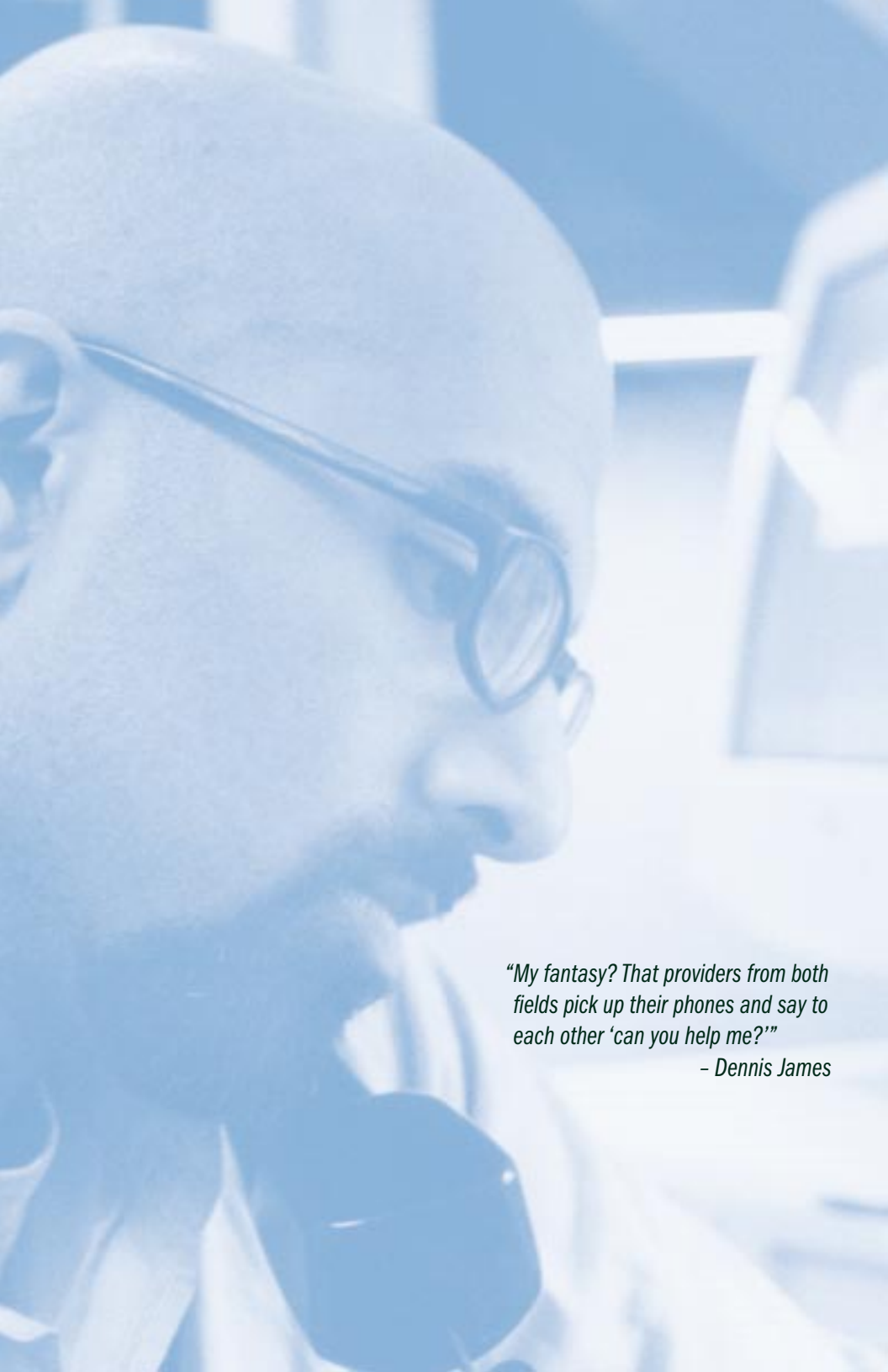
Brain Injury and Substance Abuse:

The Cross-Training Advantage



"My fantasy? That providers from both fields pick up their phones and say to each other 'can you help me?'"

– Dennis James

Table of Contents

Foreword

This educational package (Brain Injury and Substance Abuse: The Cross-Training Advantage manual and video) was put together for providers who work in the fields of Brain Injury and Substance Abuse.

Its aim is to enable providers to recognize the co-occurring condition of Brain Injury and Substance Abuse and modify their screening, assessment and treatment approaches to help clients more successfully re-integrate into the community.

The package was funded by the Ontario Neurotrauma Foundation and put together by a Project Team of Substance Abuse and Brain Injury providers, with input from other providers and clients in both fields. We see it as a first step in a Brain Injury/Substance Abuse cross-training initiative for Ontario.

We began putting the pieces together in 1999 and completed it in September 2001. It was a long process, but not an arduous one, thanks to the importance of the subject and the dedication of the people who gave us their time, suggestions and support.

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Project Team

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Introduction

The links between Brain Injury and Substance Abuse are well documented, yet people with this complex co-occurring condition face formidable, often insurmountable barriers in obtaining appropriate care because:

- Substance Abuse providers aren't trained to identify or manage the cognitive and behavioural problems that clients with Brain Injuries present.
- Brain Injury providers aren't trained to identify or manage Substance Abuse problems.

As a result, clients with this co-occurring condition often fall between the cracks. Their cases may be misunderstood, their treatment inadequate and their recovery jeopardized.

The goals of this manual and video are to:

- enhance understanding of the functional relationships between Brain Injury and Substance Abuse
- improve identification, assessment and treatment of people with both Brain Injury and Substance Abuse problems
- increase collaboration between providers in the two sectors and facilitate more integrated programming

