

Schizophrenia

Brain Health in Ontario Project



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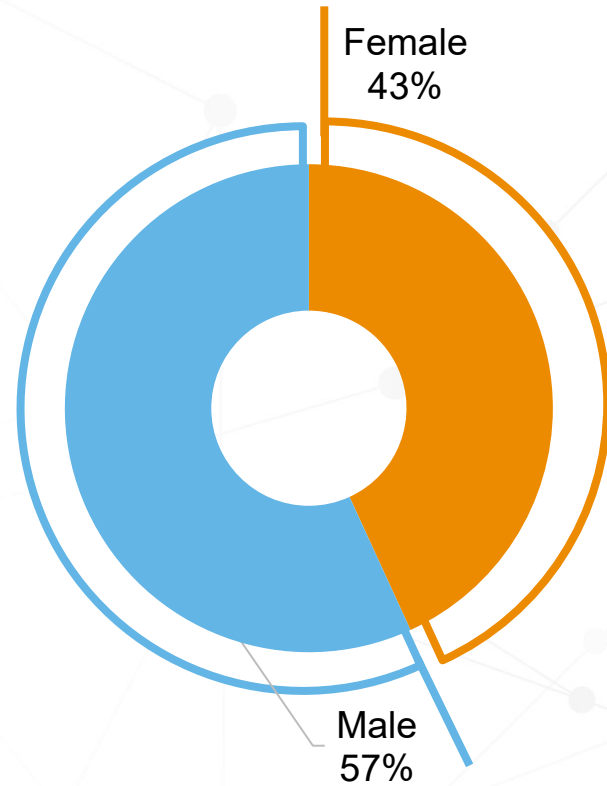
WELCOME TO BRAIN CENTRAL



Schizophrenia

- Schizophrenia (including schizophrenia spectrum and schizoaffective disorders) is a complex brain disorder that affects one's ability to differentiate between what is and is not reality. Symptoms of schizophrenia are considered either positive or negative.
- The positive symptoms include the occurrence of delusions (false beliefs that are not amenable to change even in light of conflicting evidence, such as beliefs that one is going to be harmed, for example), hallucinations (elaborate sensory experiences such as hearing voices or seeing things that are not real), skewed perceptions (such as abnormalities in spatial awareness and sense of self) and disorganized thinking or behaviour.
- The negative symptoms affect aspects of cognition, expression of emotion, and motivation and include declines in attention, memory and deficits of normal emotional responses.
- Schizophrenia typically presents in individuals between 16 and 30 years of age. Early on, schizophrenia may resemble a general anxiety or depression, with increasing difficulty with attention, relaxation, and sleep. A person may withdraw from social settings and usual activity, which can be upsetting and problematic for friends, family, and employers.
- When schizophrenia reaches an active, or psychotic, stage, the person may begin to behave erratically in response to having unusual beliefs or perceptions, or because their thoughts have become disorganized.
- Schizophrenia is both chronic and episodic in nature, worsening and improving by varying degrees. Many individuals with schizophrenia grow estranged from family and have difficulty holding consistent employment.
- There is no known cure for schizophrenia, and the ebb and flow of the severity of symptoms makes treatment complex. Treatment involves using a combined approach of medication and psychosocial interventions. The positive symptoms can often be controlled with medication. The negative symptoms, however, are more persistent, difficult to treat, and often have the greatest impact on quality of life and disability.

