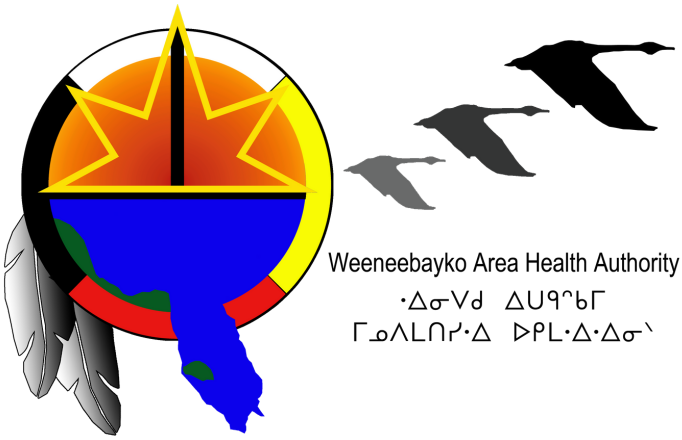

Weeneebayko Area Health Authority
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Mental Health and Addictions

James Bay and
Hudson Bay Region
2008-2017

Minomathasowin ᒥᓂᒪᓐᓂᔨᐧᐃᐣ - Healthy Living

Minomathasowin ᒥᓂᒪᓐᓂᔨᐧᐃᐣ - Healthy Living is a community-designed, flexible approach to public health in the James Bay and Hudson Bay region.

A partnership between ICES (formerly the Institute for Clinical Evaluative Sciences) and the Weeneebayko Area Health Authority (WAHA) was developed in 2018 in response to community health leaders requesting health data and access to specialists who could analyze the data and return this information to communities in a meaningful way. In agreement with the Ministry of Health, ICES research can use secure health data related to patients and their experience with the Ontario's health care system.

This report respects the First Nations Information Governance Centre principles of data Ownership, Control, Access and Possession (OCAP). WAHA and ICES ensure that these principles are followed when working with community data.

We hope this report will encourage questions and help guide future decisions on health care in the region.

Minomathasowin ᒥᓂᒪᓐᓂᔨᐧᐃᐣ - Health Living Timeline

2017

- *Held leadership and community engagement sessions that developed a new vision for public health in the James and Hudson Bay region.*

2018

- *Reviewed findings at a public health session.*
- *Received approval from communities' Chief and Councils for the new vision of public health in the region.*
- *Signed a partnership agreement with ICES.*

2019

- *Hired a Data Analyst and Knowledge Translation Specialist.*
- *Released reports on Diabetes, Asthma and Cancer Trends.*
- *Held a health data workshop in Timmins, ON.*

Understanding the Region

The James Bay and Hudson Bay Region

The James Bay and Hudson Bay region lies within the North East Local Health Integration Network (LHIN) and includes the communities of Peawanuck, Attawapiskat, Kashechewan, Fort Albany, Moosonee and Moose Factory.

North East Local Health Integration Network

The North East LHIN is one of 14 networks in Ontario. LHINs plan and fund health care delivery and community care to people across a region. The North East LHIN supports an area of 400,000 square kilometres with a population of 563,000 people; this equates to 44% of Ontario's landmass yet only 4% of its population.

Ontario

The province has a landmass of 1.1 million square kilometres and a population of 13.5 million people.

Context

The need for mental health care is on the rise. In 2016, the James Bay and Hudson Bay region experienced a suicide crisis culminating in a state of emergency being declared in Attawapiskat.

In response, a request by communities for information to understand the state of mental health and addictions in the region was submitted to ICES. The aim was to learn how individuals living in the region access care and receive treatment.

The information provided in this report comes from accessing provincial databases. Information on the data sources and their limitations is provided in the appendices of the report.

Methods

This report examines:
- Mental health and addictions-related factors linked to suicide (i.e., mood, anxiety, schizophrenia, self-harm, and substance abuse).
- Experiences with the health care system and where, when and for how long they received services involving a physician.

Local populations were identified using the following postal codes:
Attawapiskat (P0L 1A0)
Fort Albany (P0L 1H0)
Kashechewan (P0L 1S0)
Peawanuck (P0L 2H0)
Moose Factory (P0L 1W0)
Moosonee (P0L 1Y0)

Key Findings

The report is divided into three key sections: emergency department visits, hospitalizations and readmissions, and outpatient visits. The report includes information on the James Bay and Hudson Bay region, the North East LHIN and Ontario. **Here are key findings for the individuals living in the James Bay and Hudson Bay region:**

-Individuals are visiting the emergency department more often for mental health and addiction-related care than Ontario.

-There is a higher proportion of individuals who use the emergency department as the first point of contact for mental health and addictions-related care than Ontario.

- Compared to men, women are more likely to visit the emergency department for deliberate self-harm.

-There is a higher rate of mental health and addictions-related hospitalizations. However, the median length of stay of these hospitalizations is shorter than that of North East LHIN and Ontario.

-Individuals living in the region have a lower rate of mental health and addictions-related outpatient visits compared to individuals living in the North East LHIN and Ontario.

-There is a lower rate of individuals seen by a psychiatrist. Among those living in the region who have seen a psychiatrist, they are more likely to be seen by telemedicine compared to the North East LHIN and Ontario.

Glossary of Terms

First Contact in Emergency Department
First point of contact in emergency department (ED) is defined as when a patient had an unscheduled mental health and addiction related emergency department visits and no other mental health and addictions related care in the previous 2 years.

Crude Rate:
The number of events in of a total population in a given period of time (e.g. hospitalizations, outpatient visits, emergency department visits).

Standardized Rate:
The standardized rate takes into consideration that the population in the region is younger than that of Ontario. This allows us to compare indicators. In this report, we used standardized rates whenever we wanted to make a general comparison between populations that was not age or sex specific.

Age-Specific Rate:
The number of events (e.g. hospitalization) out of the population of a certain age range in a given period of time. This allows us to compare event frequency in a certain age group in different regions/areas.

Median:
A value that separates the upper and lower halves of a data sample. It can also be called a "mid point".

Length of Stay:
The number of days that a patient stayed in an inpatient facility during a single episode of hospitalization. Days of stay in a hospital as an inpatient are calculated by subtracting day of admission from day of discharge.