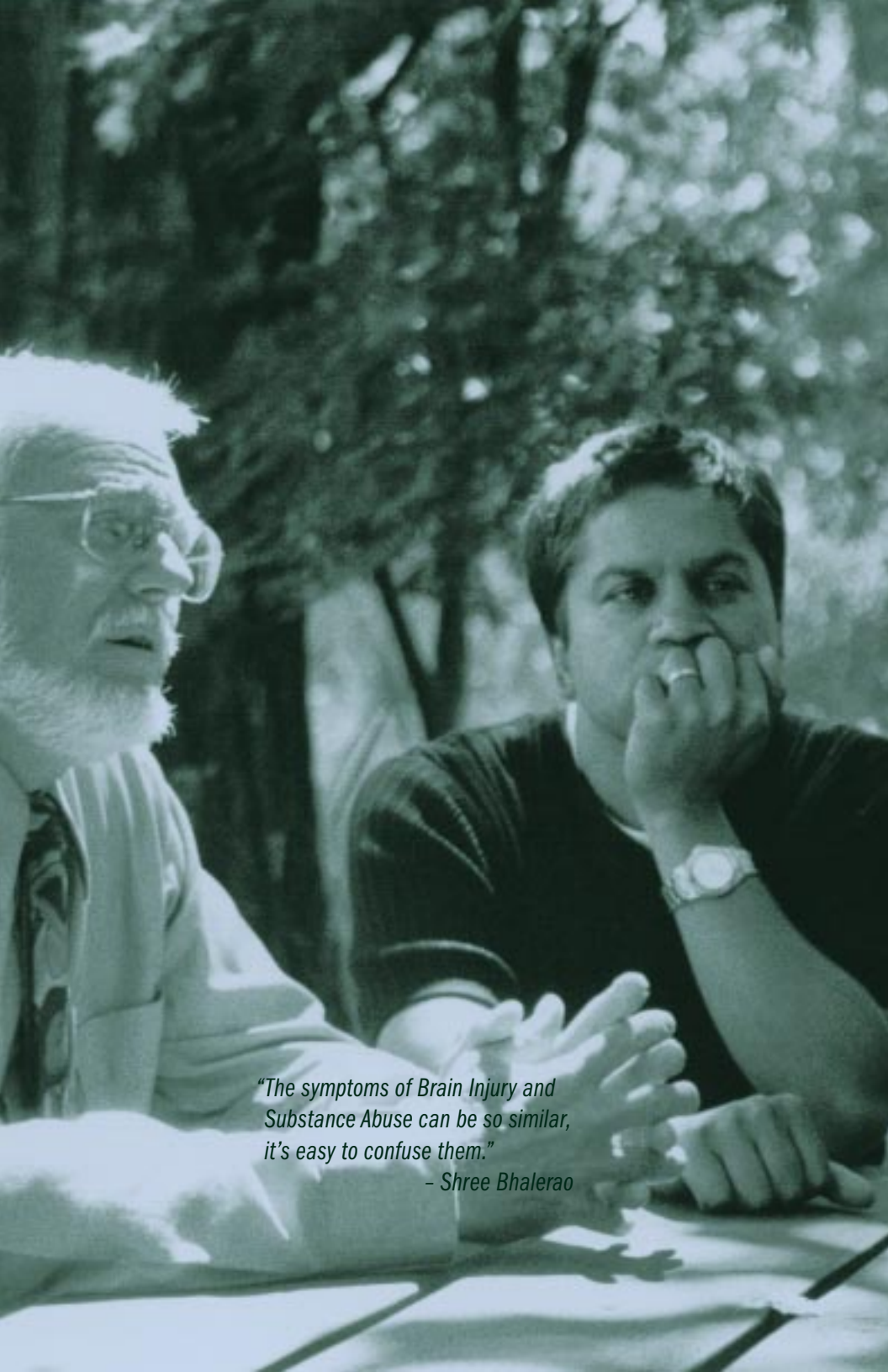
We know this material is not going to solve the problems inherent in the system or turn anyone into an instant expert in a new field. We do hope, however that it will begin a much-needed dialogue between Brain Injury and Substance Abuse providers and help integrate clients with this co-occurring condition back into the community.

Our premise is a positive one: Even without new resources, we can begin to make a difference in the lives of clients who have both Brain Injuries and Substance Abuse problems.

"Even without increased funding there are things we can do now."
– Dennis James

How to use this educational package

While the package can be used individually, participants are encouraged to use it in small groups. Ideally, group participants should read a copy of the manual before the group session, then come together to watch the video, discuss the issues, fill out the questionnaire on the back cover page and send it back to us. The questionnaire will help us evaluate your needs and continue the cross-training.



"The symptoms of Brain Injury and Substance Abuse can be so similar, it's easy to confuse them."

– Shree Bhalerao

Information for both Brain Injury and Substance Abuse providers

The following section is intended to help Brain Injury and Substance Abuse providers understand the correlation between the two conditions, recognize their symptoms and begin to cope with the complexities involved in identifying and treating clients with this co-occurring condition.

Definitions

Substance Use is the use of any psychoactive substance.

Substance Abuse, for the purpose of this video and manual, is the problematic use of alcohol and street drugs; it also includes the problematic use of prescribed drugs.

Brain Injury [1] is damage to the brain, which may be caused:

- traumatically (e.g., from an external force such as a collision, fall, assault or sports injury) or
- through a medical problem or disease process that causes damage to the brain (an internal process or pathology such as a stroke, aneurysm or tumour)

The damage occurs after birth and is not related to:

- a congenital disorder
- a developmental disability
- a process that progressively damages the brain

Effects of Brain Injury

As different parts of the brain control different physical and cognitive functions, how a person is affected by a brain injury will depend on the location and severity of the injury, making every brain injury unique. It is often difficult to determine the extent of damage clients will suffer, but impairments can be lifelong. The main goal of rehabilitation is to maximize functioning.

The Brain[2]

Frontal lobe *- Personality, judgement, reasoning, problem solving, and inhibition, perhaps the highest cortical functions, are the function of this lobe. An area designated for language comprehension called "Broca's area" is contained within the left frontal lobe hemisphere.*

Parietal lobe *- The right side affects left-side motor function, including strength, co-ordination, and sensation. The left side affects right-side motor function.*

Occipital lobe *- This is the primary visual area where the brain receives the visual "picture" from the eyes and interprets it.*

Cerebellum *- Chiefly involved with muscle function, the cerebellum helps maintain balance and provide smooth directed movements.*

Spinal Cord

Temporal lobe *- The right side is responsible for perceptual skills, such as spatial relationships and visual organization. The left side controls expressive language and is called "Wernicke's area". Although memory is a function of the brain as a whole, memory is strongly language based. Damage to the temporal lobe significantly affects these skills.*

Brainstem *- Considered the stalk of the brain, all nerve fibres pass through here, including the cranial nerves. The brainstem performs sensory, motor, and reflex functions. Of primary importance are the vital nerve centres that control heart action, blood vessel diameter, and respiration.*

Substance Abuse and Brain Injury often go hand in hand

- Approximately one-third of (traumatic) Brain Injury survivors have a history of substance abuse prior to their injury.[3]
- Alcohol or other drugs are directly involved in more than one-third of incidents that cause Brain Injury.[4]
- Twenty percent of people who do not have a Substance Abuse problem become vulnerable to Substance Abuse after a Brain Injury.[5]

Why clients with this co-occurring condition fall through the cracks

- Providers are trained to identify and treat either Brain Injury or Substance Abuse, not both.
- Clients with this co-occurring condition often lack insight and may not realize the seriousness of the problem.
- Substance Abuse programs may screen out clients identified as having a Brain Injury.
- Symptoms of Brain Injury and Substance Abuse can present in similar ways and may go unidentified.
- The effects of a Brain Injury can be invisible but they may prevent clients from successfully following a Substance Abuse program.
- Clients with Brain Injuries may lack the motivation necessary to begin Substance Abuse programs.

Brain Injury and Substance Use can be a dangerous mix

- Alcohol and drugs are neurotoxins that negatively affect recovery after a Brain Injury by interfering with the ability of nerve endings to reconnect.
- Alcohol and drugs have a more intense effect after a Brain Injury.
- Substance Abuse can increase cognitive impairment, depression, seizures and disinhibition; and can cause problems with balance, walking and talking.
- Substances interact with prescribed medication.
- Substance Abuse can lead to another Brain Injury.
- Each subsequent Brain Injury requires less force to do more damage.

How Substance Abuse emerges

As long as client is in hospital or in rehabilitation, Substance Abuse may not be a problem. It can begin or return to previous levels within two years of discharge and can accelerate two to five years after discharge.

