Mental Health and Addictions System Performance in Ontario

A Baseline Scorecard

March 2018

ICES

Mental Health and Addictions System Performance in Ontario: A Baseline Scorecard

MHASEF Research Team

March 2018

Publication Information

Published by the Institute for Clinical Evaluative Sciences (ICES).

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How to cite this publication

MHASEF Research Team. *Mental Health and Addictions System Performance in Ontario: A Baseline Scorecard*. Toronto, ON: Institute for Clinical Evaluative Sciences; 2018.

ISBN: 978-1-926850-79-5 (Online)

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Data

Data were provided by Access to Care; Immigration, Refugees and Citizenship Canada (IRCC); and the Institute for Clinical Evaluative Sciences (ICES). Data sets from IRCC and ICES were linked using unique encoded identifiers and analyzed at ICES.

Parts of this report are based on data and/or information compiled and provided by the Canadian Institute for Health Information (CIHI). However, the analyses, conclusions, opinions and statements expressed in the material are those of the authors, and not necessarily those of CIHI.

Funding

This study was supported by funds from the Mental Health and Addictions Scorecard and Evaluation Framework (MHASEF) grant from the Ontario Ministry of Health and Long-Term Care (MOHLTC). The opinions, results and conclusions included in this report are those of the authors and are independent from the funding sources. No endorsement by ICES or the MOHLTC is intended or should be inferred.

Contents

About the Institute for Clinical Evaluative Sciences

The Institute for Clinical Evaluative Sciences (ICES) is an independent, not-for-profit corporation that uses population-based health information to produce knowledge on a broad range of health care issues. ICES' unbiased evidence provides measures of health system performance, a clearer understanding of the shifting health care needs of Ontarians, and a stimulus for discussion of practical solutions to optimize scarce resources.

Key to ICES' work is its ability to link population-based health information, at the patient level, in a way that ensures the privacy and confidentiality of personal health information. Linked databases reflecting 13 million of 34 million Canadians allow researchers to follow patient populations through diagnosis and treatment, and to evaluate outcomes.

ICES receives core funding from the Ontario Ministry of Health and Long-Term Care. In addition, ICES scientists and staff compete for peer-reviewed grants from federal funding agencies, such as the Canadian Institutes of Health Research, and project-specific funds from provincial and national organizations. ICES knowledge is highly regarded in Canada and abroad, and is widely used by government, hospitals, planners, and practitioners to make decisions about health care delivery and to develop policy.

Statement on Indigenous Mental Health Data

For over 15 years, mental health has been established as a key priority by First Nations in Ontario. Today, First Nations leaders across Ontario are still calling for action to address the mental health of their children and youth. In February 2016, First Nations leaders from Nishnawbe Aski Nation in Northern Ontario declared a State of Emergency related to the mental health crisis in their communities. In a parallel gathering, the Chiefs of Ontario, the Ontario SPOR Support Unit, the Centre for Rural and Northern Health Research, and ICES hosted a First Nations Health Research Symposium where First Nations community members set priorities for health research in Ontario. Mental health and addictions was the top priority.

In this provincial scorecard, we do not present Indigenous-specific mental health data. ICES has relationships and data governance agreements with Indigenous organizations that acknowledge the inherent rights of First Nations, Métis and Inuit peoples to determine how data are used to tell their stories and to heal their communities. As a result, ICES works directly with Indigenous partners and communities to ensure that indicators are contextualized in a way that supports the substantial work that Indigenous people are undertaking. This involves working in close partnership, respecting the diversity of Indigenous communities, integrating Indigenous perspectives and acknowledging the impacts of ongoing colonialism.

Since 2017, ICES has been working directly with the Métis Nation of Ontario to provide Métis-specific mental health indicators. In addition, we are working with First Nations communities and the Chiefs of Ontario to respond to the research priorities set in February 2016 for the analysis of First Nations mental health and addictions data.

List of Exhibits

Introduction

In 2011, the Government of Ontario launched *Open Minds, Healthy Minds*,[1] a comprehensive strategy to transform the mental health and addictions system in the province into one that is accessible, equitable, high-performing and recovery-oriented. In 2014, the Mental Health and Addictions Leadership Advisory Council was created by the Government of Ontario and given a three-year mandate to advise the Ministry of Health and Long-Term Care on implementation of the mental health and addictions strategy.

A key component of a high-functioning mental health and addictions system is ongoing monitoring and evaluation, which enables evidence-based decisions to influence policy and practice. To that end, the leadership advisory council recommended that the Ministry of Health and Long-Term Care adopt a scorecard consisting of 10 system-level performance indicators for mental health and addictions care in Ontario.[2] The scorecard has two aims: to provide a holistic view of Ontario's mental health and addictions system for adults aged 16 and over by measuring its performance, and to describe the use of mental health and addictions services by the province's adult population.

The performance indicators for the mental health and addictions system are a product of the Data and Performance Measurement Task Group, a subgroup of the leadership advisory council. The task group was entrusted with mapping mental health and addictions data in Ontario, developing a performance measurement scorecard, and recommending a mental health and addictions data strategy.

To develop the performance measurement scorecard, the task group first conducted an environmental scan to identify a list of indicators in use in Ontario. Using a modified Delphi process and selection criteria which specified that indicators must be measureable, important/relevant, actionable and interpretable, the task group narrowed the list of indicators to 10. To align with existing quality improvement initiatives, the indicators were grouped into the six quality dimensions identified by the Institute of Medicine and adopted by Health Quality Ontario for their health system quality framework (**Exhibit 1**).[3,4]

EXHIBIT 1 Performance indicators for the mental health and addictions system in Ontario*

Equity	Client-centred	Safe	Effective	Timely	Efficient
Indicators will be assessed through five equity dimensions: • Geography • Income by neighbourhood • Immigration status • Age • Sex	1. Overall rating of services received by client — TBD; MHA	2. Use of physical restraints — OMHRS; MH	3. Years of life lost due to MHA — DAD, NACRS, OHIP, OMHRS, ORG-D; MHA	5. Wait times from referral to service initiation — OCAN, DATIS; MHA	7. Repeat unscheduled ED visit within 30 days — NACRS; MHA
	A. Stigma/ discrimination indicator — TBD; MHA	D. Medication reconciliation — TBD; MHA	4. Rate of death by suicide — ORG-D; MHA	6. First contact in the emergency department (ED) for MHA — DAD, NACRS, OHIP, OMHRS; MHA	8. Doctor visit within 7 days of leaving hospital after treatment for MHA — DAD, OHIP, OMHRS; MHA
Major gaps in sociodemographic dimensions include: • Francophone communities • Indigenous communities • Racialized communities	B. Decrease in a client's unmet needs indicator — OCAN; MHA		E. Global assessment of functioning (GAF) scores ≥ 10 points — OMHRS; MHA	F. Common definition of "wait times" — TBD; MHA	9. Rate of inpatient readmission within 30 days of discharge — DAD, OMHRS; MHA
	C. Family/caregiver support indicator — TBD; MHA				10. Alternate level of care — ATC; MH
					G. System transitions indicator — TBD; MHA

Legend

- Population
- System
- Community-based & hospital services
- Community-based services
- Hospital services
- Indicators recommended for development

Data source: ATC, Access to Care; DAD, Discharge Abstract Database; DATIS, Drug and Alcohol Treatment Information System; NACRS, National Ambulatory Care Reporting System; OCAN, Ontario Common Assessment of Need; OHIP, Ontario Health Insurance Plan; OMHRS, Ontario Mental Health Reporting System; ORG-D, Office of the Registrar General – Deaths; TBD, to be determined.

Abbreviations: A, Addictions; MH, Mental health; MHA, Mental health & addictions.

*Adapted from *Moving Forward: Better Mental Health Means Better Health*. Toronto, ON: Mental Health and Addictions Leadership Advisory Council; 2016.

So that a baseline scorecard could be produced in a timely manner, the task group chose indicators that were measureable (i.e., for which data were available). As a result of this pragmatic approach, indicators that were otherwise identified as important are absent from this report. Also excluded because of data unavailability is the community-based mental health and addictions sector; however, a number of this sector's indicators have been identified for future development, and these are described later in this report.

Two types of indicators are reported here: performance indicators that describe how well the health care system responds to individuals seeking help for mental illnesses and addictions, and contextual indicators that describe services provided to and relevant outcomes for individuals with mental illnesses and addictions. Many of the performance indicators identified in the scorecard are similar to those reported on by ICES for child and youth mental health in Ontario.[5,6] This alignment of indicators was deliberate to allow for a comparison of sector performance by age group. Findings from selected contextual indicators that are not part of the scorecard are also included in this report to provide context for the performance indicators and are reported after the performance indicator they most relate to (**Exhibit 2**).

EXHIBIT 2 Contextual indicators for the mental health and addictions system in Ontario

Outpatient care	Acute care
• Primary care physicians' full-time equivalent allocation to mental health and addictions care • Rate at which individuals were seen by a psychiatrist or a general practitioner/family physician for mental health and addictions care • Rate at which individuals received telepsychiatry consultations • Rate of mental health and addictions–related outpatient physician visits	• Length of stay for psychiatric hospitalizations • Rate of hospitalizations for mental health and addictions care • Rate of emergency department visits for deliberate self-harm • Rate of mental health and addictions–related emergency department visits

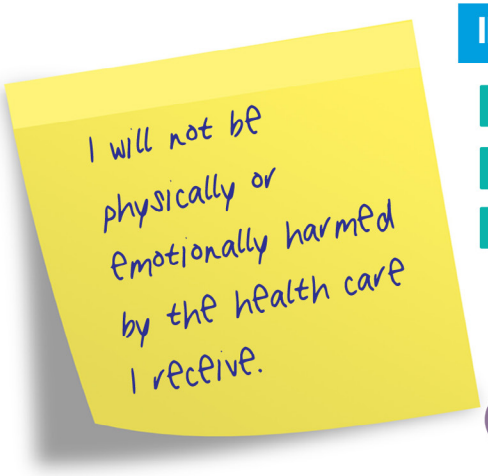
Calculation and reporting of indicators

This report includes sections that draw on four of the health system quality dimensions outlined in **Exhibit 1**: safe, efficient, timely and effective. For each of the dimensions, the performance indicators were calculated, data permitting, to evaluate trends from 2006 to 2014. A fifth quality dimension, equity, was assessed through five characteristics—age, sex, immigration category, neighbourhood income and geography—that were calculated as three-year averages using the latest years of available data.

