screened for TBI while incarcerated to see if they meet the criteria for a diagnosis. This identification could then be part of discharge planning from correctional facilities so that they would have access to TBI-related services at release.

Wait Lists

An additional concern that emerged from the focus groups was that the time it takes to connect individuals with services is detrimental to care, particularly for those who have repeatedly been marginalized and led to feel that they and their needs are not important; response times are lengthy and wait lists are long. These barriers are exacerbated since the onset of the COVID-19 pandemic. Within the context of the pandemic, response times from certain services that previously might have taken days are now taking weeks. Significant delays that existed prior to the pandemic include the wait lists to access services provided through the ABI network, especially for TBI specific housing and long-term case management (e.g., insufficient availability of services). These significant wait times result in individuals getting lost in the process between submitting a referral and being accepted for services, months or years later. It can be especially difficult to maintain established service connections over longer periods of time as many people face unstable housing, making it difficult to re-contact when services are available. Lack of communication and updates from services to those on waitlists, during these lengthy waiting periods may also result in individuals feeling forgotten or disregarded. According to the focus group participants, the wait lists for services, such as housing and case management, are a reflection of the underfunding of brain injury and related services. An additional issue raised was the transition to virtual care appointments and care, which can create an additional barrier for people with TBI who may have difficulties navigating technology.

Funding

An additional issue raised in the focus groups that relates to funding is the sustainability of programs and organizations. TBI services and programs are often precariously funded, and thus provided on a short-term basis, which can be detrimental to clients. For example, it takes time for clients to build rapport with service staff, especially for clients with a history of trauma who may need more time to develop such a relationship. Participants felt that an efficient TBI referral system would have sustainable funding to enable its continuous functioning and to provide longer-term solutions.

5. Discussion and Conclusion

The overarching aim of this project was to optimize outcomes for clients of the JHS-T with a diagnosis of TBI or suspected TBI. Specifically, we aimed to achieve this through implementation of routine screening (for experience of TBI), development, implementation and evaluation of an education and training program about TBI for JHS-T staff, and, to develop, implement and conduct a preliminary evaluation of an integrated collaborative network of specialized TBI care and community resources. A secondary aim was to provide a rapid response for education and training due to heightened experiences of stress, anxiety and aggression by clients during the COVID-19 pandemic.

We learned during initial conversations with JHS-T managers that staff were aware of the prevalence of TBI among clients; however, they lacked the education, training, and knowledge of resources to effectively support these clients with TBI. JHS-T staff were also experiencing heightened stress during the COVID-19 pandemic as services were closed, reduced, or offered virtually. Not all clients will have internet services making it difficult for them to access services.

In general, the training was useful to staff but its delivery may have been affected by the COVID-19 pandemic as the number of staff who participated was about half of the full complement of staff. This

potentially affected the response rate on the quizzes and the survey; however, the findings show that staff appreciated the opportunity to take part in the training. Most helpful was learning about TBI and resources available within the network that would help support their clients who may be affected by TBI.

The findings from the focus groups provide some potential recommendations that could guide a system of care for people with histories of TBI and criminal justice involvement in Toronto and potentially in the province.

a) Create cross-sectoral collaboration and educational opportunities for CJS and ABI community services staff that includes enhancing their ability to assess the needs and social and health complexities for people in the CJS who have TBI to improve outcomes (e.g., fewer breaches and re-entry into custody).
b) Create means to enable people with histories of CJS involvement and TBI to attain a formal diagnosis so more treatment options, especially OHIP-funded, are available for them.
c) Screen and diagnose for TBI in correctional facilities and connect people to TBI-related services at release.
d) Adequately fund the ABI system and related services, such as housing, to ensure that services and treatment options are sustainable.
e) Reduce waitlists to ensure that people receive care in a timely manner and have time to build rapport with service providers. Recognize that when the system is destabilized, like in the current COVID-19 pandemic, access to care is even more difficult.

These findings provide an opportunity to make recommendations for policies that will support a system of care with an overarching aim of improving outcomes for people with TBI who intersect with the CJS. We propose a model, The Traumatic Brain Injury and Criminal Justice System Outcomes Framework (6.7

The Traumatic Brain Injury and Criminal Justice System Outcomes Framework), which includes four underlying pillars. The pillars are supported by a foundation of sufficient funding and cross-sectoral collaboration of Ontario Ministries that have an impact on criminal justice and social determinants of health outcomes.

Pillar1. Identification: Implement routine screening of TBI for all incoming JHS-T clients

Pillar 2. Capacity Building: Implement education and training initiatives regarding TBI for all front-line staff in the criminal justice system and community reintegration agencies

Pillar 3. Model of Care: Implement Integrated Networks of Care

Pillar 4. Service Delivery: Provide access to timely and appropriate TBI care (including stable and supportive housing)

The process of Implementation from an Implementation Science Framework is one which requires sufficient time to understand, change and merge individual organizational cultures. While all members of the Network were and are very positive regarding the need for and willingness to implement the network, there are a number of existing issues. First, we were unable to fully implement screening across all JHS-T programs. JHS-T staff are and continue to be, under immense stress due to COVID-19 resulting for example, in staff turnover. Additional time is needed to fully implement screening as well as to gather data on screening and referrals. An additional barrier, also COVID-related, is the fact that services have been disrupted, resulting in reduced interpersonal interaction as many have shifted to virtual delivery. Some JHS-T clients lack access to and knowledge of technologies and may need assistance to learn to a virtual platform. We also identified barriers such as long waiting lists once referrals have been made. Implementation across sectors takes time and the process of screening and referrals for JHS-T will continue to evolve and develop beyond the completion of this project.