Demographics: Sex distribution

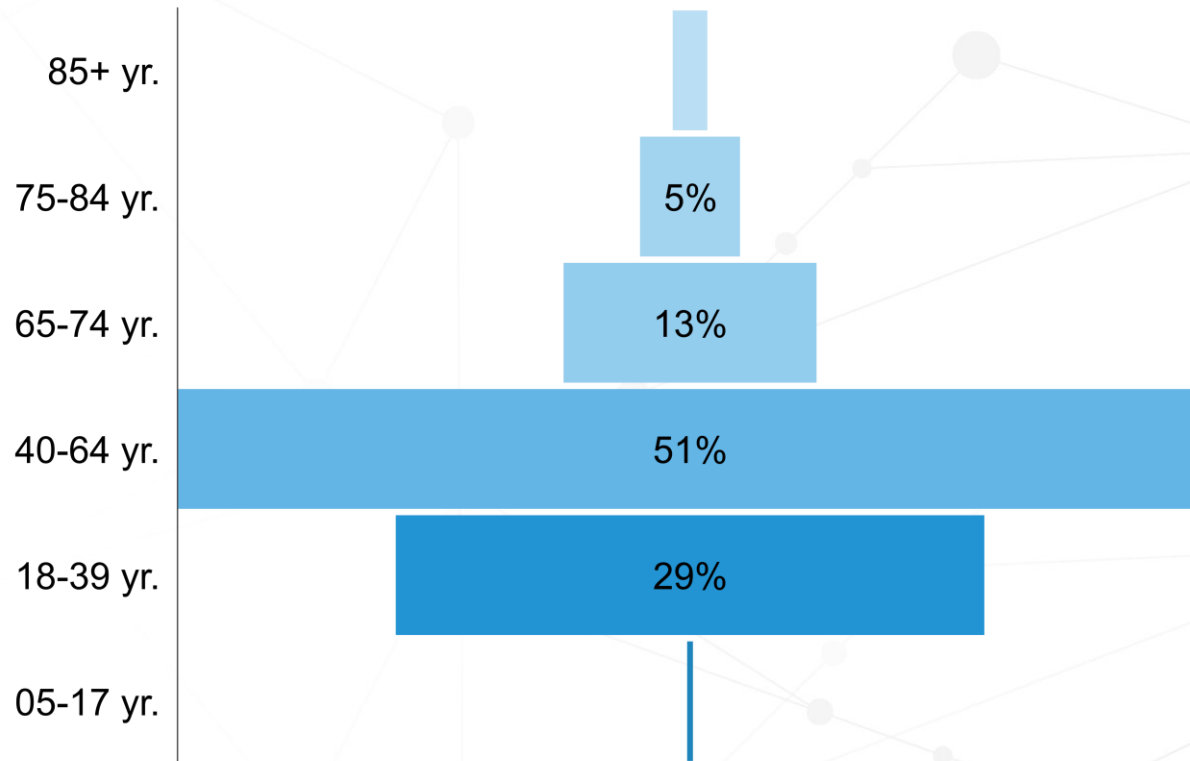


On April 1, 2019 males accounted for 57% of the 129,540 Ontarians identified with schizophrenia.

*Note, years represent the fiscal year. For example, 2019 is from April 1, 2019 to March 31, 2020.