Mental illness and addictions, in the context of this report, do not include dementia. Due to data limitations, only mental health and addictions services provided in a hospital or by a physician in an outpatient setting are included in this report. The care provided by community-based mental health and addictions agencies and by non-physician clinicians, such as psychologists and social workers, makes a large contribution to Ontario's mental health and addictions system; due to data unavailability, that care is not captured in this report. For more information on the calculation of the indicators, please refer to the accompanying *Technical Appendix*.

To highlight key findings from the indicators, only selected results are presented here. Full results for the indicators can be found in the accompanying *Chart Pack*. Based on data unavailability, some performance indicators are not reported. ICES continues to work with the Ministry of Health and Long-Term Care to develop strategies to measure and report on the remaining indicators.

Quality Dimension: Safe



INDICATOR: Use of **physical restraints**

Overall, from 2006 to 2014, use of physical restraints for individuals hospitalized for mental health and addictions–related reasons **declined by one-third**.

- **2006: 7.3%**
- **2014: 4.9%**

This was observed in **males and females** and across **all age groups**.

PERFORMANCE INDICATOR

Use of physical restraints

Physical restraint refers to when a patient has their movement limited, either by use of an external device or by being physically held, to prevent harm to themselves or others. Following a coroner's inquest in Ontario in 2008,[7] psychiatric health care facilities have been encouraged to limit restraint use to emergency situations. Less invasive alternatives to physical restraints should be considered whenever possible; these include evidence-based behavioural techniques designed to allow for de-escalation, seclusion of agitated individuals into safe rooms or spaces where they are not able to hurt themselves or others, and use of chemical restraints (the involuntary use of medications). When absolutely necessary, physical restraints should be used for the shortest amount of time with frequent monitoring of patient health and mental health status. The declining rate of restraint use in Ontario suggests that the province has been successful in implementing these safety recommendations.

EXHIBIT 3 Number of mental health and addictions–related hospitalizations where physical restraints were used per 100 mental health and addictions–related hospitalizations among individuals aged 16 to 105 years, overall and by sex, in Ontario, 2006 to 2014

Key Finding

- Between 2006 and 2014, the overall rate of physical restraint use decreased by one-third. Men had consistently higher rates of physical restraint use than women.

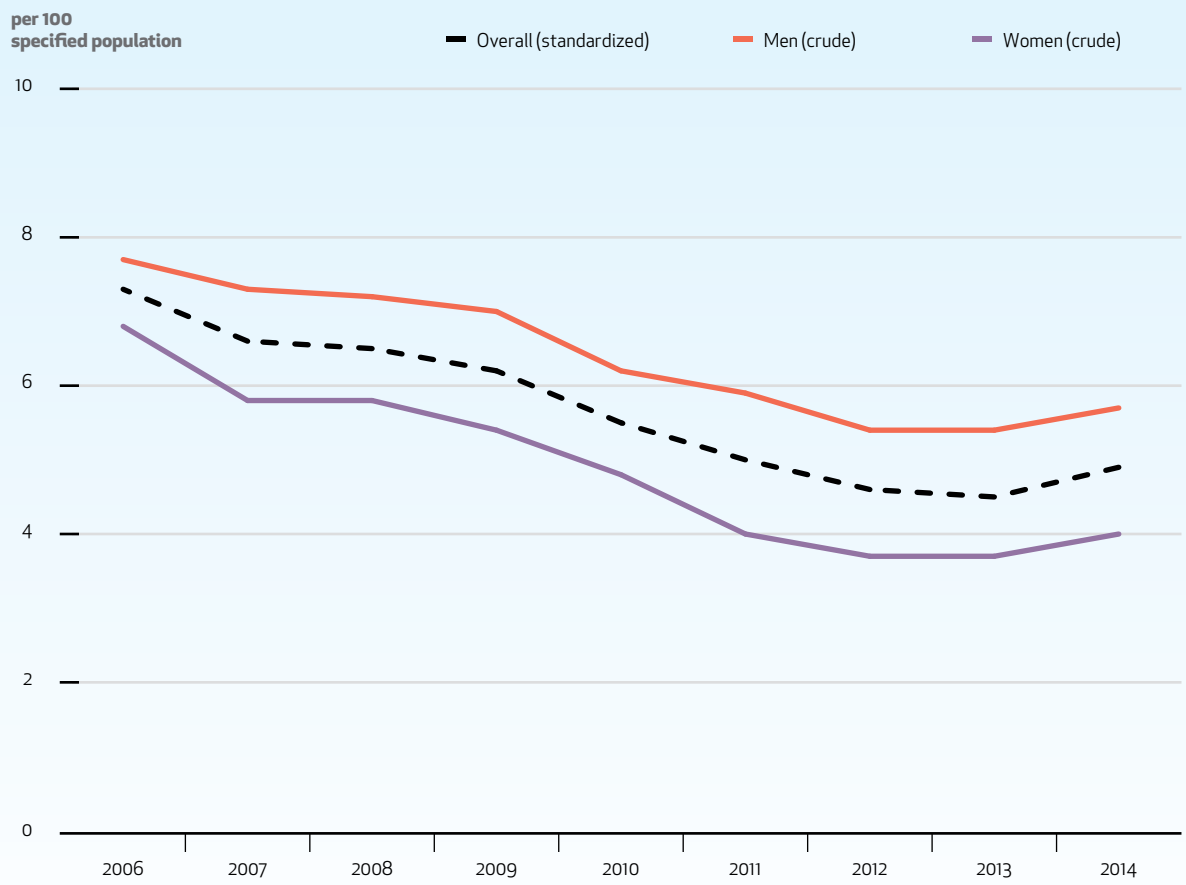
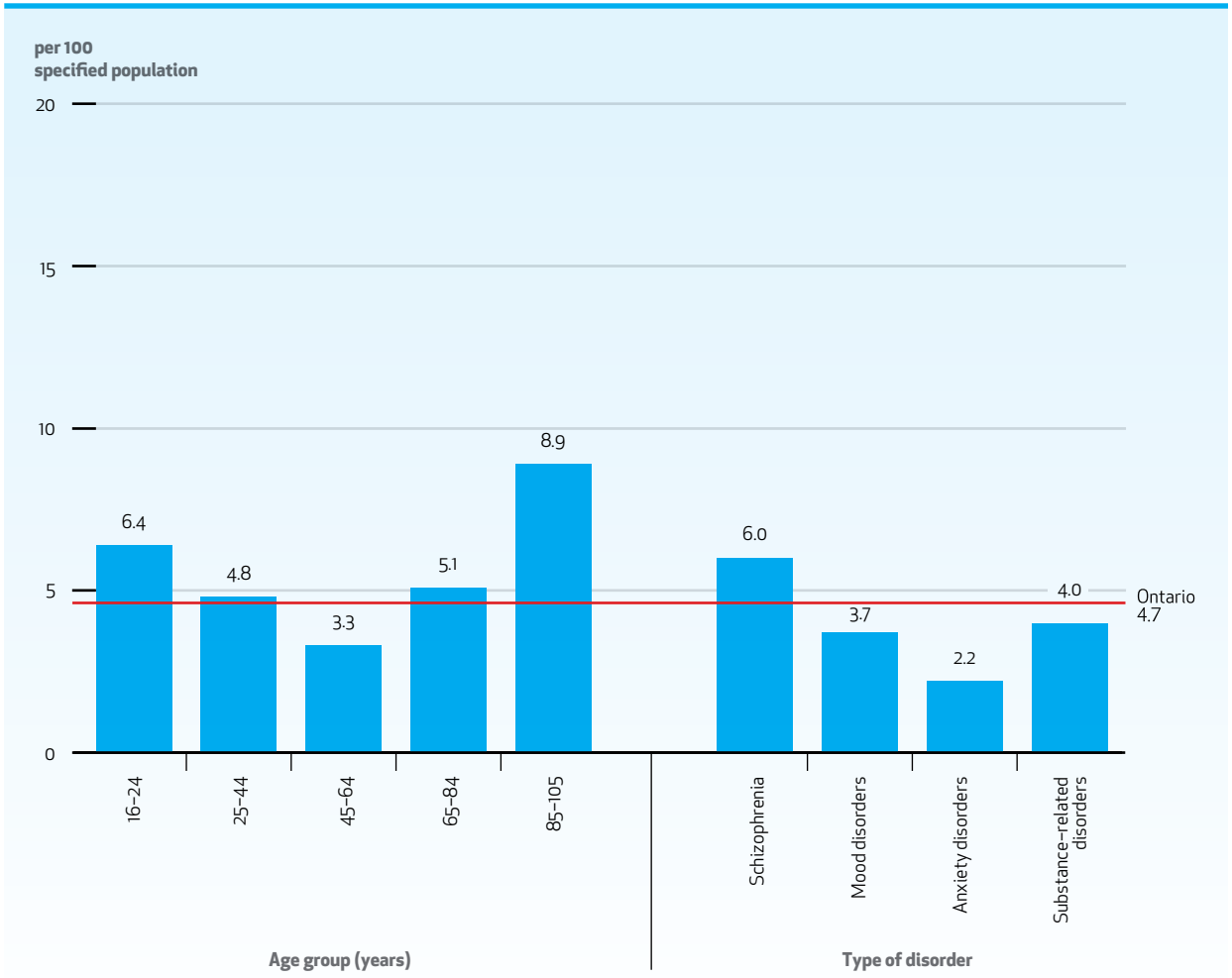