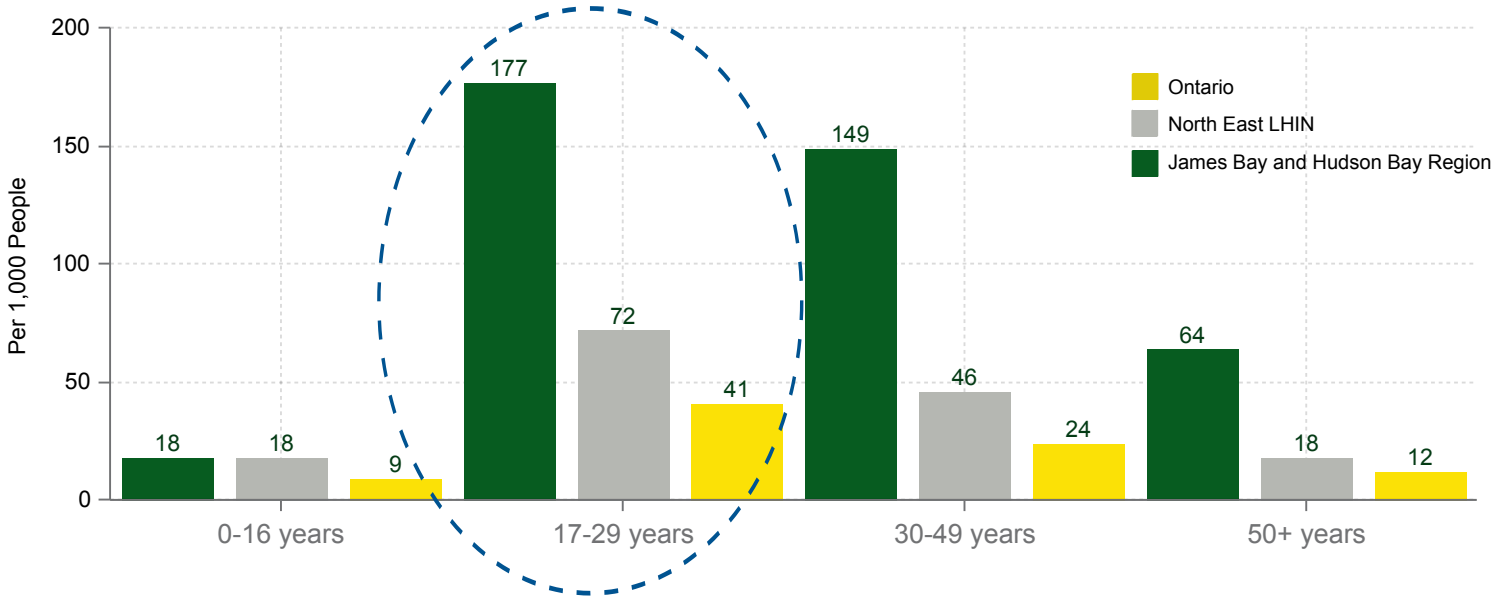
TelePsychiatry:
A mental health appointments with a psychiatrist that takes place by a secure video conferencing system.

Emergency Department Visits

Between 2008 and 2017, individuals living in the James Bay and Hudson Bay region made **6,855** mental health and addictions-related emergency department visits. This includes care accessed in both James Bay and Hudson Bay region and across the province. However, visits to a federal nursing station where an individual did not interact with a physician, were not included in this total.

The 17-29 age group had the highest rate of mental health and addictions-related emergency department visits, which is 4 times that of Ontario and 3 times that of North East LHIN of the same age group.

Rate of Mental Health and Addictions Emergency Department Visits, 2017



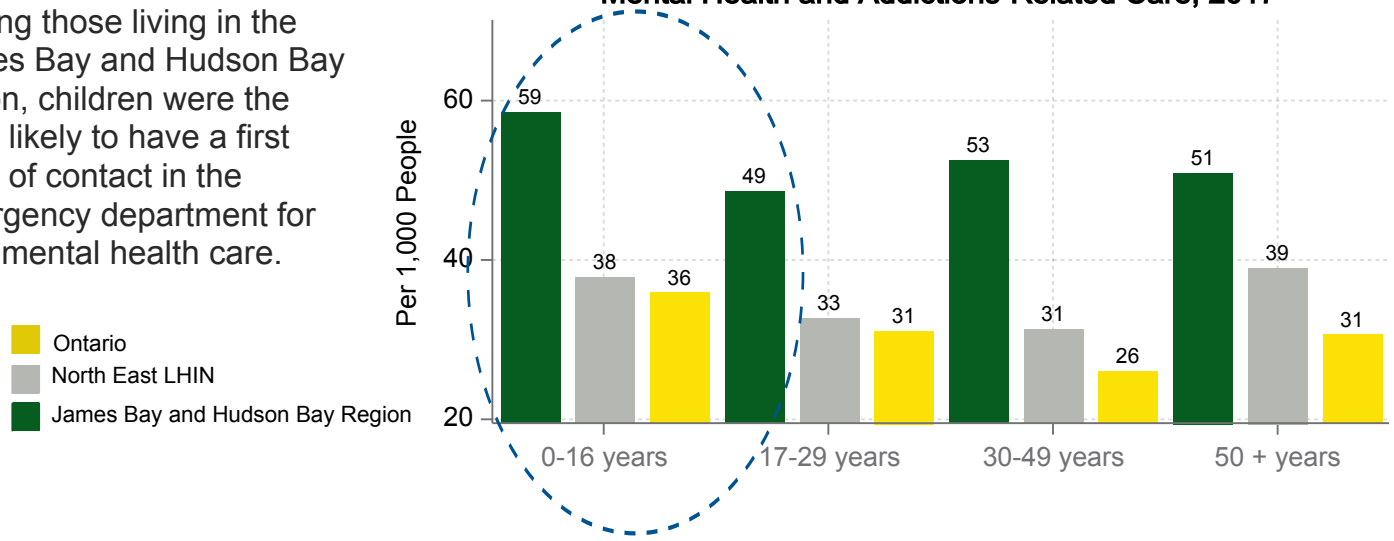
In 2017 alone individuals living in the James Bay and Hudson Bay region made a total of 762 mental health and addictions-related emergency department visits in Ontario. The rate of mental health and addictions-related emergency department visits was 10 visits per 100 people in the James Bay and Hudson Bay region, which is 5 times that of Ontario and 3 times that of the North East LHIN.

Emergency Department Visits

For many people, the first point of contact for mental health and addictions-related care is in the emergency department. To be called a "first point of contact", an individual has made an unscheduled mental health and addictions-related visit to the emergency department **and** has not received mental health and addictions-related care in the previous two years.

Among those living in the James Bay and Hudson Bay region, children were the most likely to have a first point of contact in the emergency department for their mental health care.