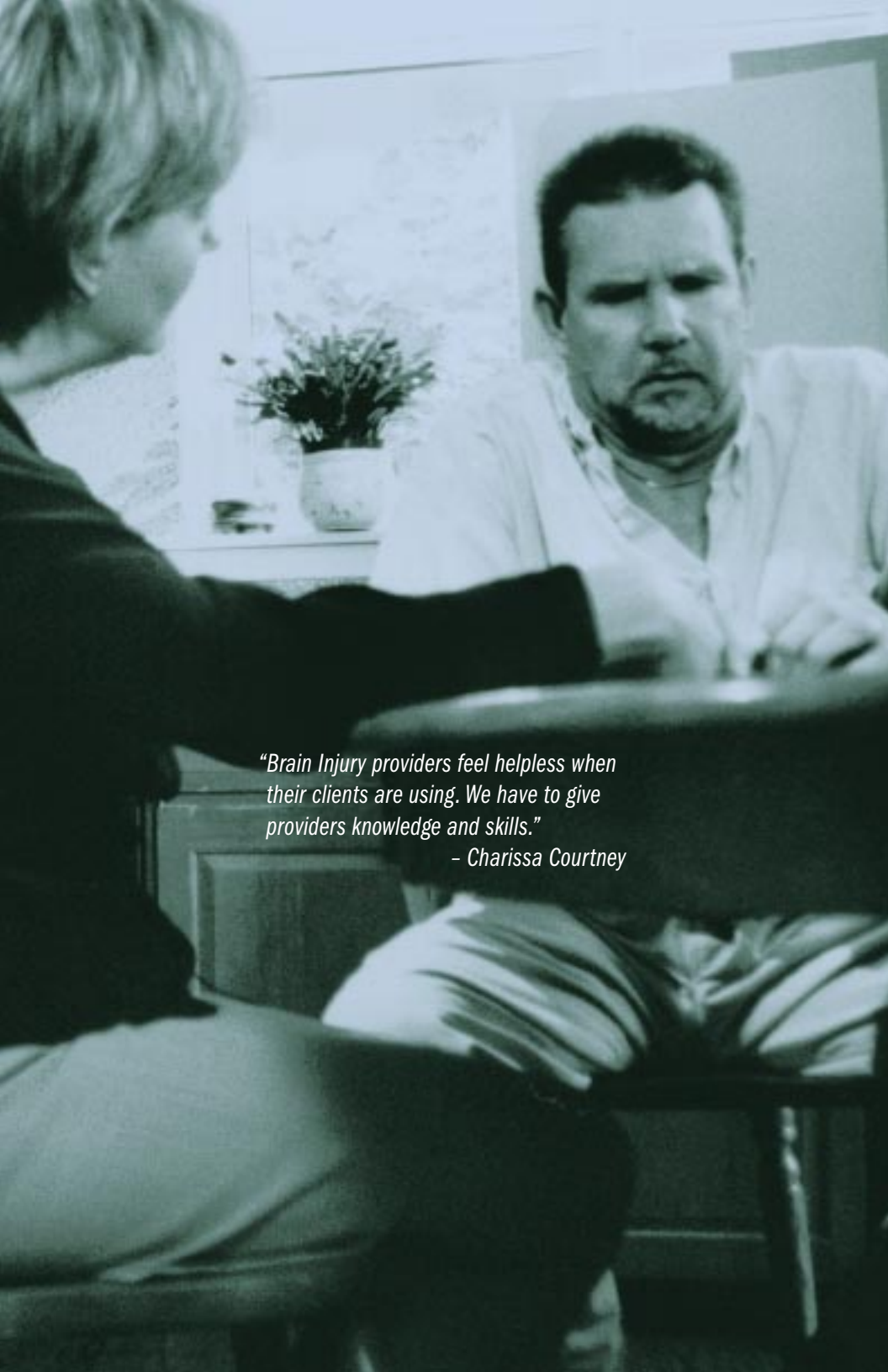
Symptoms that may be common to both Brain Injury and Substance Abuse

- short term memory loss
- impaired thinking
- difficulty with balance and co-ordination
- impulsivity
- mood disturbances *(diminished emotional control)*
- personality changes
- diminished judgement
- fatigue
- depression
- sleep problems
- decreased frustration tolerance

Symptoms of Brain Injury that are NOT associated with Substance Abuse

- problems with learning, attention and memory *(inability to focus, concentrate and remain on task; decreased ability to process information or read; decreased comprehension; decreased ability to follow)*
- difficulty with problem-solving
- initiation problems *(difficulty getting started, following through, being motivated)*
- word-finding difficulty
- perseveration *(repetition of an idea or action)*
- disorganization *(poor time-management, misplacing items)*
- tangential remarks *(going off topic)*
- sequencing difficulties *(inability to do tasks in order or follow steps)*
- inappropriate social behaviour
- headaches, dizziness or poor balance
- disorientation *(becoming lost or having trouble locating addresses, remembering landmarks)*
- lack of insight *(inability to recognize one's own deficits; inability to appreciate the consequences of own behaviours; low self-awareness)*
- difficulty generalizing learning from one situation to another

Please refer to the list of contacts and references at the back of this manual for more information on these issues.



"Brain Injury providers feel helpless when their clients are using. We have to give providers knowledge and skills."

– Charissa Courtney

Information on Substance Abuse for Brain Injury providers

This section is intended to give Brain Injury providers an overview of Substance Abuse, help them identify it and give them some tools to help move clients into appropriate Substance Abuse programs.

Red flags: indicators that increase risk of use

- prior history of Substance Abuse
- social isolation *(estrangement from friends, family and co-workers)*
- strained family/marital relations and lack of support
- boredom *(not working, no activities)*
- difficulty in adjusting to changed circumstances *(client may be angry, depressed, anxious)*
- self-medicating to feel "normal" *(to deal with chronic pain, grief and sense of loss)*

Signs that your client may be using

- deterioration in functioning
- increased irritability and agitation
- decreased self-care/change in physical appearance
- increased erratic behaviour
- missed appointments
- physical evidence of alcohol: smell/red eyes
- physical evidence of street drugs: dilated pupils

Progression of Substance Use

Substance Use often proceeds through the following five stages.

- Use: social or recreational use
- Misuse: occasional bouts of problematic use
- Abuse: repeated occasions of misuse
- Dependency: using as a coping strategy
- Addiction: physiological dependence on the substance leading to withdrawal if use is discontinued

"They're depressed, socially isolated, stigmatized. Even if they didn't use before the injury, they're at risk to start after."

– Mitzi Jarrett

What Brain Injury providers can do about Substance Abuse

- Educate client and family about the risks of clients with Brain Injuries using substances.
- Engage family/social network in actively supporting the client to address the issue.
- Take a history of client's prior and current use. Be specific — ask, "What's the most you've used? The least?"
- Ask client about his/her family history of Substance Use.
- Ask what effect use is having on client's life (social, family, job, legal).
- Use CAGE Questionnaire (p. 19) and Weighing the Pros and Cons of Use (p. 20) to engage client with the issue.
- Gain an understanding of the Model for Change (p. 22). It may help you move your client through the stages.
- Assess stressors and risk factors that might cause client to begin using *(isolation, boredom, depression, job loss, etc)*.
- Help client find meaningful substance-free activities.
- Provide support for behavioural changes before, during and after the Substance Abuse program to build motivation and reinforce new behaviours.
- Establish ongoing contact with professionals in Substance Abuse programs to exchange information and make sure the Substance Abuse program is meeting the client's learning needs.