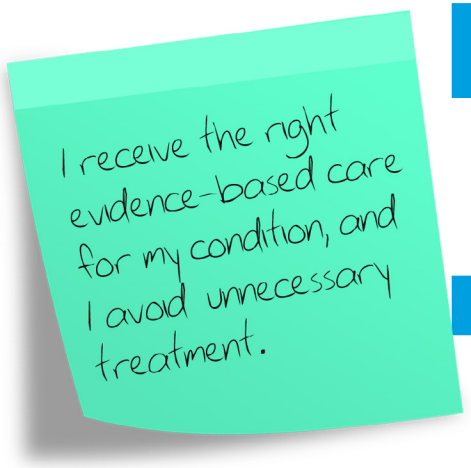
EXHIBIT 4 Number of mental health and addictions–related hospitalizations where physical restraints were used per 100 crude mental health and addictions–related hospitalizations among individuals aged 16 to 105 years, by sex and by type of disorder, in Ontario, three-year average for 2012 to 2014

Key Findings

- The rate of physical restraint use was highest among elderly adults and youth.
- The rate of physical restraint use differed by the type of disorder, with the highest rate observed among individuals with schizophrenia and the lowest among those with anxiety disorders.



Quality Dimension: Effective



INDICATOR: Years of potential life lost among individuals with **schizophrenia**

Individuals with schizophrenia have **more years of potential life lost** for all causes of death.

- **Average gap in life expectancy: 8 years**

INDICATOR: Rate of **death from suicide**

Low-income neighbourhoods and northern Ontario have suicide rates that are **well above the provincial average**.

- **Provincial average: 10.3 per 100,000**
- **North West LHIN: 22.3 per 100,000**
- **Lowest-income areas: 13.7 per 100,000**

PERFORMANCE INDICATOR

Years of potential life lost among individuals with schizophrenia

Years of potential life lost is a measure of premature mortality that quantifies the years not lived by an individual who died before age 75. Premature mortality is common among individuals with schizophrenia, not only as a result of suicide and accidental causes, which tend to occur more often in early adulthood, but also due to cardiovascular and other natural causes, which may be linked to higher rates of smoking, alcohol consumption, unhealthy eating, and physical inactivity or to an increased likelihood of weight gain associated with antipsychotic medication. Limited access to general medical services and to cardiovascular screening and prevention may also play a role.[8] For this population, specialized approaches are required to manage chronic medical illnesses and reduce the several-year gap in premature mortality between it and the general population.

EXHIBIT 5 Average age at death among individuals aged 15 and older, with and without schizophrenia, in Ontario, 2006 to 2012

Key Finding

- Individuals with schizophrenia had a life expectancy that was, on average, 8 years less than those without schizophrenia.

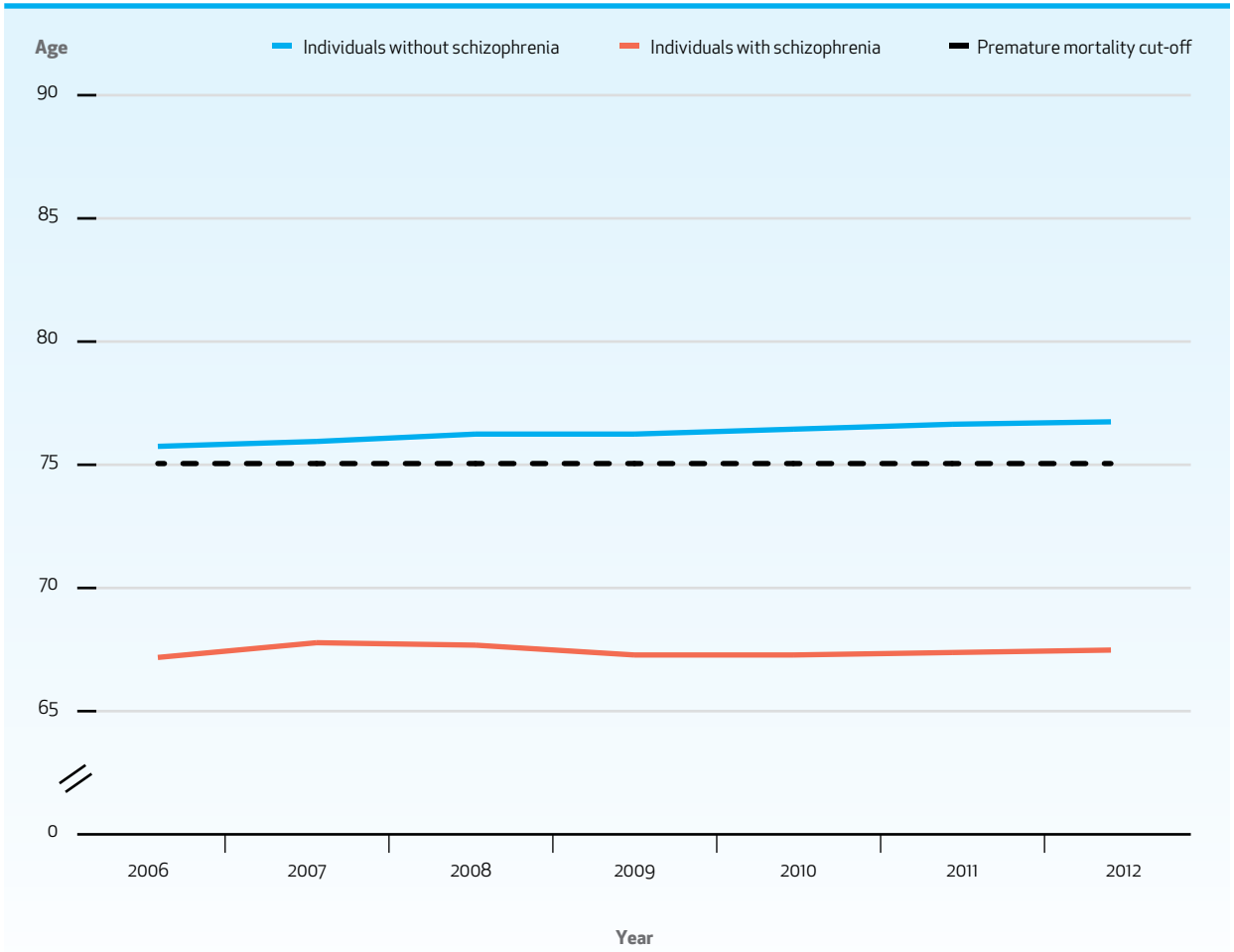
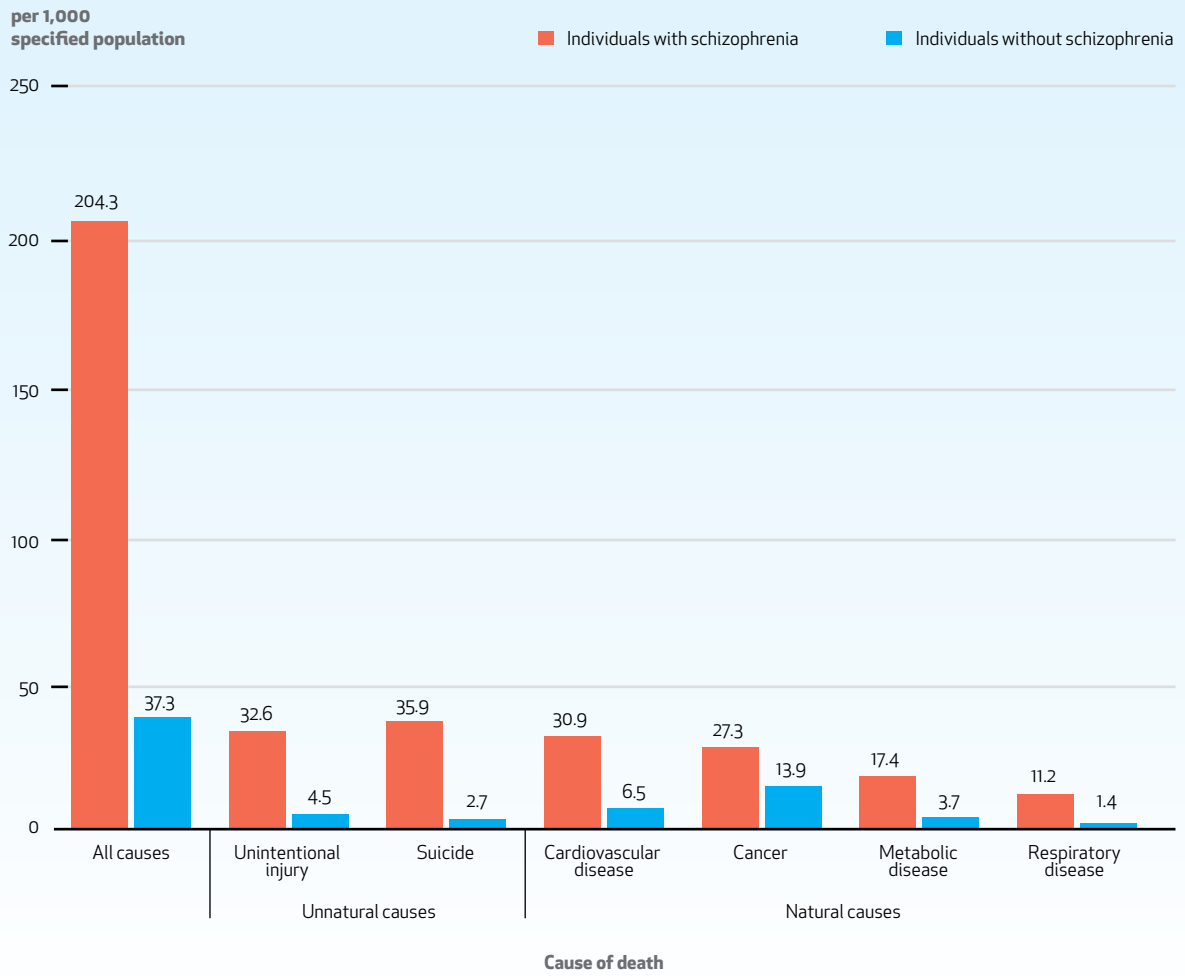