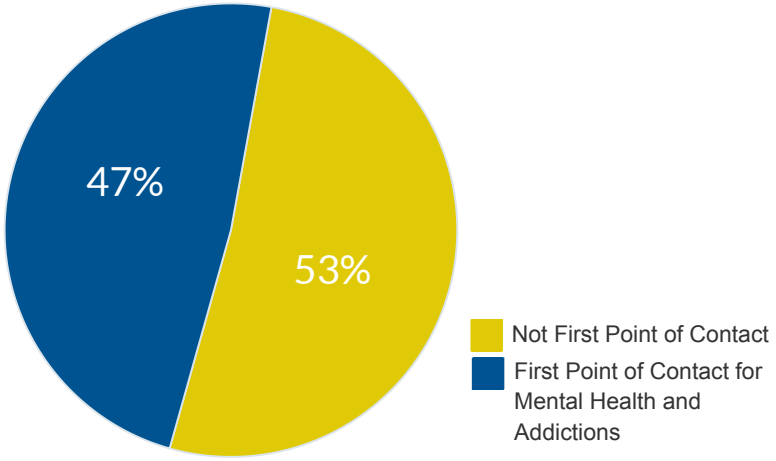
Rate of Emergency Department as The First Point of Contact for Mental Health and Addictions-Related Care, 2017



In 2017, over half of all mental health and addictions-related visits to emergency departments were the first point of contact for that individual.

In the same year, the James Bay and Hudson Bay region's rate of first point of contact for emergency department visits for mental health and addictions-related care was twice that of Ontario and the North East LHIN.

Emergency Department Visits for Mental Health and Addictions as the First Point of Contact in the James Bay and Hudson Bay Region, 2017

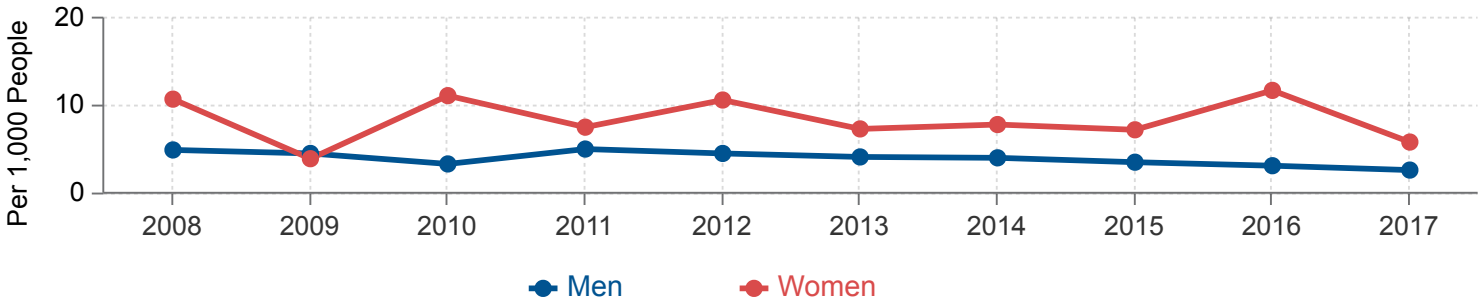


Emergency Department Visits

Between 2008 and 2017, there were **506** emergency department visits made by individuals living in the James Bay and Hudson Bay region in Ontario hospitals for deliberate self-harm.

In 2017, the rate of visits for deliberate self-harm among those living in the James Bay and Hudson Bay region was 3 times that of Ontario and 2 times that of the North East LHIN.

Rate of Emergency Department Visits for Deliberate Self-harm
James Bay and Hudson Bay Region, 2008-2017



Compared to men, women in the James Bay and Hudson Bay region were twice as likely to visit the emergency department for deliberate self-harm.

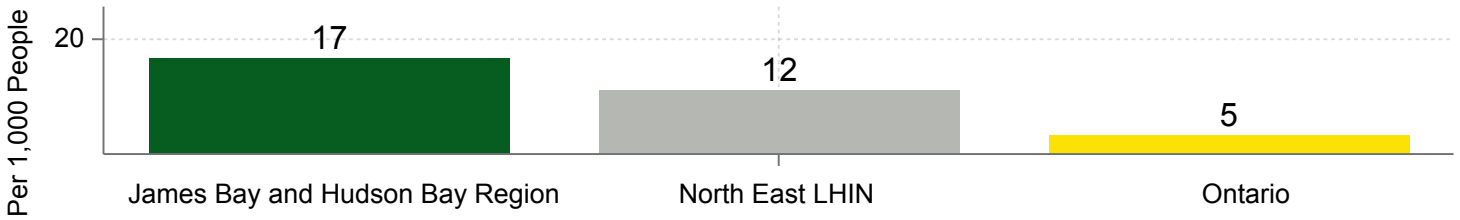
From 2008 to 2017, **30%** of mental health and addictions-related emergency department visits were followed by an unscheduled readmission visit to the emergency department within 30 days of discharge.

Hospitalizations

Between 2008 and 2017, individuals living in the James Bay and Hudson Bay region made a total of **1,357** hospitalizations for mental health and addiction-related care in Ontario. Individuals from the region were more likely to be hospitalized for mental health compared to North East LHIN and Ontario.