We developed a 2-part 6-hour training module about TBI; including definitions, presentation, cognitive, communication and behavioural challenges, presentation in the context of criminal justice and community reintegration, effective case management, community resources, screening and strategies to facilitate effective communication and anger management. The training was delivered remotely and a video recording of the training webinar has been uploaded to the St Michael's Hospital MAP Centre for Urban Health Solutions website https://maphealth.ca/incarceration-tbi-training/. We developed an information sheet for JHS-T staff that provides a schematic of the network referral process (6.4 Referral Information Sheet). The HELPS screening tool is also available on the website along with a glossary of terms (6.5 TBI Training Glossary) for the training and a resource list (6.6 TBI Resources) for TBI services and supports. We submitted an abstract to the Global Law Enforcement and Public Health Conference (March 22-25, 2021) which was accepted: The presentation title is "Training Service Providers to Support People with Experiences of Incarceration and Traumatic Brain Injury" (6.8 Global Law Enforcement and Public Health Abstract). Finally, we suggest a framework to support the development and implementation of a system of care for people with diagnosed or suspected TBI who intersect with the criminal justice system (6.7 The Traumatic Brain Injury and Criminal Justice System Outcomes Framework).

6. Appendices

6.1 Post-training survey

Thank you for your participation in the training. We would be grateful if you would reflect on and answer the following questions. This survey is a part of a research study titled "Supporting Individuals with Traumatic Brain Injury in the Ontario Criminal Justice System; Building Bridges and Creating Integrated Approaches to Care with the John Howard Society of Toronto: A Pilot Study" conducted by Principal Investigator Dr. Flora Matheson.

The first part of the survey asks you to think about your level of confidence in meeting the needs of clients after the training. The second part of the survey asks you about the quality of the training. The survey should take about 30 minutes to complete. We ask that you complete the survey by [date/time]. This research is voluntary. Your decision to participate or not participate will have no impact on your employment at the John Howard Society or you or your family's current or future care at St. Michael's Hospital. Your responses will help us to evaluate the success of the training and to identify any areas where additional training is required.

You can withdraw at any time. If you decide to participate, you can change your mind without giving a reason. You can skip any question in the survey or end the survey at any time. All data collected will be used in the study unless you withdraw prior to the start of data analysis. No direct quotes from your responses will be published or used in reports of the results.

If you have questions related to this research study, you can contact Dr. Flora Matheson, MAP Centre for Urban Health Solutions, St. Michael's Hospital via email at flora.matheson@unityhealth.to. If you have any questions regarding your rights as a research participant, you may contact the Unity Health Toronto Research Ethics Board Office at 416-864-6060 ext. 42557 during business hours (9:00am to 5:00pm).

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1) On a scale of 1 to 4 please rate your confidence on the following tasks/situations using the following:

1: Not at all confident

2. Somewhat confident

3: Confident

4: Very confident

How confident are you in:

Recognizing that a client likely has a traumatic brain injury?

1 2 3 4

Recognizing and understanding, the challenges experienced by clients with TBI: for example; memory, poor attention, impulsivity, anger?

1 2 3 4

Communicating effectively with a client with a TBI? For example; being able to rephrase if the client has difficulty understanding, knowing how to slow down to compensate for processing challenges

1 2 3 4

Understanding the difference between a positive and negative collaborative communication style?

1 2 3 4

Managing behaviours of clients with TBI (ex. hyper verbal, poor impulse control, difficulty remembering)?

1 2 3 4

Providing effective case management for clients with TBI?

1 2 3 4

Knowing how and where to access resources for clients with TBI?

1 2 3 4

De-escalating situations of anxiety and or aggression in clients with TBI?

1 2 3 4

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2) On a scale of 1 to 4 please rate your comfortability on the following tasks/situations using the following:

1: Not at all comfortable

2. Somewhat comfortable

3: Comfortable

4: Very comfortable

How comfortable are you:

Responding to clients with TBI - including feelings regarding the clients' competence and challenges? (for example, being able to see, support and facilitate the clients' competence despite their challenges)

1 2 3 4

Managing conflict between clients with TBI and other clients?

1 2 3 4

Supporting clients with TBI in everyday activities (e.g. getting to appointments, navigating justice proceedings, healthcare etc.)?

1 2 3 4

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3) On a scale of 1 to 10 how relevant was the training to your work?

1 2 3 4 5 6 7 8 9 10

4) What are 3 things you learned in the training that you will use in your work with clients?

_____

_____

_____

5) Did you have clear expectations for the course?
   a. Yes
   b. No

6) If yes, what were your expectations of the course?

_____

_____

_____

7) Did the course meet your expectations?
   a. No
   b. To some extent
   c. Yes
   d. Don't know

8) How would you rate the pace of learning on the course?
   a. Slow
   b. Medium
   c. Fast
   d. Don't know

9) Did the training cover the content you were expecting?
    a. No
    b. To some extent
    c. Very much so
    d. Don't know
10) Did you find the content easy to understand?"

1 (Very difficult) 2 (Difficult) 3 (Somewhat easy) 4 (Easy) 5 (Very easy)

11) Was there any content you were expecting but was missing? If so, please elaborate.