Demographics: Age distribution

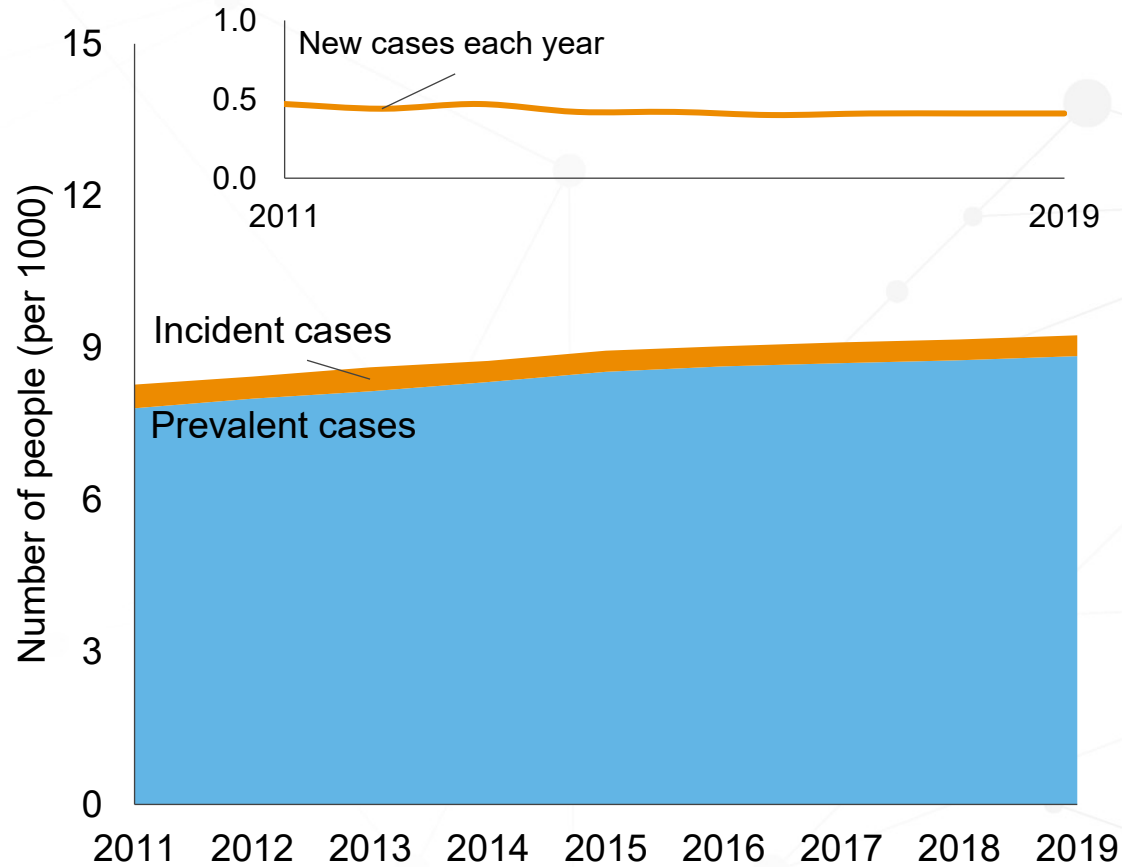


On April 1, 2019 the majority of people with schizophrenia were between the ages of 40 and 64 years, with 81% of people being under the age of 65. The mean age of a person with schizophrenia was 50 ± 16 years.

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Prevalence and incidence over time



Incidence is the number of people newly diagnosed with a disorder within a given time period while prevalence is the number of people existing with the disorder at a given time.

The incidence and prevalence of Ontarians with schizophrenia are depicted in orange and blue, respectively. Between 2011 and 2019, incidence changed from 0.47 to 0.41 per 1000 people and prevalence increased from 7.81 to 8.84 per 1000 people.

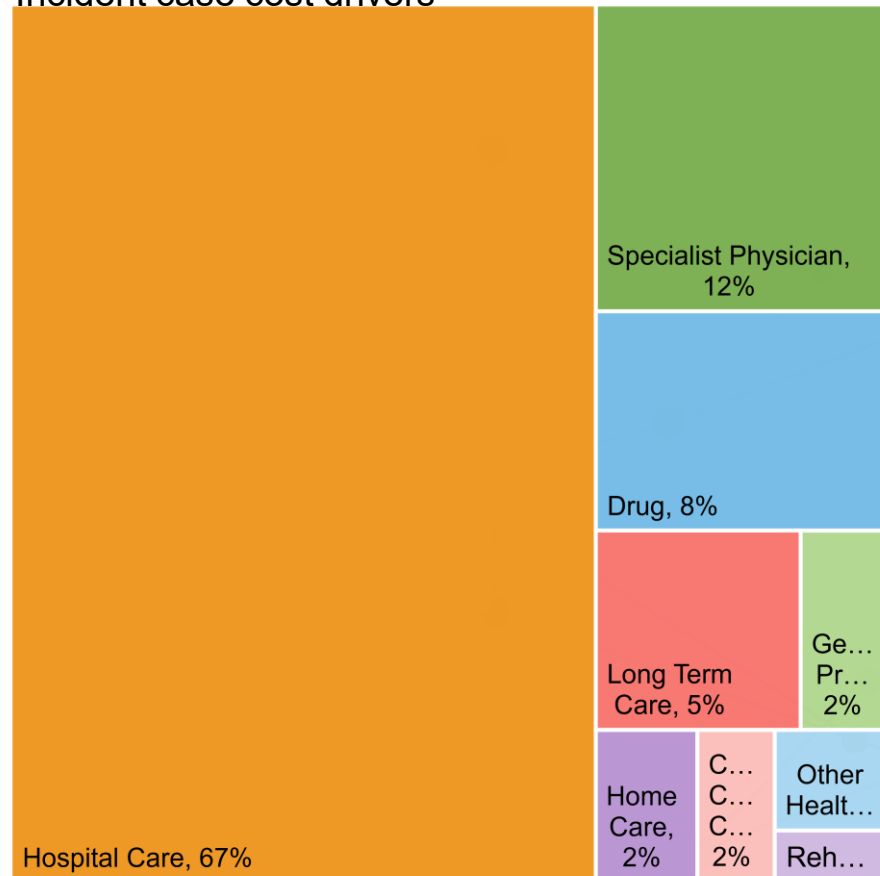
In total, the number of people with schizophrenia increased from 102,928 in 2011 to 129,540 people in 2019.