EXHIBIT 6 Number of years of potential life lost per 1,000 standard population aged 15 to 75 years with and without schizophrenia, by cause of death, in Ontario, three-year average for 2010 to 2012

Key Finding

- In 2012, more than 23,000 years of potential life was lost among individuals with schizophrenia in Ontario. Between 2010 and 2012, the highest rates of years of potential life lost were from unintentional injuries and suicide, but there were almost equally high rates of years of potential life lost from natural causes of death such as cardiovascular disease and cancer.



PERFORMANCE INDICATOR

Rate of death by suicide

There are notable sociodemographic differences in suicide rates. Rates in low-income neighbourhoods and in northern Ontario are much higher than the provincial average. The wide geographic variation in suicide rates, in northern Ontario in particular, may reflect, in part, the high rate of mental illness and addictions among First Nations populations, which account for a higher percentage of the population in northern Ontario.

EXHIBIT 7 Number of deaths by suicide per 100,000 population aged 16 to 105 years, overall and by sex, in Ontario, 2006 to 2012

Key Finding

- Between 2006 and 2012, the rate of death by suicide remained stable. The rate was three times higher among men than women. The finding of a higher rate of suicide among men is consistent with existing evidence.[9]

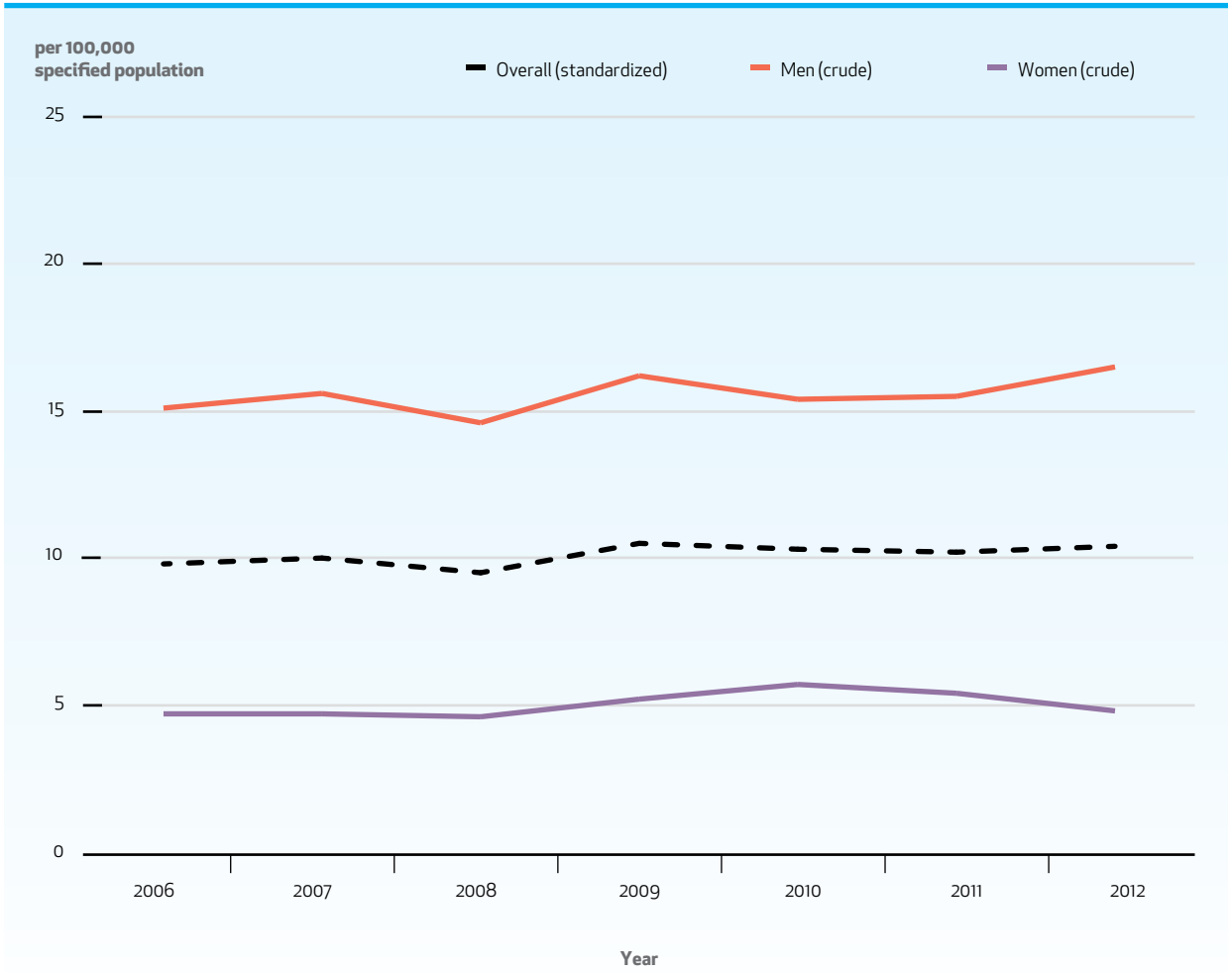


EXHIBIT 8 Number of deaths by suicide per 100,000 crude population aged 16 to 105 years, by age group and by neighbourhood income quintile, in Ontario, three-year average for 2010 to 2012

Key Finding

- Suicide rates were highest among middle-aged individuals and those living in the poorest neighbourhoods, where the rate was more than 1.5 times that of the wealthiest neighbourhoods.