_____

_____

_____

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12) The training was helpful in teaching me what I need to know about traumatic brain injury

Strongly disagree Disagree Agree Strongly Agree

13) Having two training sessions with one day in between was sufficient time for to learn the information

Strongly disagree Disagree Agree Strongly Agree

14) Learning from the 3 instructors was valuable

Strongly disagree Disagree Agree Strongly Agree

15) Having the opportunity to hear from someone with lived experience was valuable

Strongly disagree Disagree Agree Strongly Agree

16) I had enough opportunity to ask questions

Strongly disagree Disagree Agree Strongly Agree

17) The speakers presented the material in a way that was interesting

Strongly disagree Disagree Agree Strongly Agree

There was opportunity for discussion

Strongly disagree Disagree Agree Strongly Agree

18) I would have like more of….. Please list

_____

_____

_____

19) I would have liked less of ….. Please list

_____

_____

_____

20) I would like additional training regarding clients with TBI in the following areas:

_____

_____

_____

21) I would recommend this training to my colleagues

Strongly disagree Disagree Agree Strongly Agree

Thank you for taking the time to complete the survey and for your participation in the evaluation of the training.

6.2 Pre- and post-training quizzes

Pre-Training Quiz

The following is a short quiz to determine your current basic knowledge of traumatic brain injury (TBI). This is part of a research study titled "Supporting Individuals with Traumatic Brain Injury in the Ontario Criminal Justice System; Building Bridges and Creating Integrated Approaches to Care with the John Howard Society of Toronto: A Pilot Study" conducted by Principal Investigator Dr. Flora Matheson.

The quiz will take approximately 15 minutes to complete and must be returned at least 24 hours prior to the first training session. Your individual score will not be shared with anyone. This research is voluntary. Your decision to participate or not participate will have no impact on your employment at the John Howard Society or you or your family's current or future care at St. Michael's Hospital. The purpose of this quiz is to give us a baseline of general knowledge among staff so that we can assess whether the training helped you gain knowledge about TBI. You will be asked to complete this quiz again after the training.

You can withdraw at any time. If you decide to participate, you can change your mind without giving a reason. You can skip any question in the survey or end the survey at any time. All data collected will be used in the study unless you withdraw prior to the start of data analysis.

If you have questions related to this research study, you can contact Dr. Flora Matheson, MAP Centre for Urban Health Solutions, St. Michael's Hospital via email at flora.matheson@unityhealth.to. If you have any questions regarding your rights as a research participant, you may contact the Unity Health Toronto Research Ethics Board Office at 416-864-6060 ext. 42557 during business hours (9:00am to 5:00pm).

Please select one answer for each question.

1. **The term acquired brain injury is:**
   a) Specific to congenital brain injury
   b) Refers to both non-traumatic and traumatic brain injuries
   c) Descriptive of adult stroke only
   d) Excluded from use in Canada

2. **The Brain Injury Society of Toronto:**
   a) Is a non-profit organization
   b) Provides programs and services for people with acquired brain injuries
   c) Provides programs and services for families and caregivers
   d) All of the above

3. **Concussion:**
   a) Is not considered a brain injury
   b) Only happens when a person loses consciousness
   c) Is something that everyone recovers from
   d) Can be serious especially if the person has had more than one

4. **The Frontal Lobes:**
    a) Are fully developed in childhood
    b) Are responsible for speech and language
    c) Are responsible for planning and organization
    d) Are usually spared during injury

5. **Executive Functions:**
    a) Can help or hinder a person's ability to make good decisions and live independently
    b) Help a person to see and hear
    c) Can be treated with medication
    d) Are important for balance and mobility

6. **Traumatic Brain Injury:**
    a) Can be cured with time and treatment
    b) Is considered a chronic disease with evolving consequences
    c) Is easy to see in an injured person
    d) Means the person is less intelligent

7. **Sleep is an important consideration for people with TBI because:**
    a) Poor sleep is common following TBI
    b) Poor sleep can make problems with attention and memory worse
    c) Poor sleep can contribute to problems with irritability and low mood
    d) All of the above

8. **Traumatic Brain Injury**
    a) Only affects children and older adults
    b) Is a serious public health problem
    c) Is less likely to happen when a person is young and fit
    d) Occurs more frequently in females than males

9. **Common problems after TBI include**
    a) Slowed thinking and responding
    b) Problems with attention and memory
    c) Difficulty following and understanding conversation
    d) All of the above

10. **Outcome following TBI is determined by:**
    a) The severity of the injury
    b) How intelligent the person was before their injury
    c) A number of factors including family support
    d) The presence or absence of seizures

11. **TBI is often associated with:**
    a) A strong socio-economic gradient with people from disadvantaged backgrounds being at greater risk
    b) Sports injuries
    c) Being clumsy
    d) Bad behavior

12. **TBI is prevalent in the following populations:**
    a) Women survivors of intimate partner violence
    b) People involved with the criminal justice system
    c) Athletes involved in high impact sports
    d) All of the above

13. **Substance use and misuse following brain injury:**
    a) Is uncommon
    b) Is more common following mild TBI than severe TBI
    c) Is easy to treat
    d) Is impossible to treat

14. **Mental Health Challenges and TBI**
    a) Happen when the person doesn't follow their doctors' orders
    b) Are worse immediately following a TBI and get better with time
    c) Are made worse by poor sleep and fatigue
    d) Are rare

15. **Effective Case Management Following TBI Requires**
    a) Access to and support from a doctor trained in brain injury
    b) Understanding of the challenges associated with TBI and how this impacts the person in their daily life
    c) Setting goals for the person to get a job
    d) Setting clear rules for the person to follow

16. **Screening for TBI is important because:**
    a) People always go to the emergency room when they hit their head
    b) A concussion is always diagnosed by the doctor
    c) It's easy to tell when someone has had a TBI
    d) People may be unaware that they may have had a brain injury

