THINGS I DIDN'T KNOW ABOUT **SUBSTANCE USE AND BRAIN INJURY**

By Carolyn Lemsky, PhD, C.Psych

After 25 years of rehabilitation practice, my greatest regret is that I didn't know more about addictions and substance misuse early in my career. Like many clinicians, I overestimated the danger and complexity of working with clients who continued their substance use, and I underestimated my capacity as a clinician in inpatient and community outreach settings to do something useful. I didn't question the wisdom of waiting for the substance use issue to be addressed before rehabilitation could commence, or kicking substance-using patients out of treatment settings.

Fortunately, I met a few clients whose repeated crises, reinjury and vocal family advocates motivated me to develop a more realistic attitude. The other lucky stroke was meeting some concerned addictions professionals at the Centre for Addictions and Mental Health who recognized the high rate of co-morbid brain injury in their client population, and who were interested in creating practical solutions.

Co-morbid ABI and Substance Abuse

The nature and extent of alcohol misuse and brain injury has been studied to some extent, although there is very little information about street drugs and the misuse of prescription drugs. Between 30% and 50% of adolescents and adults surviving brain injuries that require hospitalization have a pre-injury history of problematic substance abuse.

There is evidence that in people whose injury was severe enough to require medical intervention, substance use diminishes after injury, with a trend toward increasing substance misuse after the two-year post-injury mark. This may be because people are generally told by their physicians to abstain from substance use for a year or two following injury. But it is also likely that during the more active phases of rehabilitation in the first years and months post-injury, people with significant brain injury have reduced access to substances.

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Substantial numbers of people with a history of brain injury go on to have post-injury substance use difficulties in the long run. Several studies conducted over the past eight years have found that between 40% and 60% of people presenting for treatment of alcohol dependence screen positive for a history of acquired brain injury. One recent study using a stringent method of defining brain injury found that more than 70% of patients accessing services for concurrent disorders (mental health and addictions) have histories of at least one brain injury with loss of consciousness.

Can brain injury cause problematic substance use?

It appears that living with brain injury can contribute to the development of a problem with substance use. First, use at a lower dose level may cause problems with balance, judgment or interactions with medications that create real harms for the individual. Also, living with a brain injury is very stressful and commonly leads to depressed mood and anxiety. Self-medicating strong emotions often drives individuals to the use of substances, prescribed or recreational.

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Gaps in the System

Despite the high prevalence of co-morbid brain injury and substance use, few programs in Ontario accommodate the special needs of this complex population. A 2005 survey of Toronto ABI Network member agencies found that a small minority of rehabilitation programs consistently screened for substance use problems and none of the surveyed addictions programs systematically screened for brain injury.

It has been common to dismiss individuals known to be actively using substances from rehabilitation on the theory that they are unable to benefit from the care offered. People with brain injury presenting to addictions programs may also be lost to care because they appear unmotivated for treatment as a result of difficulty getting organized to keep appointments, remembering relevant information, being impulsive or disinhibited, and following through with treatment recommendations.

The Substance Use and Brain Injury Bridging project, a partnership between the Centre for Addictions and Mental Health and Community Head Injury Resource Services of Toronto (CHIRS), was developed as a knowledge transfer initiative to increase the capacity of both addictions providers and ABI rehabilitation providers to provide care to this underserved and complex population. Training sessions were provided across Ontario to introduce basic concepts in both brain injury and addictions and to promote shared care through the development of community partnerships. Since training began five years ago we have learned some important lessons.

LESSON 1:
Addiction isn't the only problem associated with substance use

The Ohio Valley Center for Brain Injury Prevention and Rehabilitation developed prevention messages that we should all be familiar with and review with our clients in a non-confrontational way.

- Substance use may limit recovery from the brain injury
- Problems in balance and speech may be made worse by intoxication
- The disinhibiting effect of alcohol and other drugs may be particularly problematic for someone who has limited self-control
- After brain injury, drugs may have a more powerful effect
- Substance use may worsen cognitive symptoms, such as memory impairment and difficulty concentrating
- People who have a brain injury are at a significantly greater risk for depression – many substances have depressant effects
- People who use substances after injury are more likely to suffer a second injury
- Alcohol or other drug use may increase the risk of seizure after brain injury

LESSON 2:
There are real barriers to care

It has been common in rehabilitation programs to dismiss (or refuse to admit) clients with active problematic substance use. Likewise, many mental health and addictions programs have brain injury as an exclusionary criterion.

Stigma seems to be the biggest barrier to care. Qualitative findings from our research and the observations of researchers internationally indicate that providers in acquired brain injury settings generally overestimate the dangers associated with including individuals with substance misuse in their practices and feel ill-prepared to manage the challenges associated with their care. Some ABI providers also tend to believe that people who are actively using a substance won't benefit from rehabilitation efforts.

Similar attitudinal barriers were encountered in addictions treatment settings where clinicians often saw people with acquired brain injury as dangerous, disruptive, unpredictable and unable to benefit from the services they offered. They tended to underestimate the number of individuals with brain injury already in their service and interpret problems associated with cognitive impairment as a lack of motivation for change.

LESSON 3:
When to refer (and to whom)

Many rehabilitation providers have limited awareness of available intervention and treatment settings. We tend to think of inpatient rehabilitation as an initial step in recovery, but a common error in referral is trying to get clients into settings that require an active commitment to making a change before they have come to the conclusion that they have a problem. We should also understand that specific settings might be necessary to manage withdrawal symptoms. Most people don't realize that withdrawing from alcohol requires medical intervention.

There is certainly a lot more to know about substance use and brain injury. The SUBI project strongly recommends that rehabilitation providers develop partnerships with addictions providers for the purpose of providing cross-consultation and sharing care.

Dr. Carolyn Lemsky is the clinical director at Community Head Injury Resource Services of Toronto (CHIRS), and the project lead for the Substance Use and Brain Injury Bridging project. For further information about substance use and brain injury, see www.subi.ca, www.brainline.org and www.ohiovalley.org.

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Article references are available from editor@thehealthprofessional.ca.