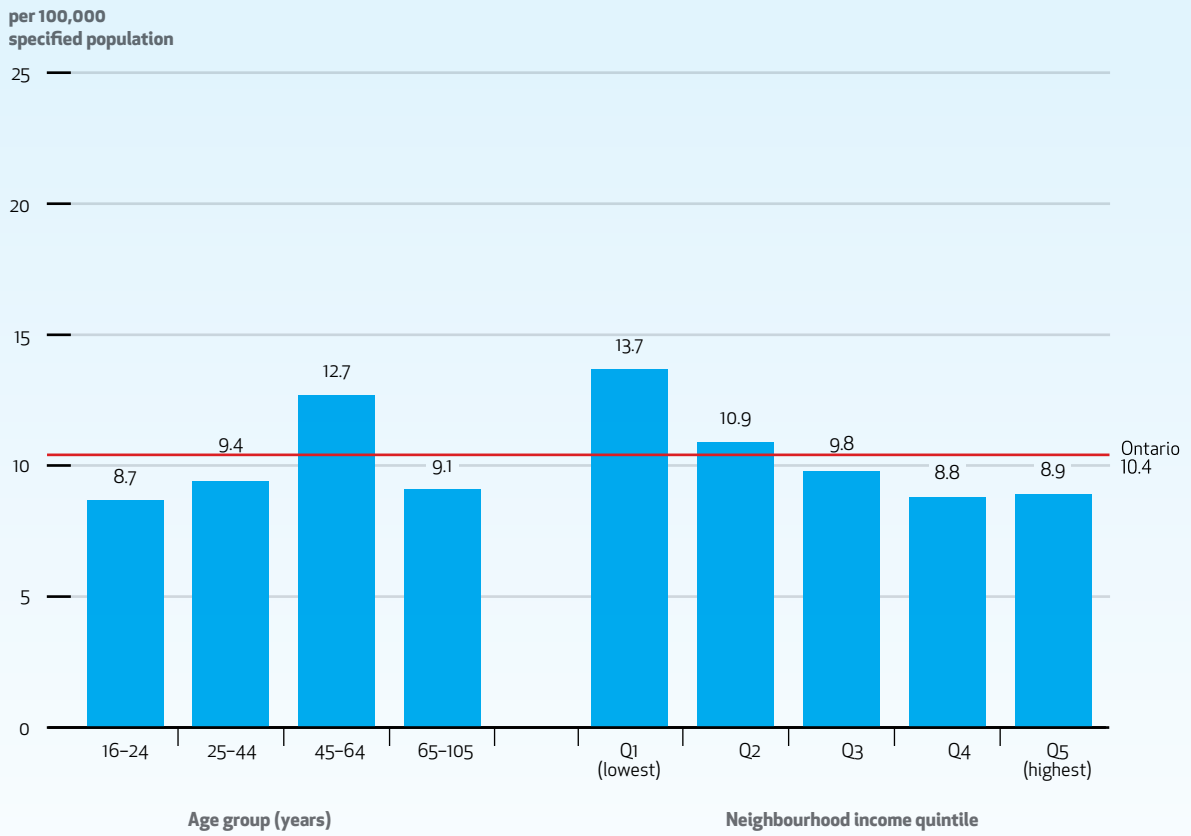
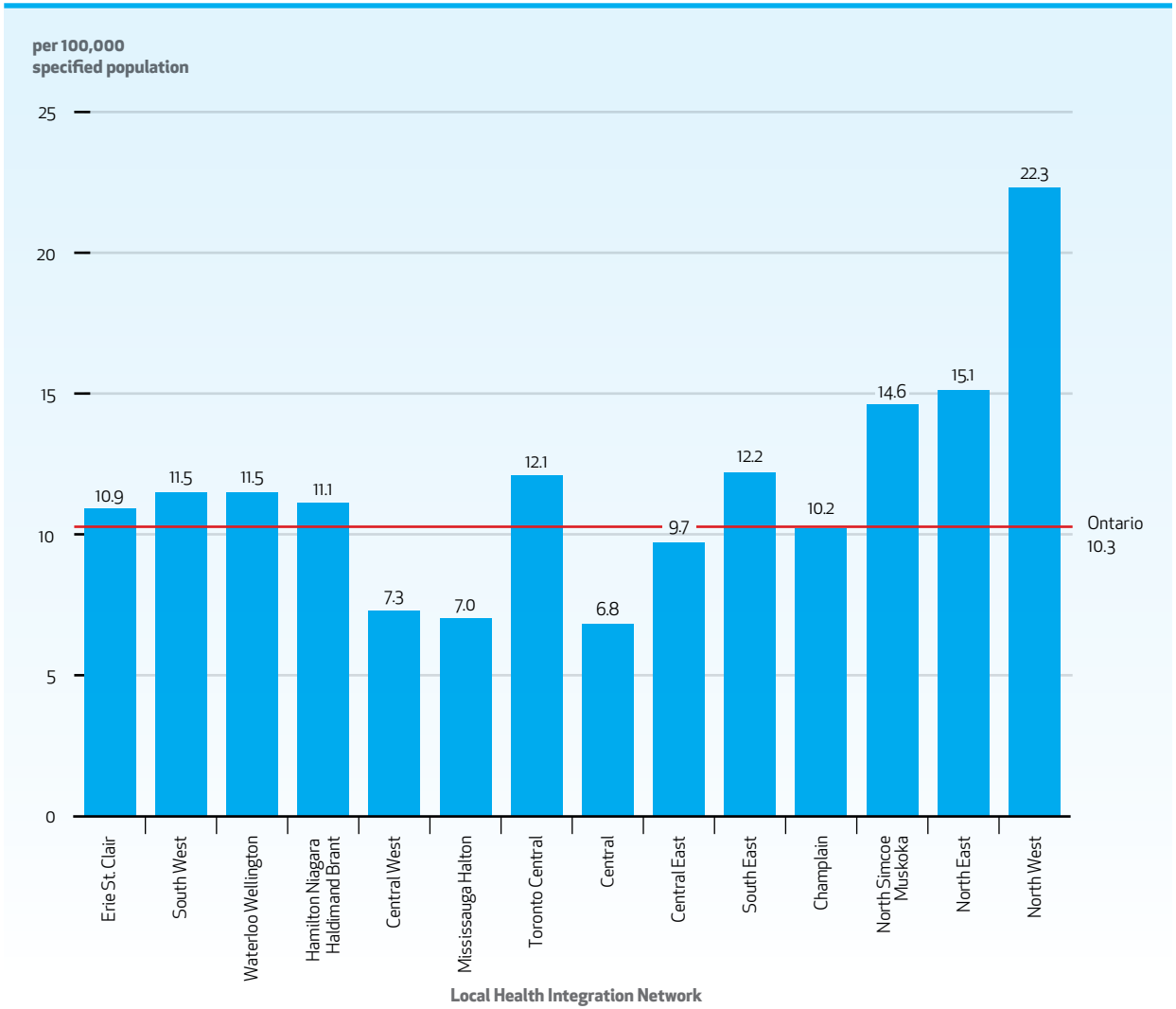


EXHIBIT 9 Number of deaths by suicide per 100,000 standard population aged 16 to 105 years, by Local Health Integration Network, in Ontario, three-year average for 2010 to 2012

Key Finding

- Suicide rates varied geographically, with the northern LHINs having the highest rates. The suicide rate in the North West LHIN was almost double the provincial average.



CONTEXTUAL INDICATOR

Emergency department visits for deliberate self-harm

Deliberate self-harm includes both self-harm and attempted suicide and is an important marker of mental health. Rates of deliberate self-harm among residents of northern Ontario and among youth were very high compared to provincial averages.

EXHIBIT 10 Number of emergency department visits for deliberate self-harm per 10,000 population aged 16 to 105 years, overall and by sex, in Ontario, 2006 to 2014

Key Finding

- Between 2006 and 2011, a modest decline in the rates of emergency department visits for deliberate self-harm was observed followed by stable rates between 2011 and 2014. Consistent with existing evidence, women had higher rates of emergency department visits for deliberate self-harm.[10-12]

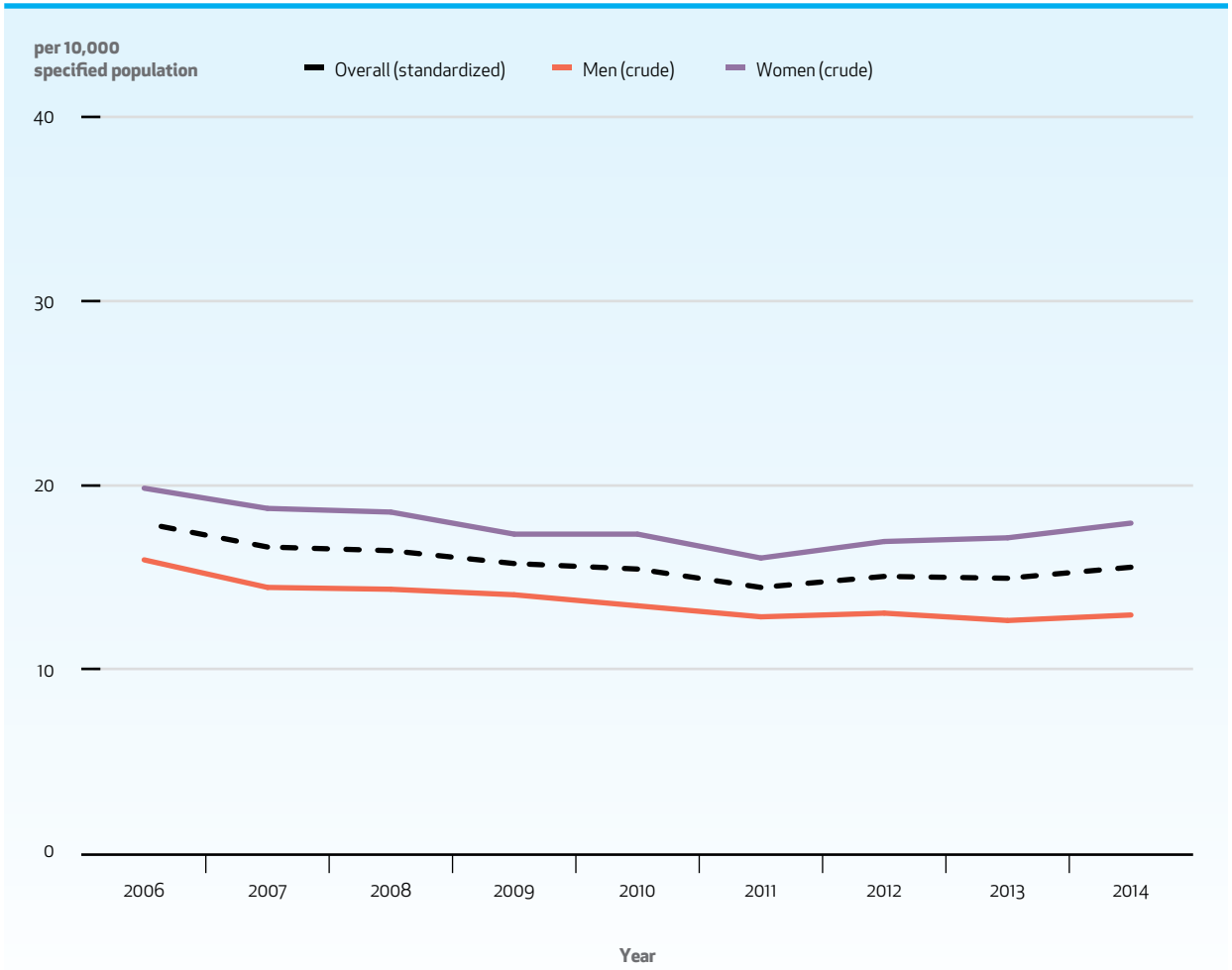


EXHIBIT 11 Number of emergency department visits for deliberate self-harm per 10,000 crude population aged 16 to 105 years, by age group and by neighbourhood income quintile, in Ontario, three-year average for 2012 to 2014

Key Findings

- Young people had a rate of deliberate self-harm that was more than double the provincial average.
- Individuals living in the poorest neighbourhoods had a rate of self-harm that was more than double that of those in the wealthiest neighbourhoods.