CAGE Questionnaire to screen for a possible drinking problem[6]

1. Have you ever felt you ought to Cut down on your drinking?
2. Have people Annoyed you by criticizing your drinking?
3. Have you ever felt bad or Guilty about your drinking?
4. Have you ever had a drink first thing in the morning (Eye-opener) to stop your nerves or get rid of a hangover?

Two or more affirmative answers indicate probable alcoholism. Any single affirmative answer deserves further evaluation.

Make Contact

Make contact with Substance Abuse providers to help identify potential Substance Use and move client into appropriate Substance Abuse program. Maintain ongoing contact with Substance Abuse provider to help individualize program changes and monitor client's progress.

Weighing the Pros and Cons of Change

Make copies of the following questionnaire for your clients. It may help you approach the topic of Substance Abuse in a non-confrontational way. Its purpose is to help clients reach a clear decision about whether they want to change their behaviour.[7]

Quitting Drinking / Drug Use

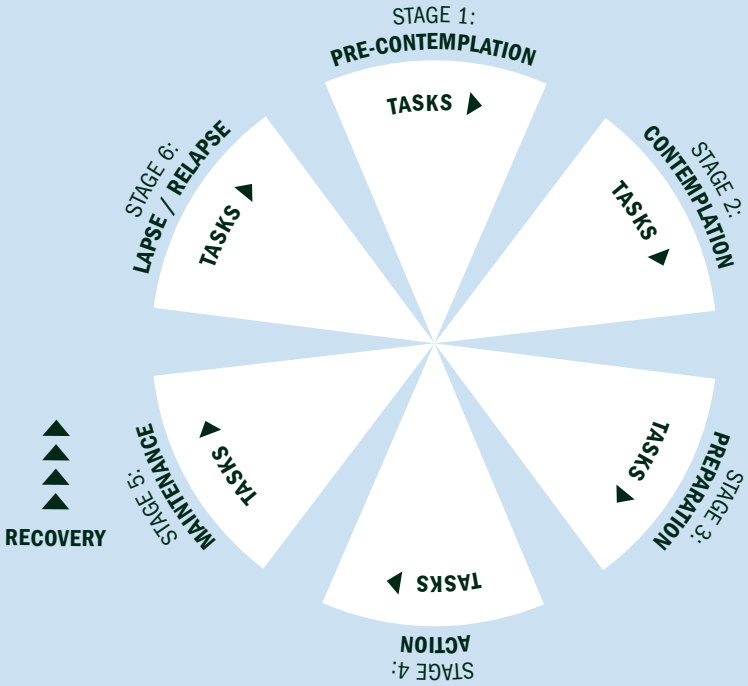
PROS (what's good about quitting)	CONS (what's not good about quitting)

Continuing to Drink / Use Drugs

PROS (what's good about continuing)	CONS (what's not good about continuing)

Model for stages of change and tasks of Substance Abuse treatment

This Stages of Change Model can be applied to most behavioural changes.[8] It's presented here to give Brain Injury providers a framework they might adapt for addressing Substance Abuse issues.



STAGE 1: Pre-contemplation

Although others can see a problem with substances, the client is not aware of one.

Tasks of provider

- Give personal and factual information to client and the family.
- Factual information could include the dangers of Substance Abuse after a Brain Injury.
- Personal information could include a description of problems that could occur in the household when client abuses substances.
- Ask for the family's support.
- Discuss the problems in a general way, e.g., "What would have to happen to show you that you had a problem with substances?"

STAGE 2: Contemplation

The client is thinking about whether or not there is a problem. This stage is characterized by ambivalence, fear of change, wishful thinking.

Tasks of provider

- Move client one step further by looking at the pros and cons of using/not using.
- Have client continue to think about what would have to happen to lead to change.
- Maintain a neutral role as a facilitator without becoming confrontational.

STAGE 3: Preparation

At this point client is ready to engage in some kind of change rather than simply contemplate it for some time in the future.

Task of provider

- Gather information on Substance Abuse programs in client's area.
- Decide which programs are best suited to client's cognitive functioning.
- Get telephone numbers, make initial contacts.
- Talk with Substance Abuse providers about client's cognitive difficulties and decide what modifications could occur in the program to suit client's learning needs.
- Keep in mind that Alcoholics Anonymous or other 12-step programs are sometimes the best option for clients with Brain Injuries as they operate on a one-day-at-a-time basis.

STAGE 4: Action

Client stops using. S/he may enter a program, detoxification centre or 12-step group.

Task of provider

- As lack of motivation and short-term memory loss are common in clients with Brain Injuries, it's a good idea to have provider or family/support system attend sessions with client.
- Provider should talk with Substance Abuse program leaders to discuss what modifications would help client follow through.

STAGE 5: Maintenance

Client consolidates and internalizes changes with practice and support.

Tasks of provider

- Keep in contact with client, family and Substance Abuse providers to monitor progress of client and make further modifications to program as necessary.
- Continue reinforcing behavioural changes.

STAGE 6: Lapse/Relapse

Often people in Substance Abuse recovery return to initial use.

Tasks of provider

- Return to previous stage and tasks.
- Consider new strategies to consolidate learning for client.
- Assess or get assessed the possible need for detoxification.
- Make relapse prevention plans with client and help him/her revise or re-adapt these plans.

What to keep in mind

Client may not follow a linear progression of stages. Returning to using is often part of a normal recovery. Providers should continue with support.

Paths of Substance Abuse treatment

1. Client recognizes that s/he has a problem and seeks a formal program.

2. Client is interviewed, assessed, accepted or referred to a program.

3. Client attends treatment, which may range from individual counselling to an intensive residential program. (Most intensive programs are three weeks in duration with sessions on stress reduction, self-esteem, ways to reduce cravings, preventing relapses, identifying triggers. Additional support is offered in “recovery homes”, which have longer-duration supportive housing.)