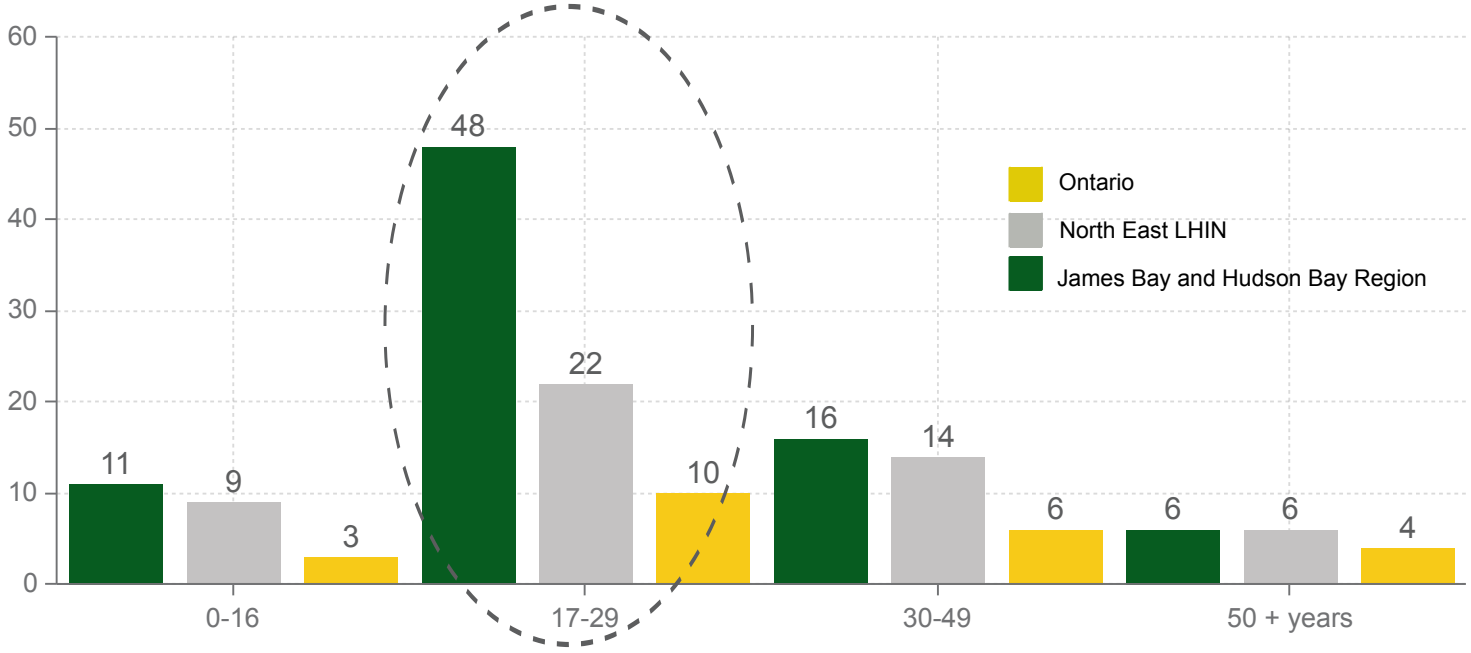
In 2017, the standardized rate was 3 times that of Ontario for mental health and addictions-related hospitalizations.

The Rate of Hospitalizations for Mental Health and Addictions, 2017



Individuals aged 17 to 29 years old who live in the James Bay and Hudson Bay region were more likely to be hospitalized for mental health and addictions-related care across Ontario. The rate in the region was 5 times that of Ontario and 2 times that of the North East LHIN.

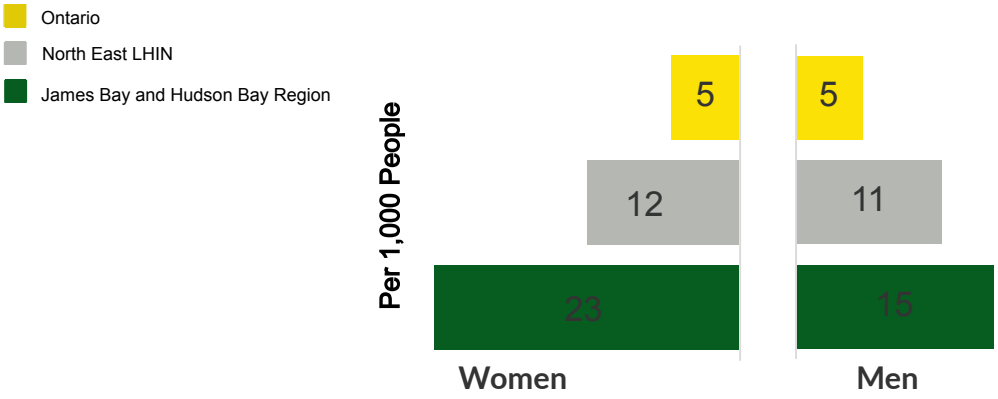
The Rate of Mental Health and Addictions-Related Hospitalization, 2017



Hospitalizations

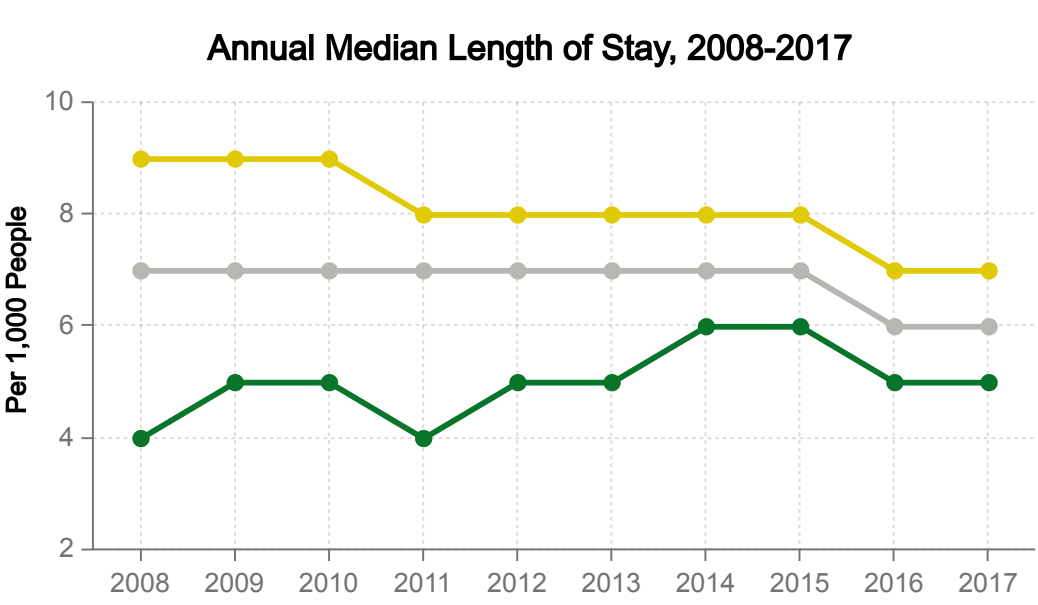
Among women, the rate of hospitalization for mental health and addictions-related care for residents of the James Bay and Hudson Bay region was 5 times that of Ontario and 2 times that of the North East LHIN.

The Rate of Mental Health and Addictions- Related Hospitalizations by Sex, 2017



Between 2008 to 2017, individuals who were hospitalized for mental health and addictions-related care living in the James Bay and Hudson Bay had a shorter length of stay in Ontario hospitals compared to those living in the North East LHIN and Ontario.

Annual Median Length of Stay, 2008-2017



Between 2008 and 2017, **11%** of mental health and addictions-related hospitalizations made by those living in the James Bay and Hudson Bay region were followed by readmission within 30 days of discharge.