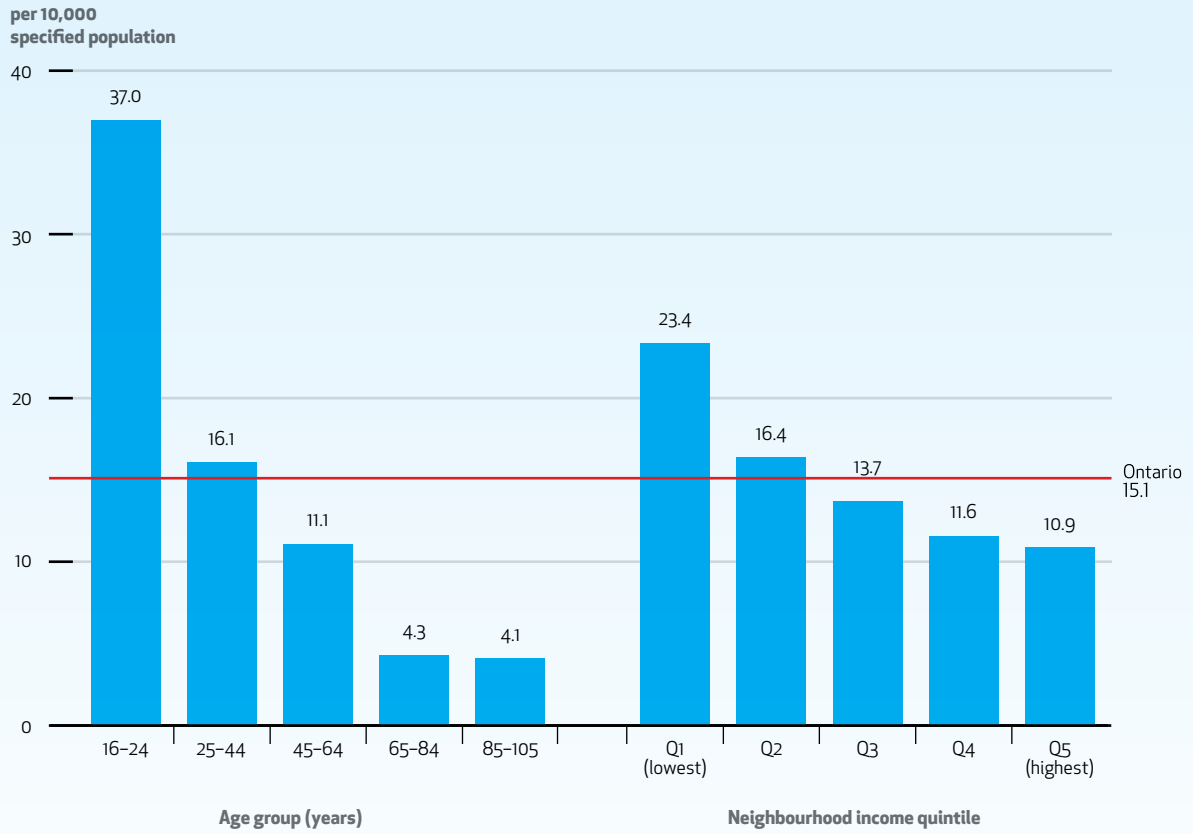
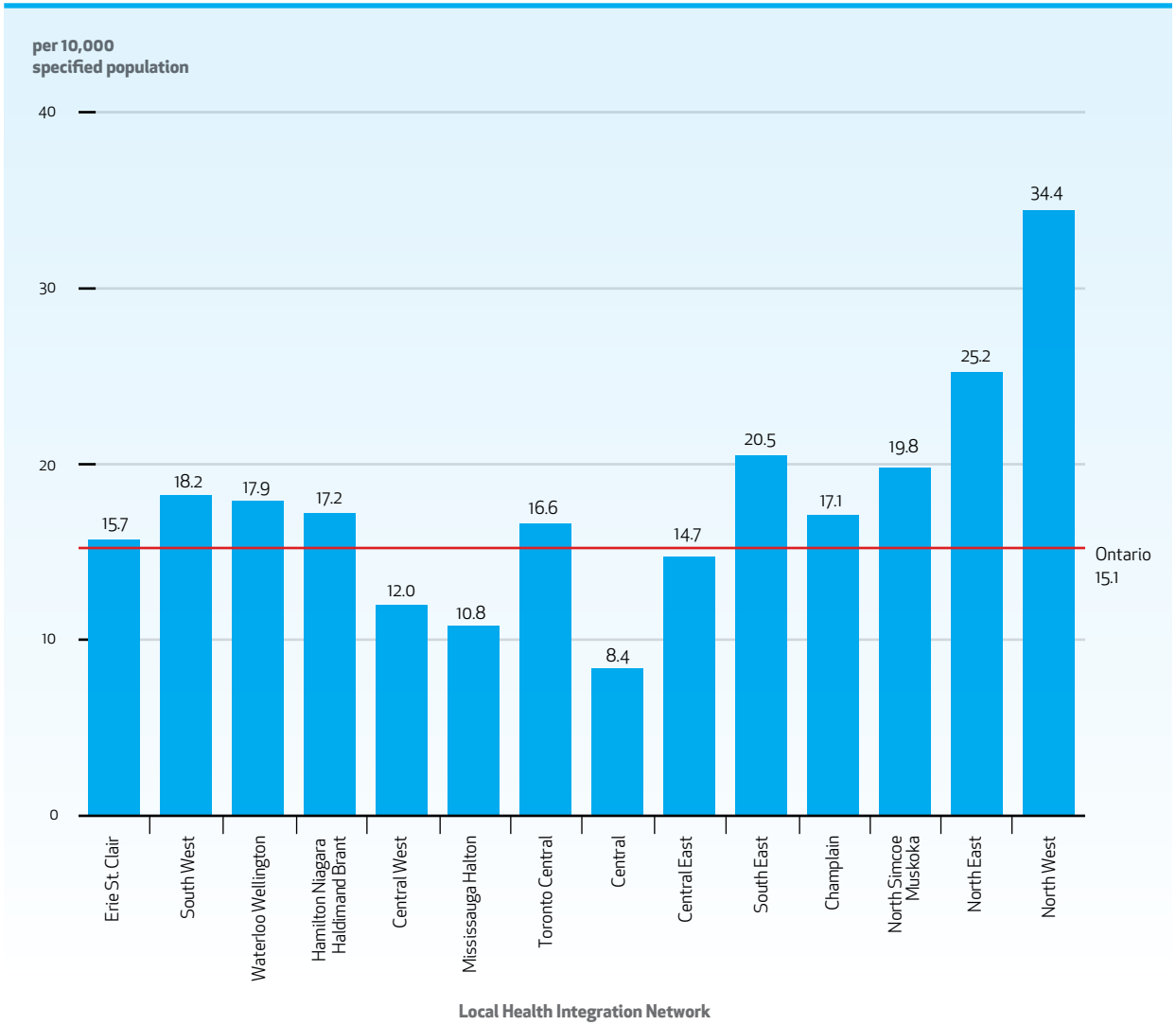


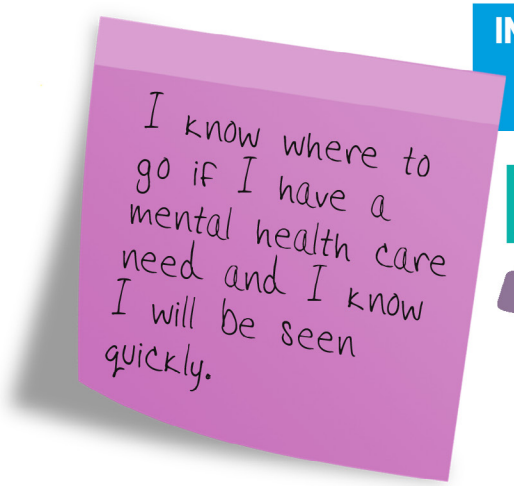
EXHIBIT 12 Number of emergency department visits for deliberate self-harm per 10,000 standard population aged 16 to 105 years, by Local Integration Health Network, in Ontario, three-year average for 2012 to 2014

Key Finding

- Rates of self-harm were highest among LHINs in northern Ontario. Throughout the province, rates of self-harm followed a similar geographic pattern to rates of suicide.



Quality Dimension: Timely



INDICATOR: The emergency department as the **first point of contact** for mental health and addictions

One in three adults presenting to the emergency department for mental health and addictions care did not have prior physician-based care.

PERFORMANCE INDICATOR

First contact in the emergency department for mental health and addictions

The high proportion of Ontarians for whom the emergency department was the first point of contact for mental health and addictions–related care may signal less than adequate access to outpatient physician- or community-based care. A limitation of this indicator is that it does not capture care provided by community-based agencies and non-physicians, such as psychologists and social workers.

EXHIBIT 13 Number of individuals for whom the emergency department (ED) was the first point of contact for mental health and addictions (MHA) care per 100 population aged 16 to 105 years with an incident MHA-related ED visit, overall and by age group, in Ontario, 2006 to 2014

Key Finding

- Overall, 1 in 3 adults presenting to the emergency department for mental health and addictions–related care did not have prior physician-based care. For youth aged 16 to 24, this rate declined by nearly 10% between 2006 and 2014, which indicates that more youth are seeking help for mental illnesses in primary care settings.