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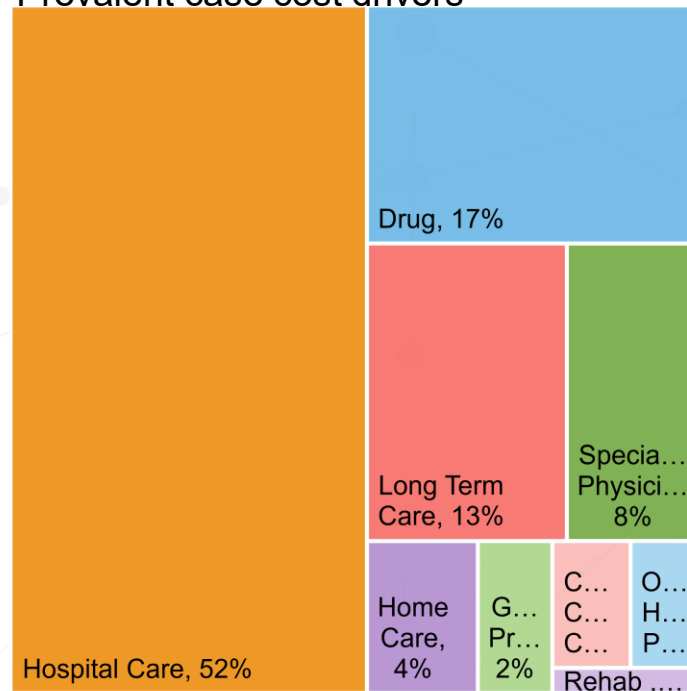


Cost Drivers: Incident vs. prevalent

Incident case cost drivers



Prevalent case cost drivers



- General Practitioner
- Specialist Physician
- Other Health Professional
- Hospital Care
- Drug
- Rehab
- Home Care
- Complex Continuing Care
- Long Term Care

*Cost drivers examined include: Hospital care, home care, general practitioner, specialist physician, other health professional, drug cost, rehab, complex continuing care, and long term care.



Cost Drivers: Incident vs. prevalent

In 2019, the average total cost to the health system for an Ontarian with schizophrenia was 1.6X more for an incident case than a prevalent case. Cost relationship is indicated by total box size. The largest cost driver of both incident and prevalent cases was attributable to hospital care at 67% and 52% of all costs respectively.

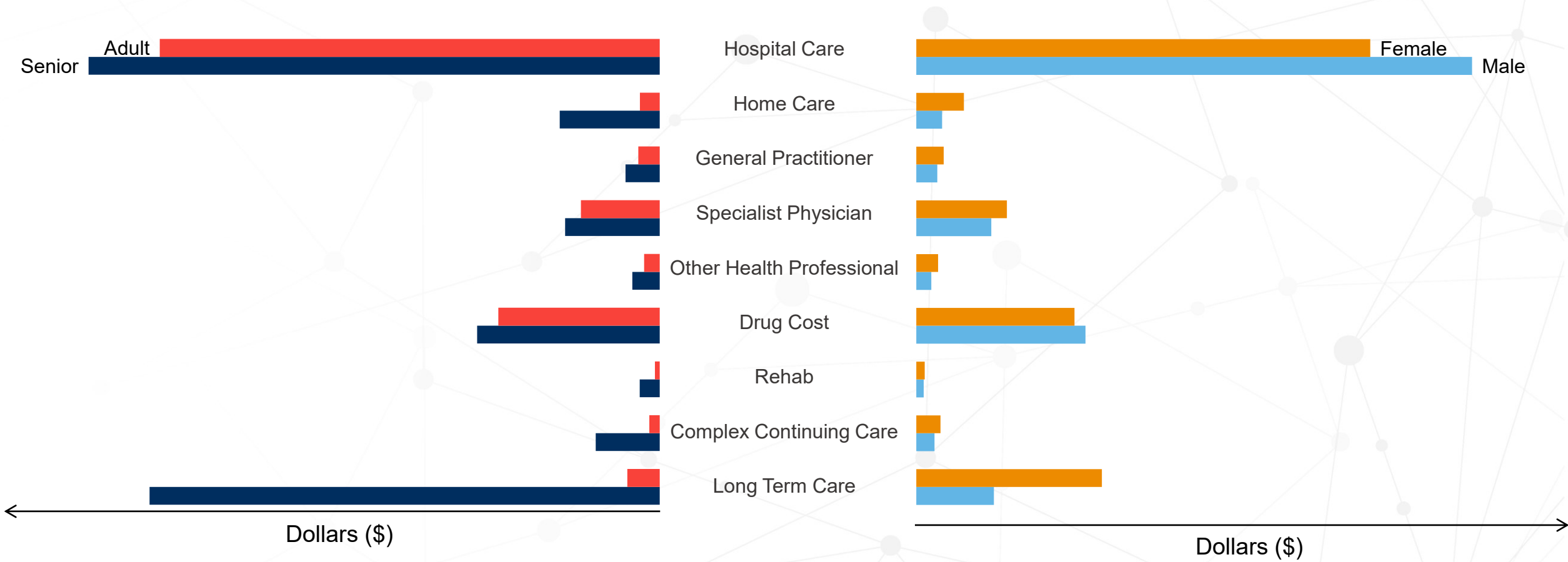
The average total health care costs for a person with schizophrenia (prevalent case) for 1 year are 7X higher for adults (18 – 64) and 3X higher for seniors (65+) compared to the average Ontarian.