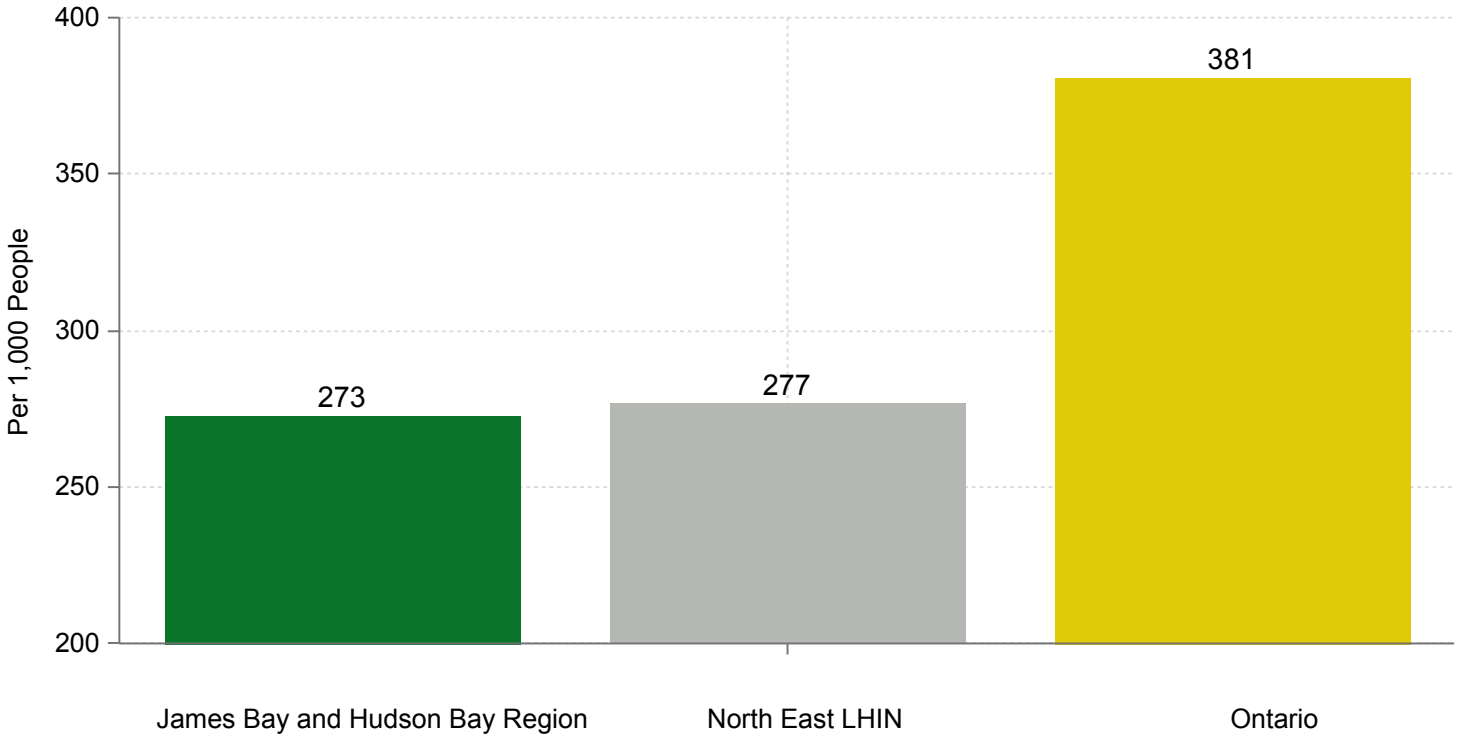
Hospitalization and Readmissions

Over the 10 years, 15% of mental health and addictions-related hospitalizations were followed up within 7 days after discharge.

60% of these follow-up visits were with a physician in the James Bay and Hudson Bay region.

In 2017, the standardized rate of these follow-up visits within 7 days was lower in the James Bay and Hudson Bay region and in the North East LHIN compared to Ontario.

Mental Health and Addictions-Related Hospital Discharge Outpatient Visits Follow Up Within 7 Days, 2017

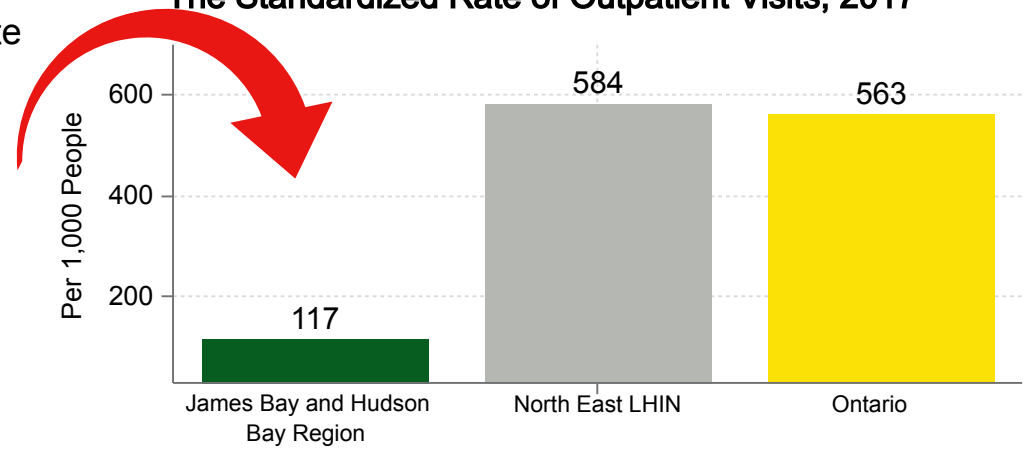


Outpatient Visits

From 2008 to 2017, individuals living in the James Bay and Hudson Bay region made a total of **8017** outpatient visits for mental health and addictions-related care across Ontario.