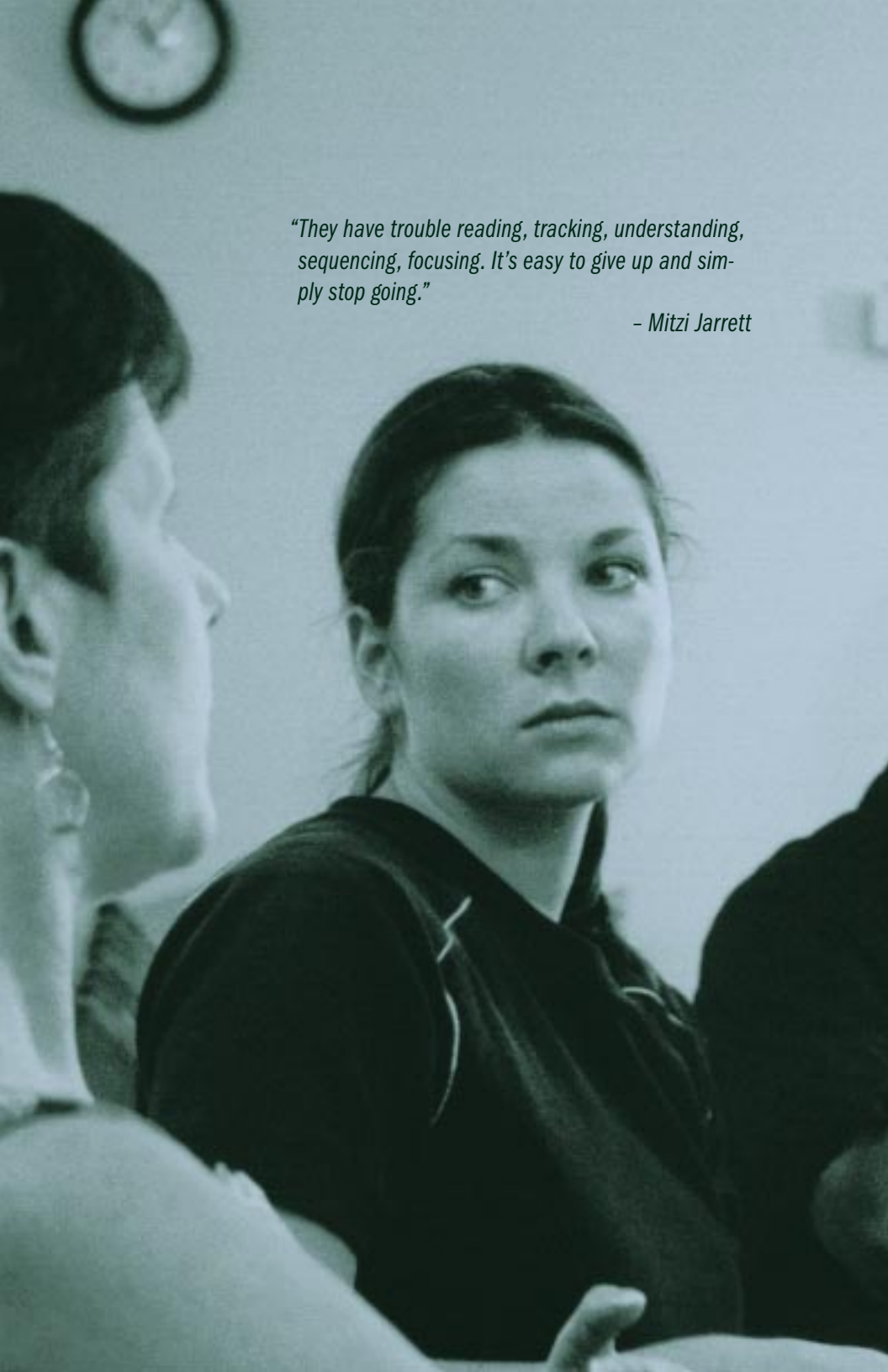
4. Client may be introduced to Alcoholics Anonymous or other program and encouraged to attend. (Some programs incorporate a 12-step approach in their structure.)

5. Client continues with support and regular meetings for a period of time that varies with programs.

Alcoholics Anonymous or other 12-step programs may be attended instead of or in addition to formal treatment. These programs may be most effective for clients with Brain Injuries.

"Something as simple as going to an addictions meeting with your client can make all the difference in the world."
– Charissa Courtney

Please refer to the list of contacts and references at the back of this manual for more information on this section. The next section is written specifically for Substance Abuse providers.



"They have trouble reading, tracking, understanding, sequencing, focusing. It's easy to give up and simply stop going."

– Mitzi Jarrett

Information on Brain Injury for Substance Abuse providers

This section is intended to give Substance Abuse providers an overview of the complexities of Brain Injury and its rehabilitation. It's also intended to help Substance Abuse providers identify Brain Injuries and make whatever changes they can to their programs to accommodate clients who have this co-occurring condition.

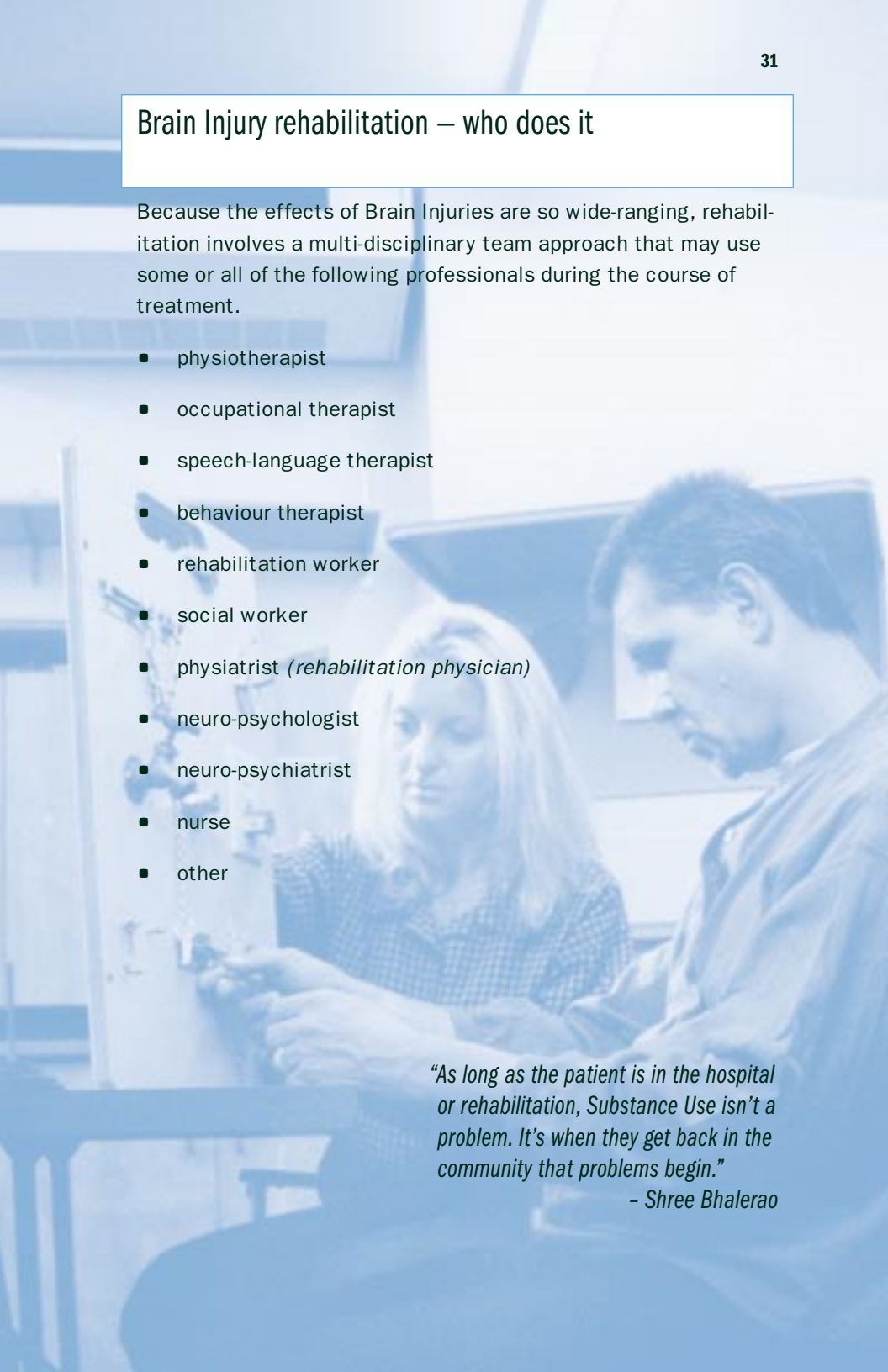
Brain Injury rehabilitation – what's done

- therapy for physical deficits *(mobility, co-ordination, balance, pain reduction and strength)*
- cognitive retraining *(strategies to improve memory, problem-solving, attention, comprehension, language skills)*
- education for client and family about Brain Injury
- behaviour management *(control inappropriate behaviours)*
- help with activities of daily living *(time management, establishing routines)*
- counseling client and family to adjust to changed circumstances
- connecting client to multiple programs and advocating on his/her behalf with various systems *(legal, fiscal, housing, vocational)*

Brain Injury rehabilitation – who does it

Because the effects of Brain Injuries are so wide-ranging, rehabilitation involves a multi-disciplinary team approach that may use some or all of the following professionals during the course of treatment.