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*Cost drivers examined include: Hospital care, home care, general practitioner, specialist physician, other health professional, drug cost, rehab, complex continuing care, and long term care.



Cost Drivers vary by age and sex for prevalent cases



*Note, years represent the fiscal year. For example, 2019 is from April 1, 2019 to March 31, 2020.



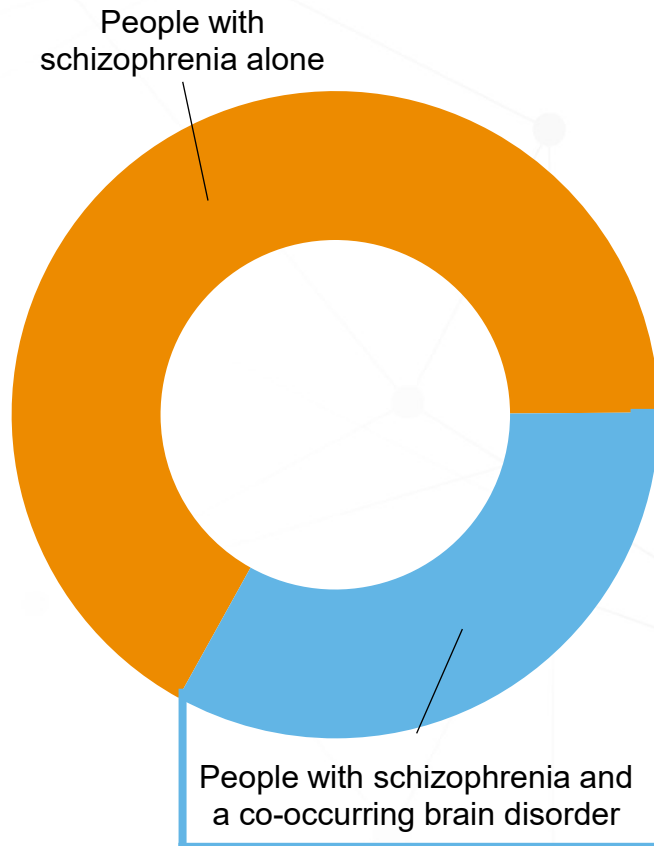
Cost Drivers vary by age and sex for prevalent cases

Overall, health care costs (in Canadian dollars, 2019) for people with schizophrenia are higher for seniors (65+ years) compared to adults (18 - 64 years) and are similar for females and males. The cost drivers, those services that drive health care costs, vary depending on age and sex. Amongst adults, hospital care accounts for the largest cost driver at 59% of all costs, while hospital care and long term care drives costs in the seniors at 36% and 32% respectively. Hospital care is the largest cost driver in both females and males representing 45% and 58% of the health care costs respectively.