17. **Communication Challenges after TBI usually include:**
    a) Speech problems
    b) Stuttering
    c) Difficulty with comprehension and slowed thinking
    d) Bad language

18. **Cognitive-communication disorders refer to:**
    a) Poor memory
    b) Difficulties with listening, speaking, reading, writing and thinking due to cognitive problems
    c) Saying the wrong thing at the wrong time
    d) Slurred speech

19. **Emotions can change following a TBI by:**
    a) Being heightened and exacerbated
    b) Being dulled and less emotional
    c) Difficulty reading others' emotions
    d) All of the above

20. **Alexithymia means:**
    a) Being over emotional
    b) The individual is rude
    c) Lack of vocabulary for emotion and lack of awareness of the feeling of emotion in the body
    d) Lack of emotion

21. **A good strategy to help support someone with a TBI so they can understand is:**
    a) Have a conversation with them when they're tired
    b) Talk to them like you're talking to a child
    c) Write everything down
    d) Speak a bit more slowly and pause between ideas, thoughts or questions

22. **When a person with a TBI has problems with attention, memory and communication, this can be misinterpreted as:**
    a) Immaturity
    b) Rudeness and Noncompliance
    c) Being helpful
    d) All of the above

23. **Advocacy for clients with TBI can include:**
    a) Teaching them that it is their legal right to ask for a person to slow down and or explain themselves in a different way
    b) Making sure they get to their appointments
    c) Helping them manage their money
    d) Letting them manage everything themselves as they need to learn

24. **Anger Management for Clients with TBI should include:**
    a) Punishment and time out
    b) Redirecting away from the trigger every time they encounter it
    c) Teaching that thoughts and facts are the same thing
    d) Helping the client to identify the feelings, the unmet need that is driving the feeling and what they would like to request

25. **Helping clients with anger management and impulse control can include:**
    a) Use of Mindfulness Meditation
    b) Problem Solving
    c) Redirection
    d) All of the above

Thank you for taking the time to complete the quiz and for your participation in the evaluation of the training.

Post-Training Quiz

The following is a short quiz to determine your post-training knowledge of traumatic brain injury (TBI). This is part of a research study titled "Supporting Individuals with Traumatic Brain Injury in the Ontario Criminal Justice System; Building Bridges and Creating Integrated Approaches to Care with the John Howard Society of Toronto: A Pilot Study" conducted by Principal Investigator Dr. Flora Matheson.

The quiz will take approximately 15 minutes to complete and should be submitted within 30 minutes following the training session. Your individual score will not be shared with anyone. This research is voluntary. Your decision to participate or not participate will have no impact on your employment at the John Howard Society or you or your family's current or future care at St. Michael's Hospital. The purpose of this quiz is to help assess whether the training helped staff gain knowledge about TBI.

You can withdraw at any time. If you decide to participate, you can change your mind without giving a reason. You can skip any question in the survey or end the survey at any time. All data collected will be used in the study unless you withdraw prior to the start of data analysis.

If you have questions related to this research study, you can contact Dr. Flora Matheson, MAP Centre for Urban Health Solutions, St. Michael's Hospital via email at flora.matheson@unityhealth.to. If you have any questions regarding your rights as a research participant, you may contact the Unity Health Toronto Research Ethics Board Office at 416-864-6060 ext. 42557 during business hours (9:00am to 5:00pm).

Please select one answer for each question.

1. **The term acquired brain injury is:**
   e) Specific to congenital brain injury
   f) Refers to both non-traumatic and traumatic brain injuries
   g) Descriptive of adult stroke only
   h) Excluded from use in Canada

2. **The Brain Injury Society of Toronto:**
   e) Is a non-profit organization
   f) Provides programs and services for people with acquired brain injuries
   g) Provides programs and services for families and caregivers
   h) All of the above

3. **Concussion:**
   e) Is not considered a brain injury
   f) Only happens when a person loses consciousness
   g) Is something that everyone recovers from
   h) Can be serious especially if the person has had more than one

4. **The Frontal Lobes:**
    e) Are fully developed in childhood
    f) Are responsible for speech and language
    g) Are responsible for planning and organization
    h) Are usually spared during injury

5. **Executive Functions:**
    e) Can help or hinder a person's ability to make good decisions and live independently
    f) Help a person to see and hear
    g) Can be treated with medication
    h) Are important for balance and mobility

6. **Traumatic Brain Injury:**
    e) Can be cured with time and treatment
    f) Is considered a chronic disease with evolving consequences
    g) Is easy to see in an injured person
    h) Means the person is less intelligent

7. **Sleep is an important consideration for people with TBI because:**
    e) Poor sleep is common following TBI
    f) Poor sleep can make problems with attention and memory worse
    g) Poor sleep can contribute to problems with irritability and low mood
    h) All of the above

8. **Traumatic Brain Injury**
    e) Only affects children and older adults
    f) Is a serious public health problem
    g) Is less likely to happen when a person is young and fit
    h) Occurs more frequently in females than males

9. **Common problems after TBI include**
    e) Slowed thinking and responding
    f) Problems with attention and memory
    g) Difficulty following and understanding conversation
    h) All of the above

10. **Outcome following TBI is determined by:**
    e) The severity of the injury
    f) How intelligent the person was before their injury
    g) A number of factors including family support
    h) The presence or absence of seizures

11. **TBI is often associated with:**
    e) A strong socio-economic gradient with people from disadvantaged backgrounds being at greater risk
    f) Sports injuries
    g) Being clumsy
    h) Bad behavior