- physiotherapist
- occupational therapist
- speech-language therapist
- behaviour therapist
- rehabilitation worker
- social worker
- physiatrist *(rehabilitation physician)*
- neuro-psychologist
- neuro-psychiatrist
- nurse
- other



"As long as the patient is in the hospital or rehabilitation, Substance Use isn't a problem. It's when they get back in the community that problems begin."

– Shree Bhalerao

Some ways to identify clients with Brain Injuries in intake or any time you suspect a Brain Injury

Look for these signs:

- symptoms listed on page 12
- physical signs like scars or irregularities of the face and head
- problems with balance, speech and/or co-ordination.
- problems with thought processes
- tangential thinking

Ask these questions :

- Have you ever been involved in a crash? *(motor vehicle, fall, sports activity)*
- Have you ever had a stroke?
- Have you ever fallen or been hit on the head? How often? When?
- Have you ever had periods of unconsciousness?
- Have you ever been hospitalized? Be specific. When? How many times?
- Was surgery done? When? Where?
- Are you on any seizure medication?
- Are you on any other medication? *(Medication could be masking or exacerbating symptoms. This question will also rule out additional medical conditions)*

How clients with Brain Injuries may present in program

They may:

- miss sessions
- not identify with group
- miss information, misunderstand what's said and fall behind
- ask about material already covered
- get stuck on one word or topic
- talk too much or go off on a tangent
- have difficulty keeping up with the conversation
- have poor follow-through on homework and assignments
- not pick up on social cues
- make socially inappropriate remarks *(overly personal/blunt)*
- become easily frustrated, irritable, impatient and overly emotional
- be unable to remember new information although historical memory is sound

Make Contact

With the client's consent, make contact with Brain Injury providers, therapists or physicians mentioned in sessions with client. If you discover there has been a Brain Injury, ask a Brain Injury specialist what you can do to tailor the sessions to the client's learning style. Keep the contact going throughout the program to monitor the progress of client and individualize program changes as necessary.

How to modify your approach for clients with Brain Injuries

- Slow down in sessions.
- Simplify your language.
- Offer information in small bites
- Give client extra time or individual time.
- Repeat information using short, simple phrases.
- Encourage note-taking or hand out printed notes.
- Anticipate a higher frequency of off-topic remarks.
- Keep instructions brief and clear.
- Get feedback — ask "Do you understand?"
- Summarize ideas and points.
- Redirect client when s/he goes off topic, talks excessively or behaves inappropriately.

What to keep in mind

- Client may lack insight as a result of the injury and may not recognize his/her cognitive deficits.
- Avoid confrontation over inappropriate behaviours. This will only escalate the situation. Instead, redirect client and roll with resistance. Be flexible, but make clear what's acceptable.
- Don't assume that non-compliance arises from lack of motivation or resistance. Check it out with client.

"The Brain Injury may have happened five years ago but the effects could still be there. Find out if they've been hospitalized, if they've had periods of unconsciousness, had surgery."

– Shree Bhalerao

Please refer to the list of contacts and references at the back of this manual for more information.

Questions and Answers

Questions were solicited from providers in both Brain Injury and Substance Abuse. The most frequently-asked questions are included with a response from the Project Team.

Q: What's the best way to respond to a client when s/he denies having a Substance Abuse problem?

A: First of all, don't confront or try to argue clients out of their point of view. You might ask for a description of how they see their Substance Use, what they like about it, what they don't like about it. You might also ask them to describe why they think others believe there is a problem. Above all, be patient and be prepared to raise the issue repeatedly, but gently.

Q: What strategies have not been successful for clients with Brain Injuries in Substance Abuse programs?

A: The reason we were motivated to put this education package together was that we recognized that too often, the impact of either Brain Injury or Substance Abuse was ignored or missed. This is the least successful strategy.

Q: Are there smaller Substance Abuse groups for clients with Brain Injuries?

A: It would seem to be a good idea to develop smaller support groups. However, to our knowledge, there currently are no groups like this in operation in Ontario.

Q: What should I do if a client with a Brain Injury is slowing down a Substance Abuse group?

A: Redirect the client back to the topic being discussed. If the client is talking excessively or can't finish with the topic, feel free to make clear that you need input from others, need to move on etc. Remember that clients with Brain Injuries may not pick up on social cues *(e.g., that the group is becoming frustrated)* so the facilitator needs to make clear what's appropriate and set limits.

Q: What strategies do Substance Abuse providers suggest to encourage clients who are reluctant to go into Substance Abuse programs?

A: Reluctance implies a certain level of willingness or a desire to attend but with reservation. First and foremost, try to determine what is producing the reluctance. Realize that a certain degree of reluctance is common among people entering a Substance Abuse program. Support in the form of information gathering or pre-arranged and prepared appointments with a Substance Abuse program or provider may be very helpful. Accompanying the clients to an Alcoholics Anonymous (or any other) meeting can provide a reassuring experience.

Q: Is a client with a Brain Injury more vulnerable to substances than s/he was before the injury?

A: Yes. Alcohol and drugs are neurotoxins that affect recovery by interfering with the ability of nerve endings to reconnect after a Brain Injury. Substances have a more powerful effect after a Brain Injury. This effect is even more powerful on women than men. Substances can interact with prescribed medication. Substance Use can lead to high-risk behaviour, which can lead to another Brain Injury. Each subsequent Brain Injury requires less force to do more damage.

Q: How many drinks are considered safe after a Brain Injury.

A: There is no specific number of drinks that is considered safe after a Brain Injury. Each client is unique and each Brain Injury is unique, so each person's tolerance for alcohol and other substances varies. Total abstinence may not be realistic for some clients and in such cases, use should be minimal and activities while using should be limited.

Q: Should Substance Abuse programs accept people with Brain Injuries?

A: In most instances, yes. Substance Abuse providers will probably need to make some modifications to how they present their material to take cognitive impairments into account. There also has to be a good match between the client and the program. Some clients with Brain Injuries cannot successfully participate in a Substance Abuse program. For these people, integrating Substance Abuse material into Brain Injury programming is a better solution.

Q: How do I get a client with a Brain Injury to agree and stick to an agreement about how much and how often s/he will use?

A: This is like any behavioural contract with a client. Agreement and compliance rates are higher if the client supplies the parameters.

Q: Are there family support systems in Substance Abuse centres that the family can attend for support?

A: Many Substance Abuse programs have family support groups and family education groups. Within the Alcoholics Anonymous framework, Al Anon is specifically for family members.