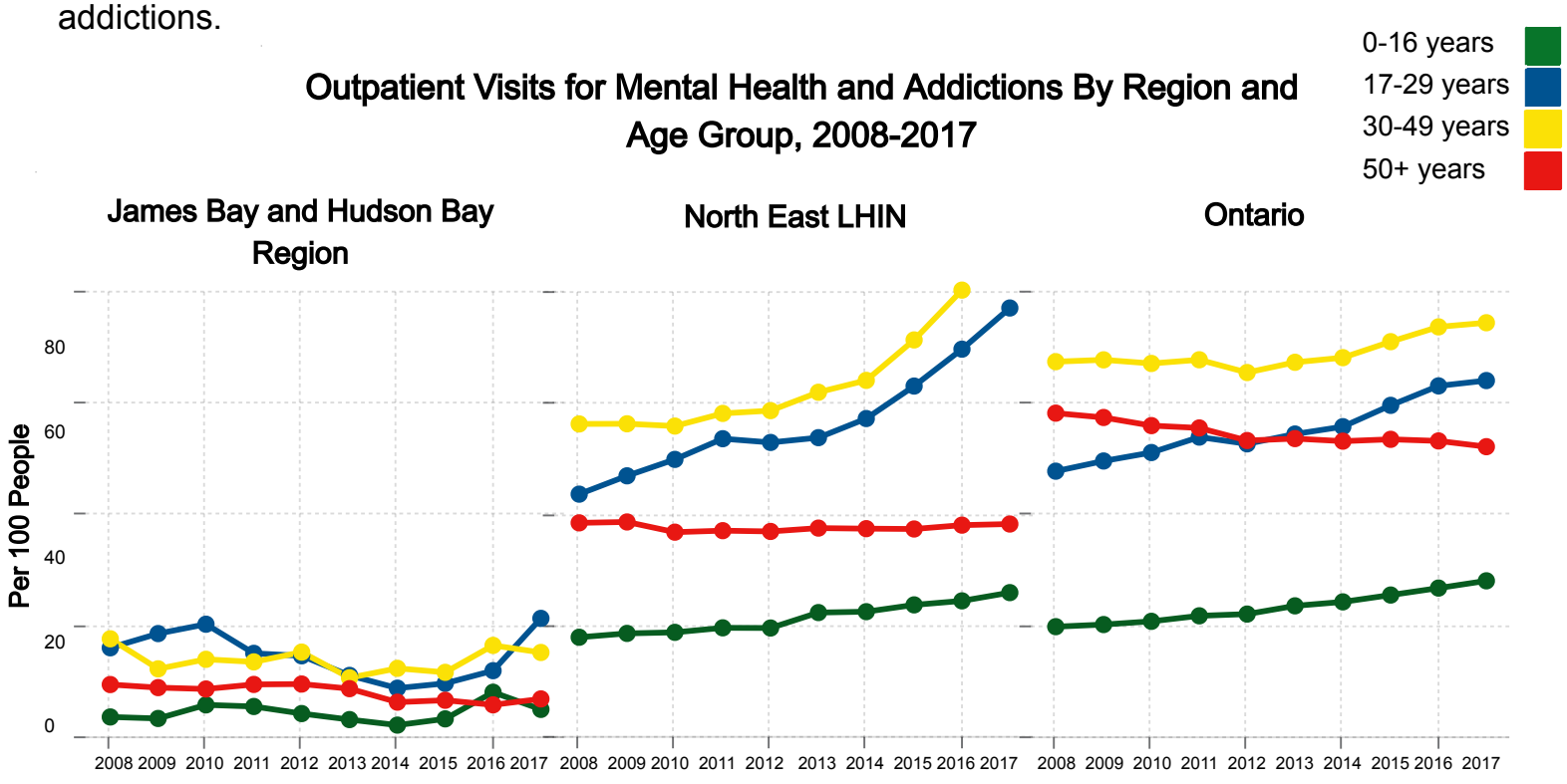
In 2017, the standardized rate of outpatient visits for mental health and addictions in the James Bay and Hudson Bay region was **80%** lower than Ontario and the North East LHIN.

The Standardized Rate of Outpatient Visits, 2017



Individuals aged 17-29 and 30-49 from the James Bay and Hudson Bay region were most likely to access outpatient care for mental health and addictions-related care across Ontario.
In Ontario, those aged 30-49 were most likely to access outpatient care for mental health and addictions.

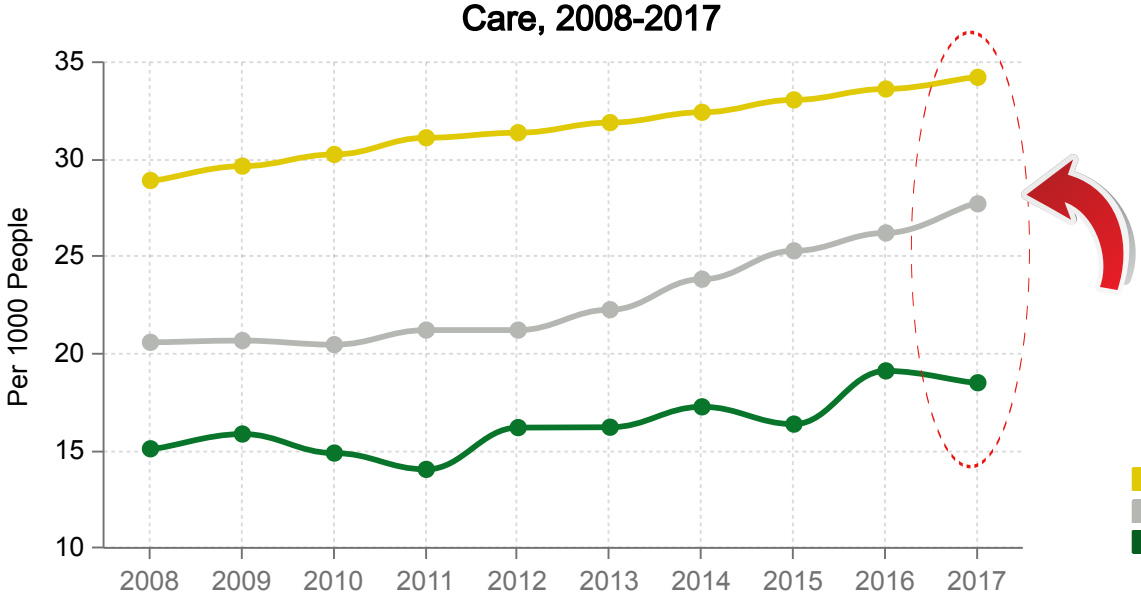
Outpatient Visits for Mental Health and Addictions By Region and Age Group, 2008-2017



Outpatient Visits

Between 2008 and 2017, the number of individuals seen by a psychiatrist per 1000 people increased in Ontario, but remained unchanged for those living in James Bay and Hudson Bay region.