12. **TBI is prevalent in the following populations:**
    e) Women survivors of intimate partner violence
    f) People involved with the criminal justice system
    g) Athletes involved in high impact sports
    h) All of the above

13. **Substance use and misuse following brain injury:**
    e) Is uncommon
    f) Is more common following mild TBI than severe TBI
    g) Is easy to treat
    h) Is impossible to treat

14. **Mental Health Challenges and TBI**
    e) Happen when the person doesn't follow their doctors' orders
    f) Are worse immediately following a TBI and get better with time
    g) Are made worse by poor sleep and fatigue
    h) Are rare

15. **Effective Case Management Following TBI Requires**
    e) Access to and support from a doctor trained in brain injury
    f) Understanding of the challenges associated with TBI and how this impacts the person in their daily life
    g) Setting goals for the person to get a job
    h) Setting clear rules for the person to follow

16. **Screening for TBI is important because:**
    e) People always go to the emergency room when they hit their head
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18. **Cognitive-communication disorders refer to:**
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20. **Alexithymia means:**
    e) Being over emotional
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21. **A good strategy to help support someone with a TBI so they can understand is:**
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    e) Teaching them that it is their legal right to ask for a person to slow down and or explain themselves in a different way
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    g) Teaching that thoughts and facts are the same thing
    h) Helping the client to identify the feelings, the unmet need that is driving the feeling and what they would like to request

25. **Helping clients with anger management and impulse control can include:**
    e) Use of Mindfulness Meditation
    f) Problem Solving
    g) Redirection
    h) All of the above

Thank you for taking the time to complete the quiz and for your participation in the evaluation of the training.

6.3 Focus group guide

Focus Group Facilitator(s):	
Number of Participants:	
Date (YYYY/MM/DD):	
Time (HH:MM – HH:MM):	
Focus Group Location:	

Thank you for taking the time to join this focus group. We've brought you together from different organizations to learn from each other and hear your perspectives on the new Collaborative Network of Care of which you are a member, more specifically the need, value, efficacy, and efficiency of the network.

Your feedback is important to help us understand the value of having a network, current barriers and gaps in service, as well as to inform the future scaling up of a formal mechanism of referral for individuals with TBI in the criminal justice system.

Before we start, we would like to remind you that participation in the focus group is voluntary. You do not have to answer all of the questions and may skip any question you do not wish to answer. You are free to pause or stop your participation in the focus group at any time for any reason. The expected length of the focus group discussion is expected to be approximately one hour. We would also like to remind you that the discussion will be audio recorded. You had the opportunity to opt in or out of allowing us to use direct quotes that could contain information that would identify yourself or your agency, if you chose not to be identified we will review your quotes and only include them if we can maintain your confidentiality. We also ask that you respect and maintain confidentiality of this discussion. We advise you not to use names or identifiable information during the discussion. Please know we are not here to judge you, but to learn and problem solve together.

Do you have any questions before we start?

Objective: To understand the needs of individuals with TBI in the CJS

1. **What are the clinical, service and community resource needs of individuals with TBI in the criminal justice system?**

Objective: To understand the complexities of individuals with TBI in the CJS

2. **What are the additional complexities experienced by this population (i.e. those with TBI in the criminal justice system) compared to those in the general TBI population?**
    - *Can the network in its current form meet these needs (additional complexities)? If not, what is needed in order for this to happen?*

Objective: To understand access to TBI services

3. **How did JHS-T clients access TBI services prior to the network initiative (i.e., routes, processes, obstacles)?**

Objective: To understand gaps in the referral system

4. **What gaps currently exist in the pathways to TBI treatment? (i.e. waiting lists, lack of appropriate services, etc.) within the newly established network?**
    - *Has COVID-19 introduced additional challenges?*

Objective: To understand network challenges

5. **What are the likely TBI service and community resource challenges that the network will encounter? (e.g. behavioural issues, substance use, lack of funds, etc.)**
    - *Has COVID-19 introduced additional challenges?*

6. **What COVID-19-related service system disruptions does the network currently face?**
    - *What COVID-19 related service system disruptions could the network face in the future?*