Q: Are Substance Abuse providers ever made part of a Brain Injury team as an internal or external support?

A: Recently, some Substance Abuse providers participated in Brain Injury rehabilitation. Our belief is that there should be more of this kind of co-operation and we have created this educational package to support this view.

Q: What do clients with Brain Injuries need from Substance Abuse Providers to feel more comfortable in our programs?

A: They need to know that the provider is sensitive to the person with cognitive difficulties and is willing to make the process easier by repeating, slowing down, using handouts, simplifying speech. They need the provider to communicate directly with them by asking, "How it is going? What would help? Are you able to follow?"

Q: Is the Alcoholics Anonymous Model appropriate/effective for people with Brain Injuries?

A: AA has proven a very effective support and model for many people and the most effective support for some people. The accessibility and frequency of meeting, the availability of supportive contacts combined with easily-remembered reminder slogans could be particularly helpful for some people with Brain Injuries.

Q: Given their cognitive difficulties, how do you help clients with Brain Injuries transfer what they have learned in treatment into their daily lives?

A: People with Brain Injuries do have trouble generalizing information learned in a program to their everyday life. It's vital that rehabilitation providers and family members actively reinforce and support the client to follow through on new routines and behaviours.

Contacts

Addiction Clinical Consultation Service: **1-888-720-2227**
When you need professional advice to help your client with an alcohol or drug problem.

Canadian Association for Mental Health: **1-800-463-6273**
Alcohol and drug treatment in Ontario, A Guide for People Seeking Help.

Centre for Addiction and Mental Health: **1-800-463-6273**
Website: **www.camh.net**

Drug and Alcohol Registry of Treatment (DART)
Office Line: **519-439-0174** Crisis Line: **1-800-565-8603**
Website: **www.dart.on.ca**

Drug and Alcohol Treatment Info Line: **1-800-565-8603**
Help Is Just a Call Away.

Metro Addiction Assessment Referral Service: **416-599-1448**

Ohio Valley Center for Brain Injury Prevention and Rehabilitation: **614-293-3802**
Website: **www.ohiovalley.org** (Ask about their Substance Abuse Information Series)

Ontario Brain Injury Association: **1-800-263-5404**
Website: **www.obia.on.ca**
(for information on Brain Injury and contacts for local associations)

Regional Assessment Referral Service
For nearest location and contact information call DART

Toronto Acquired Brain Injury Network: **416-597-3057**
Website: **www.torontoabinetwork.ca** email: **abi.network@torontorehab.on.ca**

References

Endnotes

1. Toronto ABI Network definition of ABI, May 1999.
2. Brain Injury: The Perspective from the Other Side of the Looking Glass. Ontario Brain Injury Association
3. Corrigan, 1995; Kolakowsky-Haynes et al., 1999; NHIF task force cited in Sparadeo et al., 1990.
4. Boyle et al., 1991; Corrigan, 1995; Dikmen et al., 1995; Drubach et al., 1993; Loiselle et al., 1993.

Endnotes continued

5. Ohio Valley Center for Brain Injury Prevention and Rehabilitation. (1997). Substance use and abuse after brain injury; A programmer's guide. Columbus, OH: The Center.
6. Ewing J.A., Detecting Alcoholism. The CAGE questionaire. JAMA 1984;252;1907
7. Miller, W. R., & Rollnick, S. (1991). Motivational interviewing. New York: Guilford.
8. Prochaska, J.O., DiClemente, C. C., & Norcross, J.C., 1992.

Books / Reports

Krywonis, M., Chalmers, H., & Phillips, K. (1996, November). ***Acquired brain injury and substance abuse: Provincial treatment and training issues.*** Toronto: Addiction Research Foundation.

Marion, D. W. (1999). ***Traumatic brain injury.*** New York: Thieme Medical Publishers.

Journal Articles

Bigler, E. D., Blatter, D. D., Johnson, S. C., Anderson, C. V., Russo, A. A., Gale, S. D., Ryser, D. K., MacNamara, S. E., & Bailey, B. J. (1996). ***Traumatic brain injury, alcohol and quantitative neuroimaging: Preliminary findings.*** Brain Injury, 10(3), 197–206.

Bombardier, C. H. (1995). ***Alcohol use and traumatic brain injury.*** Western Journal of Medicine, 162(2), 150–151.

Bombardier, C. H., Ehde, D., & Kilmer, J. (1997). ***Readiness to change alcohol drinking habits after traumatic brain injury.*** Archives of Physical Medicine and Rehabilitation, 78(6), 592–596.

Bombardier, C. H., Kilmer, J., & Ehde, D. (1997). ***Screening for alcoholism among persons with recent traumatic brain injury.*** Rehabilitation Psychology, 42(4), 259–271.

Bombardier, C. H., & Rimmele, C. T. (1999). ***Motivational interviewing to prevent alcohol abuse after traumatic brain injury: A case series.*** Rehabilitation Psychology, 44(1), 52–67.

Boyle, M. J., Vella, L., & Moloney, E. (1991). ***Role of drugs and alcohol in patients with head injury.*** Journal of Rehabilitation and Social Medicine, 84(10), 608–610.

Corrigan, J. D. (1995). ***Substance abuse as a mediating factor in outcome from traumatic brain injury.*** Archives of Physical Medicine and Rehabilitation, 76(4), 302–309.

Journal Articles continued

Corrigan, J. D., Lamb-Hart, G. L., & Rust, E. (1995). ***A programme of intervention for substance abuse following traumatic brain injury.*** Brain Injury, 9(3), 221–236.

Delmonico, R. L., Haniey-Peterson, P., & Englander, J. (1998). ***Group psychotherapy for persons with traumatic brain injury: Management of frustration and substance abuse.*** Journal of Head Trauma Rehabilitation, 13(6), 10–22.

Dikmen, S. S., Machamer, J. E., Donovan, D. M., Winn, H. R., & Temkin, N. R. (1995). ***Alcohol-use before and after traumatic head-injury.*** Annals of Emergency Medicine, 26(2), 167–176.

Drubach, D. A., Kelly, M. P., Winslow, M. M., & Flynn, J. P. (1993). ***Substance abuse as a factor in the causality, severity, and recurrence rate of traumatic brain injury.*** Maryland Medical Journal, 42(10), 989–993.

Fuller, M. G., Fishman, E., Taylor, C. A., & Wood, R. B. (1994). ***Screening patients with traumatic brain injuries for substance abuse.*** Journal of Neuropsychiatry and Clinical Neurosciences, 6(2), 143–146.

Gentiletto, L. M., Rivara, F. P., Donovan, D. M., Jurkovich, G. J., Daranciang, E., Dunn, C. W., Villaveces, A., Copass, M., & Ries, R. R. (1999). ***Alcohol interventions in a trauma center as a means of reducing the risk of injury recurrence.*** Annals of Surgery, 230(4), 473–480.

Gurney, J. G., Rivara, F. P., Mueller, B. A., Newell, D. W., Copass, M. K., & Jurkovich, G. J. (1992). ***The effects of alcohol intoxication on the initial treatment and hospital course of patients with acute brain injury.*** Journal of Trauma, 33(5), 709–713.

Jurkovich, G. J., Rivara, F. P., Gurney, J. G., Fligner, C., Ries, R., Mueller, B. A., & Copass, M. (1993). ***The effect of acute alcohol intoxication and chronic alcohol abuse on outcome from trauma.*** Journal of the American Medical Association, 270(1), 51–56.