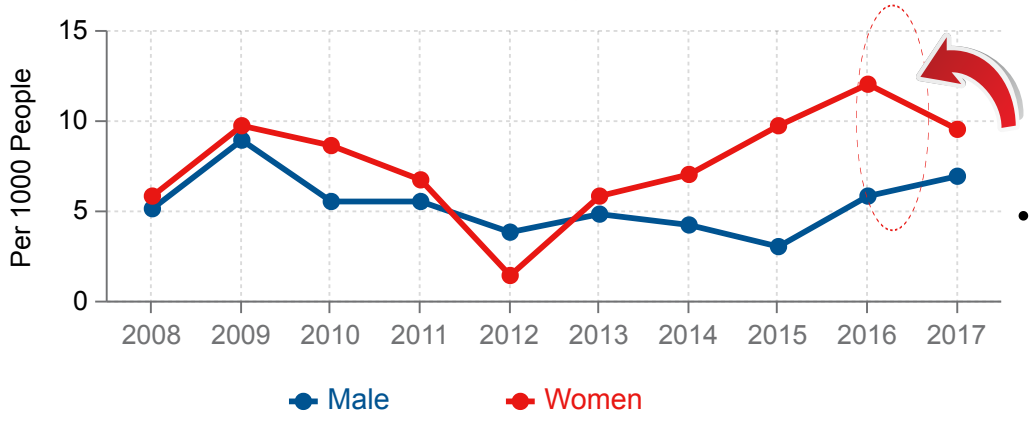
Individuals Seen by Psychiatrist for Mental Health and Addictions Care, 2008-2017



In 2017, the standardized rate of individuals seen by a psychiatrist in the James Bay and Hudson Bay region was 46% lower than Ontario and 35% lower than North East LHIN.

Roughly **40%** of those living in the James Bay and Hudson Bay region who saw a psychiatrist, was via telepsychiatry.

The rate of Telepsychiatry in the James Bay and Hudson Bay Region by Sex, 2008-2017

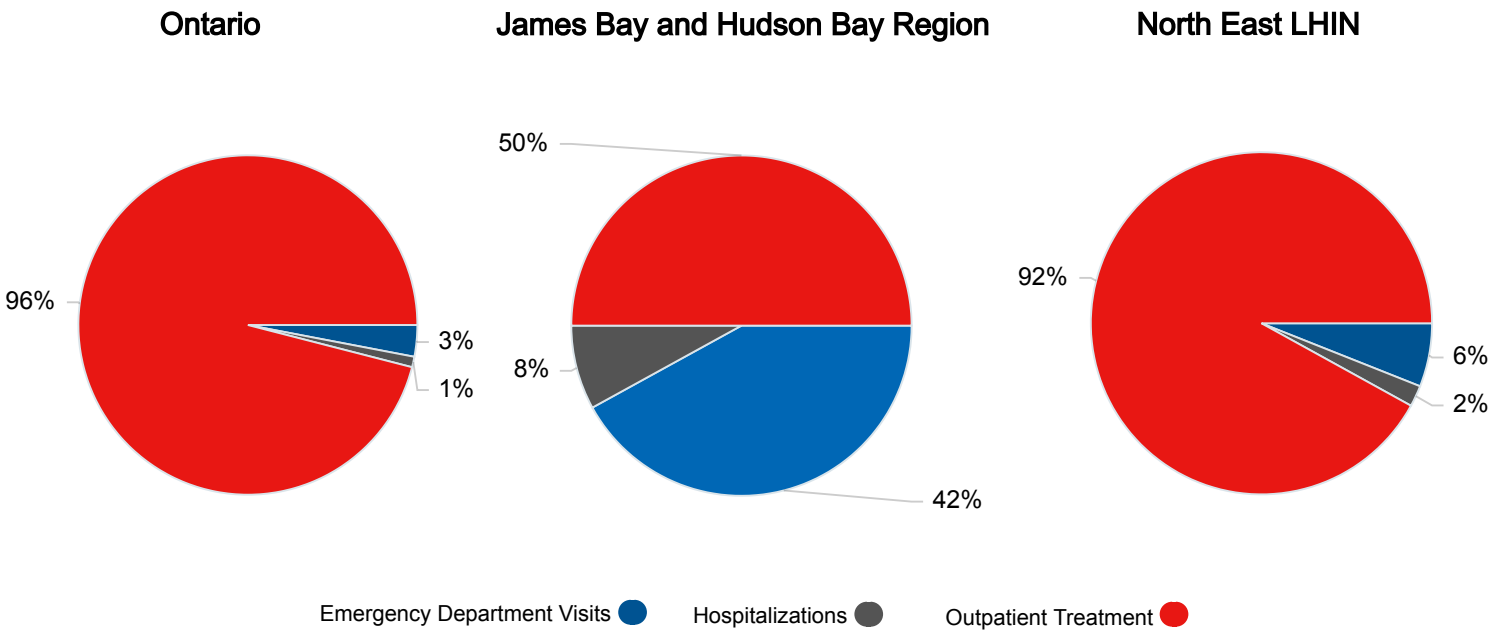


2017:

- The rate of individuals who received telepsychiatry was **2** times that of North East LHIN and **7** times that of Ontario.
- Women in the James Bay and Hudson Bay region accessed telepsychiatry at a rate 36% higher than men.

Key Results

Mental Health and Addictions-Related Care by Treatment Location, 2008-2017



Between 2008 and 2017, individuals from the James Bay and Hudson Bay region received 42% of their mental health and addictions-related care in the emergency departments across Ontario.

Individuals from the North East LHIN only had 6% of the mental health and addictions-related care visits in the emergency department and 3% among these living in Ontario.

Meanwhile, of all the mental health and addictions-related care received by those living in the James Bay and Hudson Bay region, 50% of them occurred in outpatient clinics, compared to 92% of these living in the North East LHIN and 96% in Ontario.

Summary

Individuals from the James Bay and Hudson Bay region have limited access to outpatient related physician visits and care and receive most of their care from a physician in the emergency room.

- Individuals from the James Bay and Hudson Bay region are more likely to use emergency departments as the first point of contact for mental health and addictions-related care.
- The rate of hospitalization for mental health and addictions in the James Bay and Hudson Bay region was 3 times that of Ontario; however, the median length of stay was shorter.

- Following hospitalization, individuals in the James Bay and Hudson Bay region are less likely to see a physician within 7 days.
- Individuals in the James Bay and Hudson Bay region have limited access to outpatient care for mental health and addictions. The rate of mental health and addictions outpatient visits was lower in the James and Hudson Bay region.

- To sum up, individuals living in the James Bay and Hudson Bay region are more likely to use emergency department and hospitalization for mental health and addictions-related care, but they have limited access to outpatient care and outpatient follow up after discharged from hospital.

Appendix A: Data Sources

What databases were used?

National Ambulatory Care Reporting System (NACRS)
The NACRS is compiled by Canadian Institute for Health Information and contains administrative, clinical (diagnoses and procedures), demographic, and administrative information for all patient visits made to hospital and community based ambulatory care centres (Emergency Departments, Day surgery Units, Hemodialysis Units, and Cancer Care Clinics).

Discharge Abstract Database (CIHI-DAD)
The DAD is compiled by the Canadian Institute for Health Information and contains administrative, clinical (diagnoses and procedures/interventions), demographics, and administrative information for all admissions to acute care hospitals, rehab, chronic, and day surgery institutions in Ontario.