Objective: To understand the ideal functionality of the network

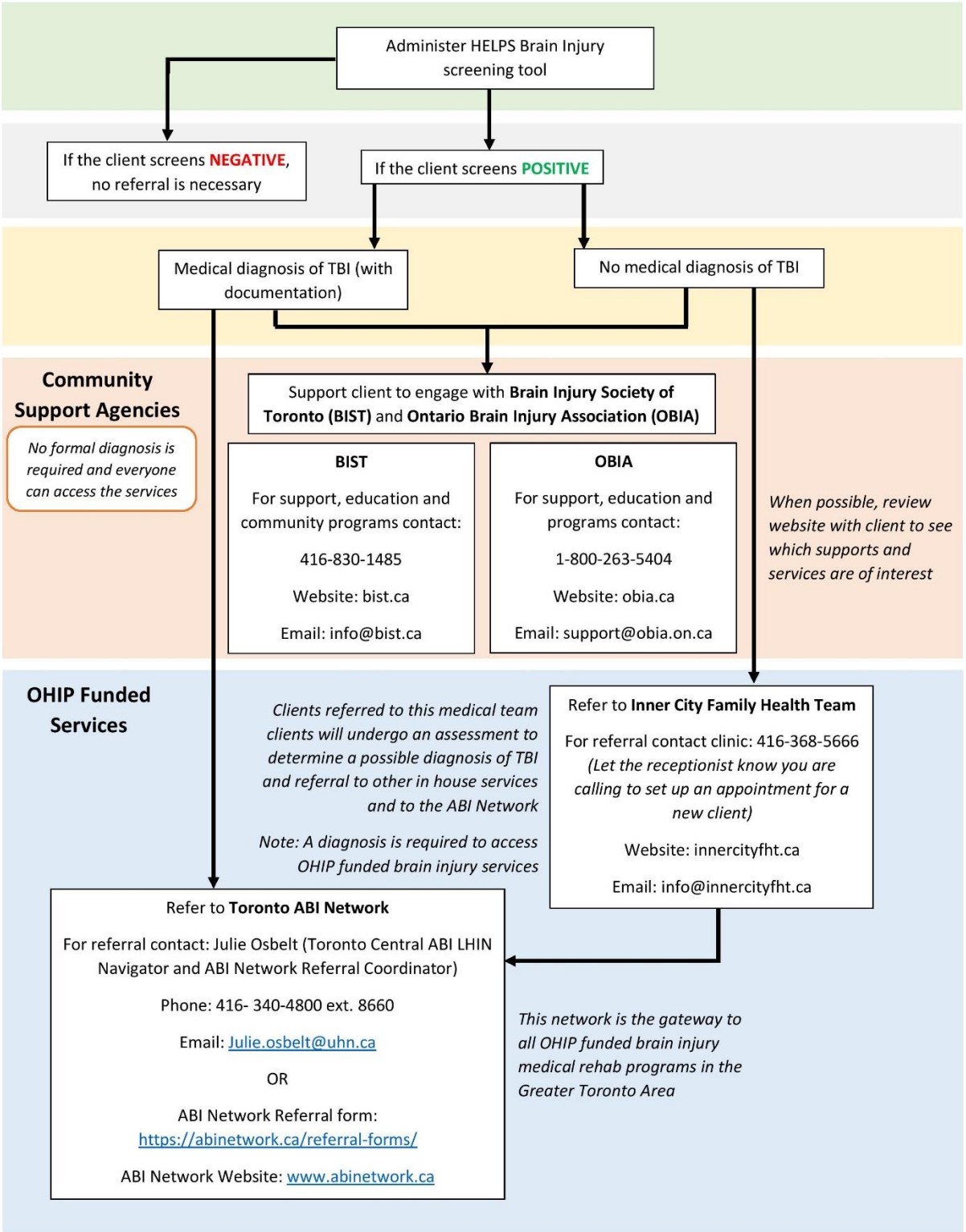
7. **What would an efficient provincial TBI referral system that serves people with criminal justice system experiences look like?**

8. **How can the network facilitate care for John Howard Society Toronto clients?**

Are there any other comments you would like to share?

Thank very much for your time.

6.4 Referral Information Sheet



6.5 TBI Training Glossary

Training Glossary

Traumatic Brain Injury (TBI): an alteration in brain function or other evidence of brain pathology caused by an external force

Non-Traumatic Brain Injury: injuries to the brain that are not caused by an external physical force to the head

Anoxia: this refers to a lack of oxygen to the brain such as in near drowning, or strangulation

Brain tumours: a mass or growth of abnormal cells in your brain

Encephalitis: inflammation of the brain, caused by infection or an allergic reaction

Metabolic encephalopathy: neurological disorder not caused by primary structural abnormalities; rather, a result of systemic illness, such as diabetes, liver disease, renal failure and heart failure

Toxic effects: an adverse effect of a drug produced by an exaggeration of the effect that produces the theraputic response

Vascular insults: a sudden interruption of the blood supply to the brain caused by rupture of an artery in the brain (cerebral haemorrhage) or the blocking of a blood vessel, as by a clot of blood (cerebral occlusion)

Fetal Alcohol Spectrum Disorders: an umbrella term describing the range of effects that can occur in an individual whose mother drank alcohol during pregnancy. These effects may include physical, mental, behavioral, and/or learning disabilities with possible lifelong implications.

Mild TBI: Indicators

1. Any period of loss of consciousness;
2. Any loss of memory for events immediately before or after the accident;
3. Any alteration in mental state at the time of the accident (eg, feeling dazed, disoriented, or confused); and
4. Focal neurological deficit(s) that may or may not be transient; but where the severity of the injury does not exceed the following:
    - loss of consciousness of approximately 30 minutes or less;
    - after 30 minutes, an initial Glasgow Coma Scale (GCS) of 13–15; and
    - posttraumatic amnesia (PTA) not greater than 24 hours.

Moderate TBI: Loss of consciousness from ≥ 30minutes to 6 hours and a Glasgow Coma Scale rating of 9 to 12.

Severe TBI: Loss of consciousness of greater than 6 hours and a Glasgow Coma Scale of 3 to 8. (i.e. less than 9). Length of coma and duration of post traumatic amnesia (lack of ability to create new memories) also indicators of severity.

Executive Functions: A series of integrative cognitive functions that determine goal-directed and purposeful behavior and are superordinate in the orderly execution of daily life functions.

Social Determinants of Health: the social and economic factors that influence people's health

Intimate Partner Violence: domestic violence by a current or former spouse or partner in an intimate relationship against the other spouse or partner. IPV can take a number of forms, including physical, verbal, emotional, economic and sexual abuse.

Cognitive-communication: refers to difficulties with any aspect of communication; listening, understanding, speaking, reading, writing and thinking, due to underlying cognitive impairments. This also includes challenges with behavioral self-regulation that impact social communication.

Social-communication: use of language within social contexts and encompasses social interaction, pragmatics, and language processing, and includes other more general social cognitive skills.