Kelly, D. F. (1995). ***Alcohol and head-injury: An issue revisited.*** Journal of Neurotrauma, 12(5), 883–890.

Kelly, M. P., Johnson, C. T., Knoller, N., Drubach, D. A., & Winslow, M. M. (1997). ***Substance abuse, traumatic brain injury and neuropsychological outcome.*** Brain Injury, 11(6), 391–402.

Kolakowsky-Hayner, S. A., Gourley, E. V., Kreutzer, J. S., Marwitz, J. H., Cifu, D. X., & McKinley, W. D. (1999). ***Pre-injury substance abuse among persons with brain injury and persons with spinal cord injury.*** Brain Injury, 13(8), 571–581.

Kreutzer, J. S., Marwitz, J. H., & Witol, A. D. (1995). ***Interrelationships between crime, substance abuse, and aggressive behaviours among persons with traumatic brain injury.*** Brain Injury, 9(8), 757–768.

Kreutzer, J. S., Witol, A. D., & Marwitz, J. H. (1996). ***Alcohol and drug use among young persons with traumatic brain injury.*** Journal of Learning Disabilities, 29(6), 643–651.

Kreutzer, J. S., Witol, A. D., Sander, A. M., Cifu, D. X., Marwitz, J. H., & Delmonico, R. (1996). ***A prospective longitudinal multicenter analysis of alcohol use patterns among persons with traumatic brain injury.*** Journal of Head Trauma Rehabilitation, 11(5), 58–69.

Kreutzer, J., Sander, A., & Fernandex, C. (1997). ***Misperceptions, mishaps and pitfalls in working with families after traumatic brain injury.*** Journal of Head Trauma Rehabilitation, 12(6), 63–73.

Kwasnica, C. M., & Heinemann, A. (1994). ***Coping with traumatic brain injury: Representative case studies.*** Archives of Physical Medicine and Rehabilitation, 75(4), 384–389.

Langley, M. J., Lindsay, W. P., Lam, C. S., & Priddy, D. A. (1990). ***A comprehensive alcohol abuse treatment programme for persons with traumatic brain injury.*** Brain Injury, 4(1), 77–86.

Leach, L., Frank, R., Bouman, D., & Farmer, J. (1994). ***Family functioning, social support and depression after traumatic brain injury.*** Brain Injury, 8(7), 599–606.

Loiselle, J. M., Baker, M. D., Templeton, J. M., Jr., Schwartz, G., & Drott, H. (1993). ***Substance abuse in adolescent trauma.*** Annals of Emergency Medicine, 22(10), 1530–1534.

Pires, M. (1989). ***Substance abuse: The silent saboteur in rehabilitation.*** Nursing Clinicians in North America, 24(1), 291–296.

Prochaska, J. O., DiClemente, C. C., & Norcross, J.C. (1992). ***In search of how people change; Applications to addictive behaviors.*** American Psychologist, 47, 1102–14.

Rivara, F. P., Koepsell, T. D., Jurkovich, G. J., Gurney, J. G., & Soderberg, R. (1993). ***The effects of alcohol abuse on readmission for trauma.*** Journal of the American Medical Association, 270(16), 1962–1964.

Sander, A. M., Witol, A. D., & Kreutzer, J. S. (1997). ***Alcohol use after traumatic brain injury: Concordance of patients' and relatives' reports.*** Archives of Physical Medicine and Rehabilitation, 78(2), 138–142.

Solomon, D. A., & Malloy, P. F. (1992). ***Alcohol, head injury, and neuropsychological function.*** Neuropsychological Review, 3(3), 249–280.

Sparadeo, F. R., Strauss, D., & Barth, J. T. (1990). ***The incidence, impact, and treatment of substance abuse in head trauma rehabilitation.*** Journal of Head Trauma Rehabilitation, 5(3), 1–8.

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A quick review...

for Brain Injury providers

- Educate the client and the family about the risks of people with a Brain Injury using substances.
- Engage the family/network in actively supporting the client to address the issue.
- Take a history of client's prior and current use. Be specific—ask 'what's the most you've used; the least'.
- Ask client about his/her family history of Substance Use.
- Ask about the impact on the client's life (social, family, job, legal).
- Use CAGE Questionnaire (see p. 19)and Pros and Cons of Use (p. 20) to engage the client with the issue.
- Gain an understanding of the model for stages of change (p. 22). It may help you move your client through the stages.
- Assess stressors and risk factors that might cause client to begin using (isolation, boredom, depression, job loss).
- Help client find meaningful substance-free activities.
- Provide support for behaviour changes before, during and after Substance Abuse program to build motivation and reinforce new behaviours.
- Establish ongoing contact with professionals in Substance Abuse programs to exchange information and make sure the Substance Abuse program is meeting the client's learning needs.

for Substance Abuse providers.

- Look for signs of Brain Injury (p. 12).
- Ask specific questions in assessment (p. 32).
- Contact a local Brain Injury Provider for help and advice.
- Followup apparent non-compliance with questions about possible Brain Injury (p. 32).
- Look for signs of trouble in program (p. 33).
- Modify your approach to meet client's learning style (p. 34).

Brain Injury and Substance Abuse: The Cross-Training Advantage

Participation Feedback Questionnaire

This questionnaire will help up assess your needs and continue with this education program. If you're using the material individually, please copy this questionnaire, complete it and fax it back to **Dennis James at CAMH (416) 425-7896**. If you're conducting a small group, please make copies of the questionnaire for all participants and mail them to Dennis James, Clinical Director, Assessment and General Treatment, Addiction Programs, CAMH, 33 Russell Street, Toronto Ontario, M5S 2S1.

1 Please indicate which field you are in (please circle one):
(Brain Injury) (Substance Abuse)

2 How did you use this package? (individually) (in a group)

3 (a) Do you have experience working with clients with Brain Injuries?
(Yes) (No) If yes, for how many years? ____

(b) Do you have experience working with clients who abuse substances?
(Yes) (No) If yes, for how many years? ____

4 (a) The level of the materials in the manual for Brain Injury providers was:
(too basic) (about right) (too advanced)

(b) The level of materials in the manual for Substance Abuse providers was:
(too basic) (about right) (too advanced)

5 (a) The content of the video for Brain Injury providers was:
(too basic) (about right) (too advanced)

(b) The content of the video for Substance Abuse providers was:
(too basic) (about right) (too advanced)

6 Did this package supply the information you were hoping for? (Yes) (No)

Please rate the next group of statements using the following scale:
1 = strongly agree 2 = agree 3 = neutral 4 = disagree 5 = strongly disagree

7 I believe this training program has:

(a) Increased my skill set
1 2 3 4 5

(b) Increased my awareness of this problem
1 2 3 4 5

7 continued

(c) Increased my comfort/confidence
1 2 3 4 5

8 I feel I can use information I have learned in this program in my interactions with clients and their families.
1 2 3 4 5

9 Would you find a workshop on Brain Injury and Substance Abuse helpful?
(Yes, half-day) (Yes, full-day) (No)

10 What did you find most helpful in this package?

_____

_____

_____

_____

11 What could have been done differently?

_____

_____

_____

_____

12 Other comments:

_____

_____

_____

_____

_____

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