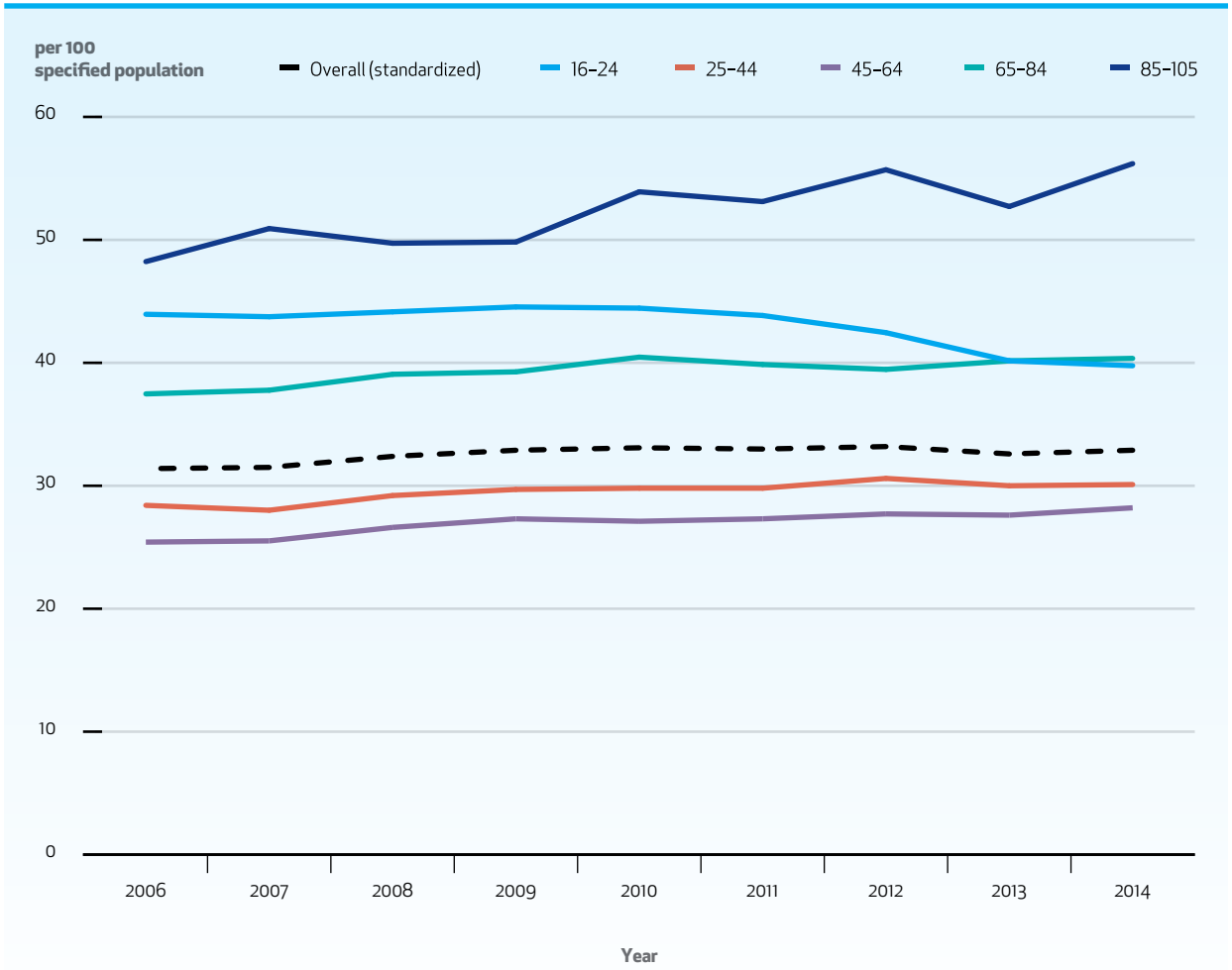


EXHIBIT 14 Number of individuals for whom the emergency department (ED) was the first point of contact for mental health and addictions (MHA) care per 100 population aged 16 to 105 years with an incident MHA-related ED visit, by type of disorder, in Ontario, 2006 to 2014

Key Finding

- The likelihood of the emergency department being the first point of contact for mental health and addictions–related care varied by type of disorder. Individuals with schizophrenia had the lowest rate of first contact in the emergency department while those with anxiety and substance-related disorders had the highest. A possible explanation for the lower rate of ED use among individuals with schizophrenia may be the implementation of early psychosis intervention programs throughout the province; these aim to minimize the impact of psychosis through early diagnosis and intensive treatment and support.[13]

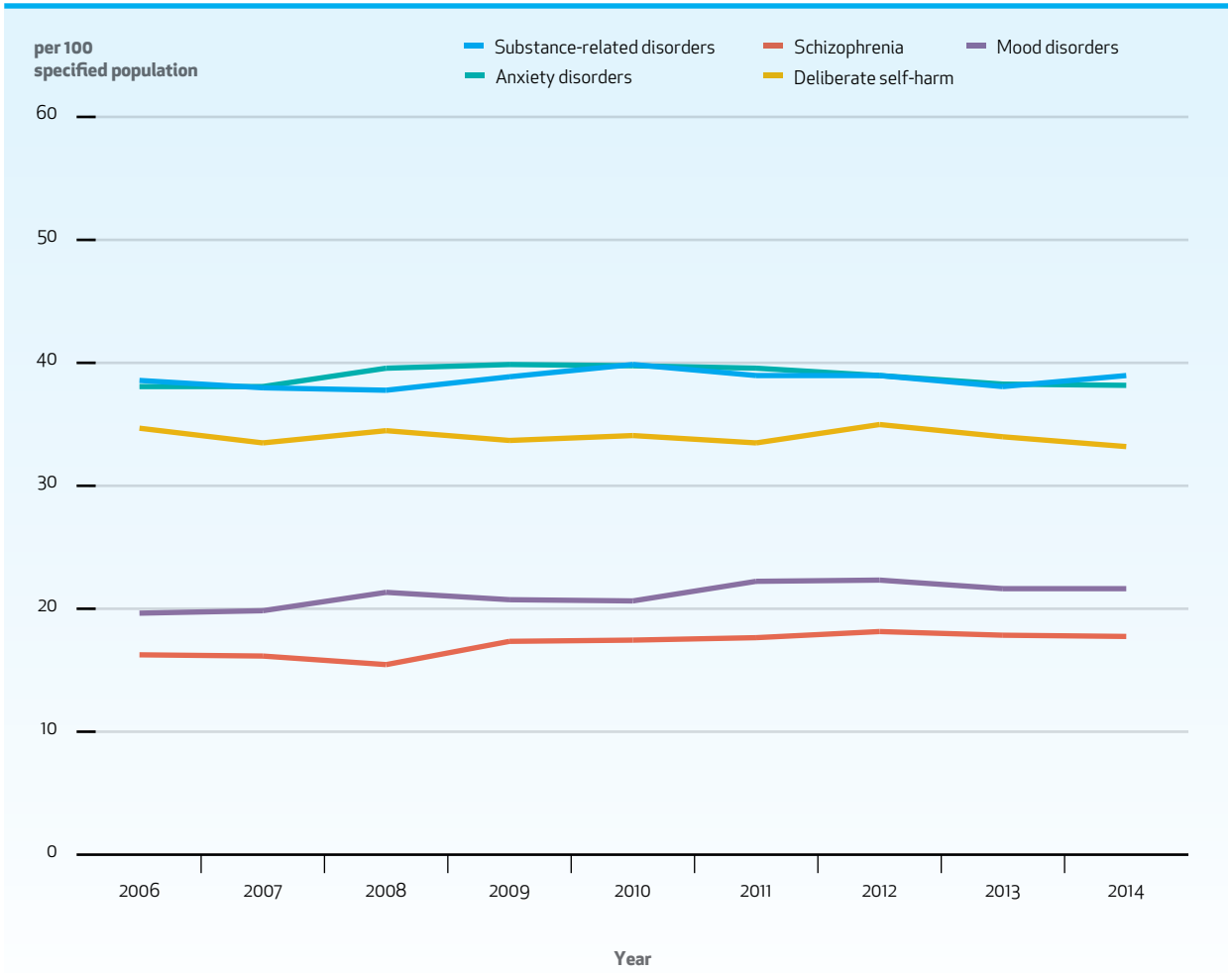


EXHIBIT 15 Number of individuals for whom the emergency department (ED) was the first point of contact for mental health and addictions (MHA) care per 100 crude population aged 16 to 105 years with an incident MHA-related ED visit, by immigrant category, in Ontario, three-year average for 2010 to 2012

Key Finding

- Immigrants and refugees were more likely than non-immigrants to use the emergency department as the first point of contact for mental health and addictions–related care.