Alexithymia: Characterized by

- Poor awareness for personal emotions and emotions of others;
- Reduced acknowledgement of physical sensations and association with emotional responses (e.g., elevated heart rate and fear);
- Difficulty describing and/or trouble distinguishing emotions (e.g., differentiating anger from sad);
- Preference for discussing concrete or superficial facts rather than emotions.

Negative attribution: interpreting or misinterpreting another's intent as being negative, even when it isn't.

Non- Violent Communication Marshall Rosenberg: the Integration of 4 things

1. Consciousness: A set of principles that support living a life of compassion, collaboration, courage, and authenticity.
2. Language: Understanding how words contribute to connection or distance.
3. Communication: Knowing how to ask for what you want, how to hear others even in disagreement, and how to move forward towards solutions that work for all.
4. Means of influence: Sharing "power with others" rather than using "power over others".

6.6 TBI Resources

Abused and Brain Injured Toolkit (Intimate partner violence)
www.abitoolkit.ca

Brain Injury Society of Toronto (BIST)
www.bist.ca
info@bist.ca
416-840-1485

ABI Justice Toolkit (BIST)
ABI Justice is the first and currently the only resource in Ontario that aims to decrease common barriers that become present for persons with brain injury when faced with legal matters. It is a porthole for legal information as it pertains to those who have sustained or those who assist clients who live with a brain injury.
www.abijustice.org

Brain Injury Canada
www.braininjurycanada.ca

Acquired Brain Injury Network (ABI Network) Toronto
www.abinetwork.ca

ABI Network Referral Forms
https://abinetwork.ca/referral-forms/

Toronto Central ABI LHIN Navigator and ABI Referral coordinator: Julie Osbelt
416- 340-4800 ext. 8660
Julie.osbelt@uhn.ca

Inner City Family Health Team
www.innercityfht.ca
Clinic Lead: Nazia Bhatti nbhatti@innercityfht.ca
416-368-5666

Ontario Brain Injury Association (OBIA)
www.obia.org
Toll free 1-800 263-5404

Substance Use and Brain Injury (SUBI)
www.SUBI.ca
https://www.brainline.org/article/substance-abusebrain-injury-client-workbook

International Resources:
Headway (UK Brain Injury Association)
www.headway.org.uk
Project Learn (Mark Ylvisaker)
http://www.projectlearnet.org/tutorials/sr_ef_routines.html

6.7 The Traumatic Brain Injury and Criminal Justice System Outcomes Framework

Overarching Aims	1. To optimize the outcomes for individuals with histories of traumatic brain injury and criminal justice involvement according to the social determinants of health including; social, economic, wellbeing, educational/vocational, and community integration. 2. To improve clinical experience (Wrap-around care i.e. Access to the right care, right provider at the right time in the right place) 3. To improve 'patient/client' experience; safety, effectiveness patient centeredness, timeliness, efficiency and equity			
Long Term Aims	To track the prevalence of TBI among justice-involved individuals such that this becomes 'Standard of Care'	To "empower" front line staff to continue to build their capacity and to continually learn in order to ensure they are optimizing/enhancing outcomes for clients	To facilitate the development of an integrated model of care with the recognition that TBI is as a chronic life-long health condition with long term complex needs	Wrap-around services are necessary to achieve positive outcomes for people living with TBI, such as reduction in recidivism and optimization of community reintegration, participation, and quality of life
Short Term Aims	To identify those with history of suspected or diagnosed TBI for referral purposes and care management	To facilitate further understanding and expand capacity of staff to manage and support the specialized needs of people with TBI who intersect with the justice system	To provide staff with an understanding of potential local resources including community agency TBI support and referrals to access appropriate specialized TBI care to better serve their clients	To meet the immediate needs for medical and rehabilitation care and stable housing, appreciating the needs of these individuals
Pillars	**Identification** Implement routine screening of TBI for all incoming JHS-T clients	**Capacity Building** Implement education and training initiatives regarding TBI for all front line staff in the criminal justice system and community reintegration agencies	**Model of Care** Implement Integrated Networks of Care	**Service Delivery** Provide access to timely and appropriate TBI care (including stable and supportive housing)

Foundation: Policy and Funding

1. Sustained and sufficient funding to support integrated networks of care and policies to ensure standards of care
2. Inter-sectoral collaborations between the Ministry of Health and Long-Term Care, the Ministry of the Solicitor General, the Ministry of Children, Community and Social Services, and the Ministry of Housing

6.8 Global Law Enforcement and Public Health Abstract

Presentation Title: Training Service Providers to Support People with Experiences of Incarceration and Traumatic Brain Injury

Flora I. Matheson, Catherine Wiseman-Hakes, Madison Ford, Amber Kellen

Abstract:

Rates of traumatic brain injury (TBI) among people experiencing incarceration range from 50% to 80%. TBI can result in serious long-term effects, including cognitive, communication, emotional, behavioural and social impairments that can affect a person's community reintegration following incarceration. These impairments can lead to outbursts and aggression, which are heightened during periods of acute stress, such as in the current pandemic. There is a general lack of awareness regarding the impact of a TBI, which results in pervasive environmental, attitudinal and information barriers that marginalize those with TBI. The impact of COVID-19 on the criminal justice system has been well documented in the media with incarcerated individuals at heightened risk due to lack of isolation, lack of PPE, and many released into the community early without appropriate supports.