Ontario Mental Health Reporting System (OMHRS)
The OMHRS is compiled by the Canadian Institute for Health Information and contains administrative, clinical (diagnoses and procedures), demographics, and administrative information for all admissions to adult designated inpatient mental health beds. This includes beds in general hospitals, provincial psychiatric facilities, and specialty psychiatric facilities. Clinical assessment data is ascertained using the Resident Assessment Instrument for Mental Health (RAI-MH), but different amounts of information are collected using this instrument depending on the length of stay in the mental health bed. Multiple assessments may occur during the length of a mental health admission.

Ontario Health Insurance Plan (OHIP) The OHIP claims database contains information on inpatient and outpatient services provided to Ontario residents eligible for the province's publicly funded health insurance system by fee-for-service health care practitioners (primarily physicians) and "shadow billings" for those paid through non-fee-for-service payment plans. The main data elements include patient and physician identifiers (encrypted), code for service provided, date of service, associated diagnosis and fee paid.

Appendix A : Data Sources

Office of the Registrar General - Deaths (ORGD)

Vital Statistics DatabaseThe ORGD Vital Statistics Database contains information on all deaths registered in Ontario starting on January 1, 1990. Information on the causes of death (immediate, antecedent and underlying) recorded on the death certificate are captured. At ICES, a single cause of death variable is derived based on the underlying cause of death if available; otherwise, the immediate cause of death is derived from the ICD-9 coding system.

Postal Code Conversion File (PCCF)

The PCCF database will link to postal codes within a given cohort and determine other census geographic identifiers such as, dissemination/enumeration area, census division, longitude/latitude, urban/rural flag and neighbourhood income quintile.

Registered Persons Database (RPDB)

The RPDB provides basic demographic information (age, sex, location of residence, date of birth, and date of death for deceased individuals) for those issued an Ontario health insurance number. The RPDB also indicates the time periods for which an individual was eligible to receive publicly funded health insurance benefits and the best known postal code for each registrant on July 1 of each year.

Who is included?

The WAHA population, identified by the following postal codes:
Attawapiskat - P0L 1A0
Fort Albany - P0L 1H0
Kashechewan - P0L 1S0
Peawanuck - P0L 2H0
Moose Factory - P0L 1W0 (Moose Cree and MoCreebec use the same postal code)
Moosonee - P0L 1Y0

Who is excluded?

Individuals older than 105 years
Individuals with no valid IKN / Cannot be linked in RPDB
Non-Ontario residents
Individuals without a given sex

Appendix B: Indicators Used

Indicator title	Numerator and Denominator Definitions
Rate of MHA-related ED visits	$= \frac{\text{Annual number of unscheduled MHA related ED visits}}{\text{Annual population ages 0 to 105 ages inclusive}}$
Rates of first contact in the ED for MHA care	$= \frac{\text{Number of individuals with an unscheduled MHA-related ED visit and had no previous MHA related contact in the previous 2 years}}{\text{Number of individuals with an incident unscheduled MHA related ED visit}}$
Rate of ED visits for deliberate self-harm	$= \frac{\text{Annual number of unscheduled ED visits for deliberated self harm}}{\text{Annual population ages 0 to 105 ages inclusive}}$
30-day MHA related ED revisit	$= \frac{\text{Number of MHA ED revisits within 30 days following the incident ED visit}}{\text{Total annual number of unscheduled MHA related ED visits that did not result in an inpatient admission}}$
Rate of hospitalizations for MHA care	$= \frac{\text{Annual number of MHA related hospitalizations}}{\text{Annual population ages 0 to 105 inclusive}}$
Median length of stay for psychiatric hospitalizations	=Median of the length of hospitalization when patient was admitted to hospital for MHA issues
30-day re-admissions after a MHA hospital discharge	$= \frac{\text{Number of MHA related hospital admissions within 30 days following the incident hospital discharge}}{\text{Total annual number of MHA hospital discharge alive}}$
Rates of outpatient visits within 7 days following a MHA-related hospital discharge	$= \frac{\text{Number of MHA related hospital discharges which was followed up within 7 days by any outpatient GP or Psychiatrist or pediatrician}}{\text{Total number of MHA related hospital discharges alive}}$
Rate of MHA-related outpatient physician visits	$= \frac{\text{Annual number of MHA related outpatient physician visits}}{\text{Annual population ages 0 to 105 inclusive}}$
Rate at which individuals are seen by a psychiatrist for MHA care	$= \frac{\text{Annual number of unique individuals seen by a psychiatrist}}{\text{Annual population ages 0 to 105 years inclusive}}$
Rate at which individuals received telepsychiatry consultations	$= \frac{\text{Annual number of unique individuals received a telepsychiatry consultaion}}{\text{Annual population ages 0 to 105 inclusive}}$

Definitions:

MHA: Mental Health and Addictions

ED: Emergency Department

GP: General Physician

Appendix C: Limitations

The following are limitations of the report:

- The time that an individual was held at the emergency department and waiting for transfer to hospital admission was not included in the length of stay.
- Visits to Health Canada nursing stations without physician interaction in Kashechewan and Peawanuck were not captured in these databases.
- This report is limited to Ontario Health Insurance Plan (OHIP) billable interactions; for instance, community program or non-physician health care interactions were not captured.
- Some physician visits may not be captured in databases because they were paid for by other organizations in the region and not billed to OHIP.
- Mental health issues were combined with addictions issues.
- Indigenous population and non-Indigenous populations were combined.
- First Nations people living outside of First Nations communities were not included.

The region's small population size leads to additional limitations:

- Unstable data and small changes in the data can lead to big fluctuations.
- A particular disease may be difficult to analyze due to small population numbers.
- Ideally, this report's findings would be interpreted in combination with other data such as qualitative experiences (getting people's thoughts about results) and knowledge of community members.

Weeneebayko Area Health Authority is the leading health care provider on the western James Bay coast serving a population of approximately 12,000 people. Comprised of hospitals in Moose Factory, Fort Albany and Attawapiskat, and a health centre in Moosonee we also provide paramedic services and outpatient care in communities along our coast from Moose Factory to Peawanuck. We are affiliated with Queens University.

For more information on this report, please contact Minomathasowin@waha.ca

Visit our website waha.ca

This study was supported by ICES, which is funded by an annual grant from the Ontario Ministry of Health and Long-Term Care (MOHLTC). No endorsement by ICES or the Ontario MOHLTC is intended or should be inferred.

Visit our website ices.on.ca

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