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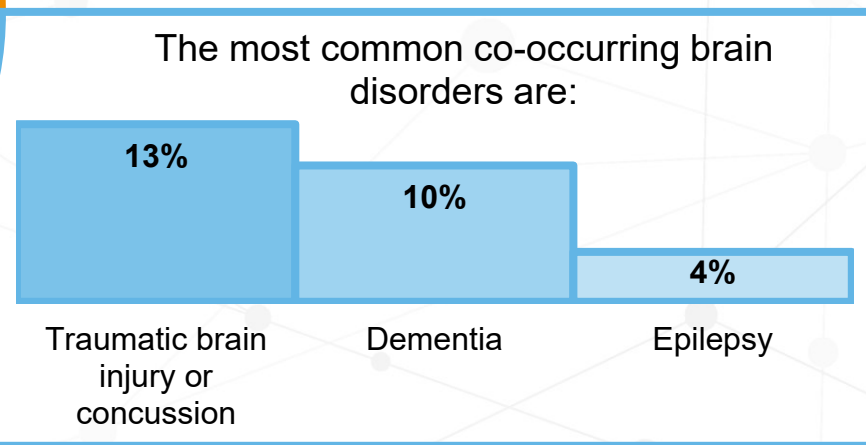


Co-occurring brain disorders



Of those individuals who were identified as having schizophrenia between 2011 and 2019, 33% (blue) were also identified as having one of the other 12 brain disorders studied using health administrative data. Traumatic brain injury or concussion was the top co-occurring brain disorder, with

13% of those with schizophrenia also having brain injury, followed by 10% with dementia, and 4% with epilepsy.

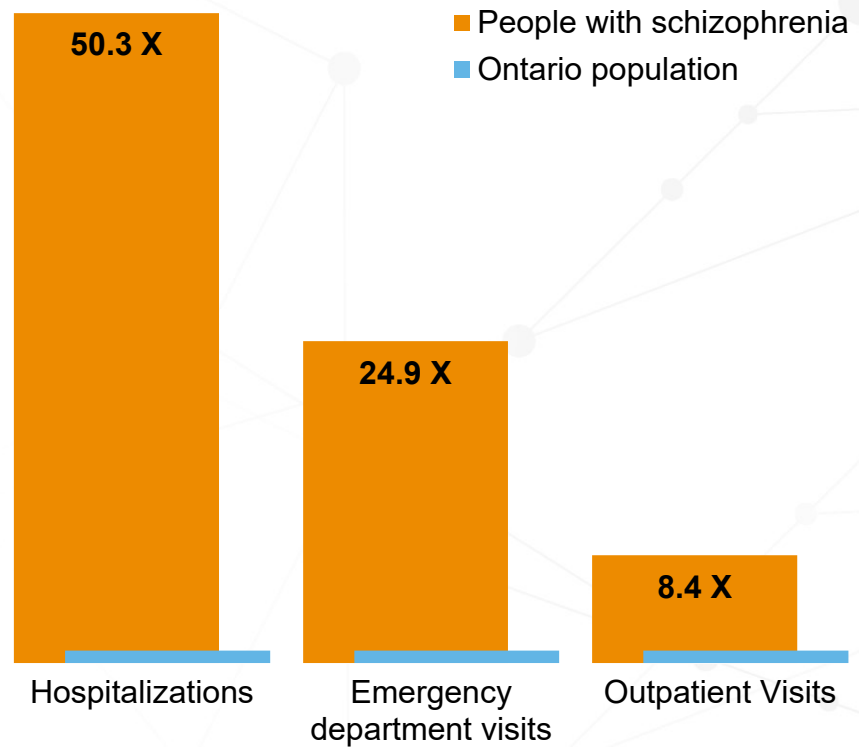


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*Note, other brain disorders studied include: non-malignant brain tumour, benign brain tumour, dementia (incl. Alzheimer's disease), epilepsy, motor neuron disease, multiple sclerosis, parkinsonism, schizophrenia, spina bifida, spinal cord injury, stroke, and traumatic brain injury & concussion.



Mental Health and addictions service use



Of those individuals who were identified as having schizophrenia in 2019, their visit rates for mental health and addictions related services were between 8.4X to 50.3X greater than the general Ontario population, depending on visit type.

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Additional study information

Brain Disorder	Evidence Grade	Reference	Algorithm	ICD-09 (CM) codes	ICD-10 codes	OHIP Dx codes	ODB drugs name	OMHRS codes	Age Restriction
Schizophrenia	II	Validated Algorithm: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4542516/	1 hospitalization record <u>or</u> 3 physician claim records in a 3-year period	295	F20, F25	295	N/A	DSM-IV= 295	None

Brain health in Ontario project main page: www.braininstitute.ca/BrainHealth
Methods and Considerations: www.braininstitute.ca/brainhealth-methodology



Publication information

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