This presentation reports on the development, implementation and evaluation of a rapid response education and training program on TBI for John Howard Society Toronto (JHS-T) in Canada. The recommended evidence-based approach involves an emphasis on training frontline staff regarding TBI, as well as the implementation of proper identification, assessment and support. This can result in better outcomes for people with TBI in the criminal justice system in regard to community re-entry, and justice re-involvement.

The JHS-T is part of a national network of John Howard Societies in Canada, dedicated to helping those who have been in conflict with the law. The JHS-T delivers individualized, integrated support and empower their clients to achieve positive change. Many of the JHS-T's clients have a history of suspected or diagnosed TBI.

All front-line staff received the training, which was an emergency request from the agency in response to the current COVID-19 pandemic. The first session provided basic knowledge of TBI while the second session focused on learning strategies and environmental modifications to support clients during the pandemic (and afterward). The evaluation focused on knowledge acquisition through a pre- and post-training quiz and level of confidence and comfort in supporting clients with TBI after completion of the training. Highlights of the training and the findings of the evaluation will be presented with opportunities for the audience participation.

6.9 Training Survey Summary Table

Questions	Mean (STD)
1) How confident are you in: (1-4 scale) 1: Not at all confident 2. Somewhat confident 3: Confident 4: Very confident	
Recognizing that a client likely has a traumatic brain injury?	3.5 (0.5)
Recognizing and understanding, the challenges experienced by clients with TBI: for example; memory, poor attention, impulsivity, anger?	3.7 (0.5)
Recognizing the impact of your own communication style on your client's ability to understand?	3.5 (0.5)
Communicating effectively with a client with a TBI?	3.3 (0.7)
Managing behaviours of clients with TBI (ex. hyper verbal, poor impulse control, difficulty remembering)?	2.8 (0.9)
Providing effective case management for clients with TBI?	3.0 (0.8)
Knowing how and where to access resources for clients with TBI?	3.8 (0.4)
De-escalating situations of anxiety and or aggression in clients with TBI?	3.2 (0.7)
2) How comfortable are you: (1-4 scale) 1: Not at all comfortable 2. Somewhat comfortable 3: Comfortable 4: Very comfortable	
Responding to clients with TBI - including feelings regarding the clients' competence and challenges?	3.0 (0.6)
Managing conflict between clients with TBI and other clients?	2.8 (0.7)
Supporting clients with TBI in everyday activities (e.g. getting to appointments, navigating justice proceedings, healthcare etc.)?	3.2 (0.9)
3) On a scale of 1 to 10 how relevant was the training to your work?	9.5 (0.8)

7. References

1. Shiroma, E.J., P.L. Ferguson, and E.E. Pickelsimer, *Prevalence of traumatic brain injury in an offender population: A meta-analysis.* Journal of Correctional Health Care, 2010. **16**(2): p. 147-159.
2. Allely, C., *Prevalence and assessment of traumatic brain injury in prison inmates: A systematic PRISMA review.* Brain injury, 2016. **30**(10): p. 1161-1180.
3. Barnfield, T.V. and J.M. Leathem, *Incidence and outcomes of traumatic brain injury and substance abuse in a New Zealand prison population.* Brain Injury, 1998. **12**(6): p. 455-466.
4. Diamond, P.M., et al., *Screening for traumatic brain injury in an offender sample: a first look at the reliability and validity of the Traumatic Brain Injury Questionnaire.* The Journal of head trauma rehabilitation, 2007. **22**(6): p. 330-338.
5. Colantonio, A., et al., *Traumatic brain injury and early life experiences among men and women in a prison population.* J Correct Health Care, 2014. **20**(4): p. 271-9.
6. Matheson, F.I., et al., *Association between traumatic brain injury and prison charges: a population-based cohort study.* Brain injury, 2020. **34**(6): p. 757-763.
7. McIsaac, K.E., et al., *Association between traumatic brain injury and incarceration: a population-based cohort study.* CMAJ open, 2016. **4**(4): p. E746.
8. Wszalek, J.A., *Cognitive and Neural Mechanisms Underlying Comprehension of Legal Language and Concepts*. 2017: The University of Wisconsin-Madison.
9. Williams, H., J.A. Wszalek, and L.S. Turkstra, *Language impairments in youths with traumatic brain injury: Implications for participation in criminal proceedings.* Journal of head trauma rehabilitation, 2015. **30**(2): p. 86-93.
10. Togher, L., et al., *Training communication partners of people with traumatic brain injury: A randomised controlled trial.* Aphasiology, 2004. **18**(4): p. 313-335.
11. Yuhasz, J.E., *Misconceptions about traumatic brain injury among correctional health care professionals.* Journal of Correctional Health Care, 2013. **19**(2): p. 135-143.
12. Baumann, R.M., et al., *Experiences of violence and head injury among women and transgender women sex workers.* Sexuality research and social policy, 2019. **16**(3): p. 278-288.
13. Nagele, D., et al., *Brain injury in an offender population: Implications for reentry and community transition.* Journal of Offender Rehabilitation, 2018. **57**(8): p. 562-585.
14. Dams-O'Connor, K., et al., *Screening for traumatic brain injury: findings and public health implications.* The Journal of head trauma rehabilitation, 2014. **29**(6): p. 479.
15. Hux, K., T. Schneider, and K. Bennett, *Screening for traumatic brain injury.* Brain Injury, 2009. **23**(1): p. 8-14.
16. Braun, V. and V. Clarke, *What can "thematic analysis" offer health and wellbeing researchers?* Int J Qual Stud Health Well-being, 2014. **9**: p. 26152.
17. Clarke, V. and V. Braun, *Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning.* The psychologist, 2013. **26**(2).