

Neuropsychologists determine the nature of a patient's cognitive impairments and their impact on functioning using standardized tests, diagnostic interviews and behavioural observations. Results on measures of memory, attention, visual perception, language, executive functions (reasoning, planning, and organization), mood and personality are compared with the performances of others of similar age, gender and education to quantify impairment.

In the case of the homeless patient population, in addition to clarifying diagnosis and providing treatment recommendations, neuropsychological reports can be used to document disability status for the purpose of obtaining benefits and for legal purposes. Most importantly, reports can also alert caregivers to the need for accommodation in services, and make recommendations for support. This can be quite important in planning for a successful transition from shelter to supported housing.

Neuropsychologists work with multidisciplinary team members to develop a rehabilitation plan for patients with brain dysfunction. Research suggests that up to 80% of homeless persons may have cognitive impairments affecting memory, attention, cognitive processing speed and executive functions.

Cognitive impairment may be caused by:

- Acquired brain injuries (e.g., stroke, brain injury)
- Neurodevelopmental disorders (e.g., schizophrenia)
- Degenerative illnesses (e.g., dementia)
- Infectious diseases (e.g., Hepatitis C, HIV/AIDS)
- Vascular problems (e.g., hypertension or heart disease)
- Fetal Alcohol Syndrome and chronic substance abuse

The incidence of traumatic brain injury (TBI) in the homeless population ranges from 8% to 53%.

These diseases are associated with unique, but overlapping neuropsychological profiles:

- Behavioural disinhibition may follow TBI. Frontotemporal dementia and crack abuse alter frontal lobe functioning.
- Learning and memory impairments are frequently observed in schizophrenia, TBI and dementia, and difficulties with balance, judgment, problem-solving and memory is observed in alcohol abuse.

Many patients may present with more than one of the aforementioned conditions, making them particularly challenging to assess and treat.

**Impact on medical adherence in primary health settings.** Patients with poor attention or memory may be unable to fill their prescriptions or remember to take medications as prescribed. Such patients could benefit from cognitive compensation strategies and cueing mechanisms to help them with such difficulties. Addressing poor medication adherence, among other functional difficulties, could translate into less frequent emergency room visits and improved health outcomes. Adherence to medication regimes and cognitive compensation strategies makes it much more likely that the patient may be more amenable to living in supportive housing and group homes, rather than on the streets.