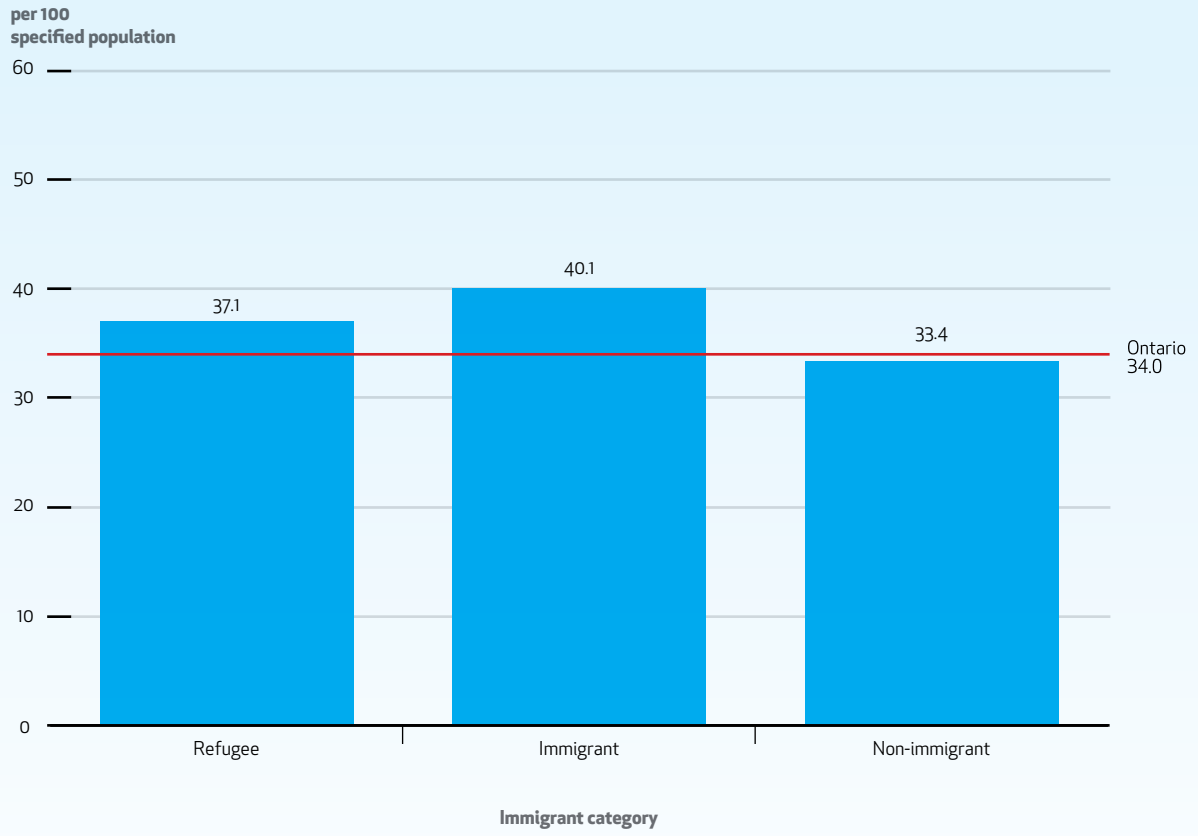
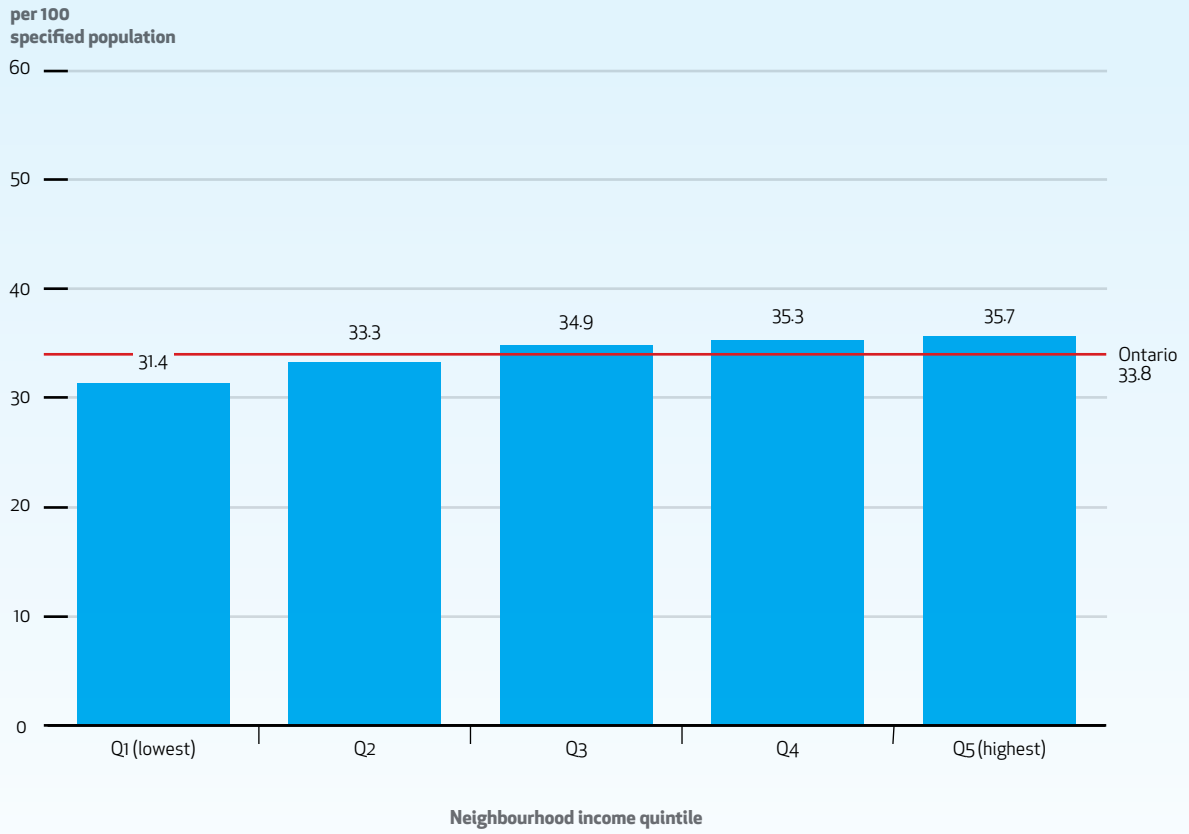


EXHIBIT 16 Number of individuals for whom the emergency department (ED) was the first point of contact for mental health and addictions (MHA) care per 100 crude population aged 16 to 105 years with an incident MHA-related ED visit, by neighbourhood income quintile, in Ontario, three-year average for 2012 to 2014

Key Finding

- Individuals living in wealthier neighbourhoods were slightly more likely to use the emergency department as their first point of contact for mental health and addictions–related care.



CONTEXTUAL INDICATOR

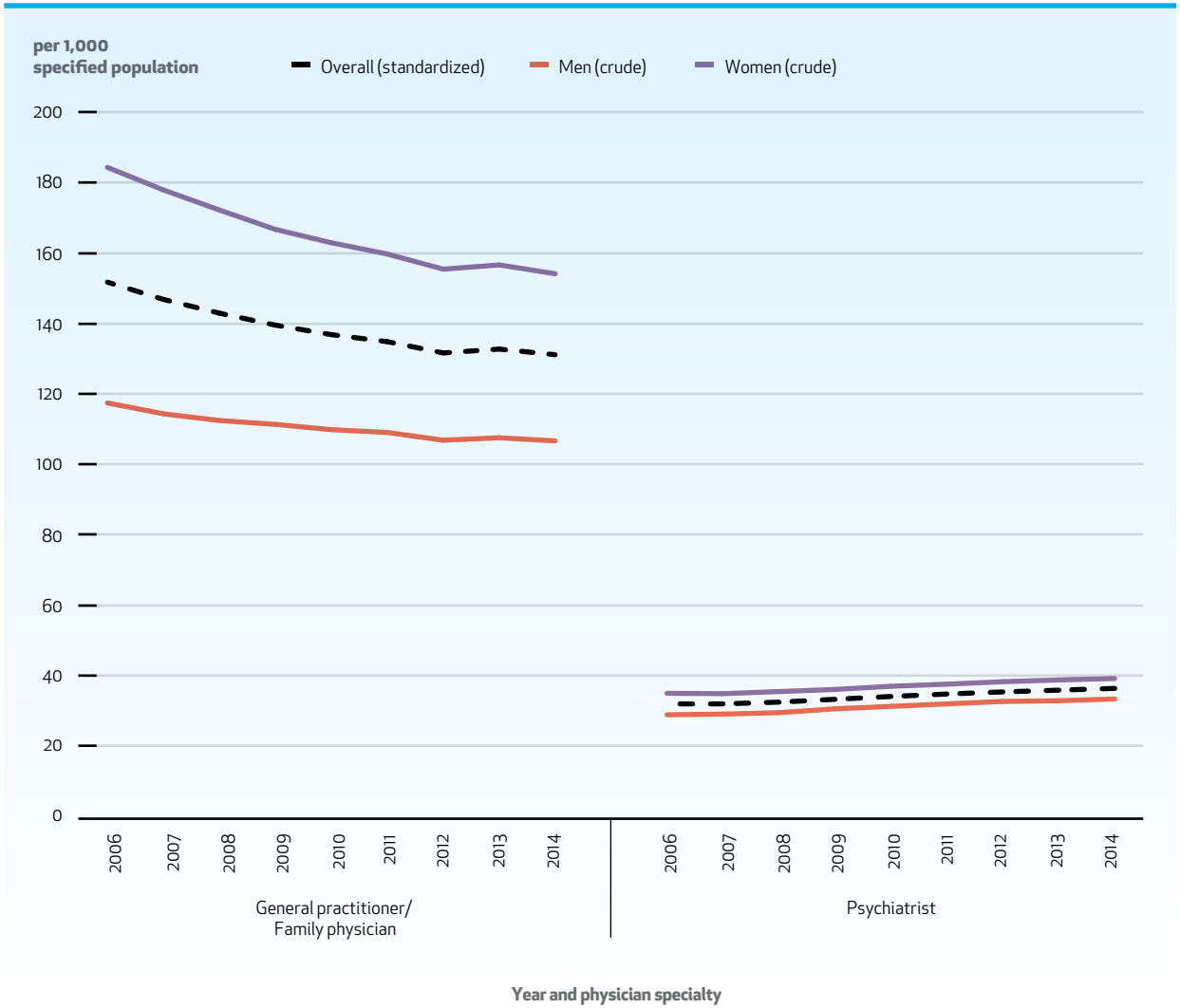
Individuals seen by psychiatrists and family physicians

Between 2006 and 2014, the proportion of Ontarians seen by general practitioners or family physicians for mental health and addictions–related care decreased, while the proportion seen by psychiatrists increased slightly. As the prevalence of mental illness and addictions has not decreased, the overall decline in outpatient physician service use may be of concern, particularly if it cannot be explained by an increased use of uninsured mental health and addictions services.

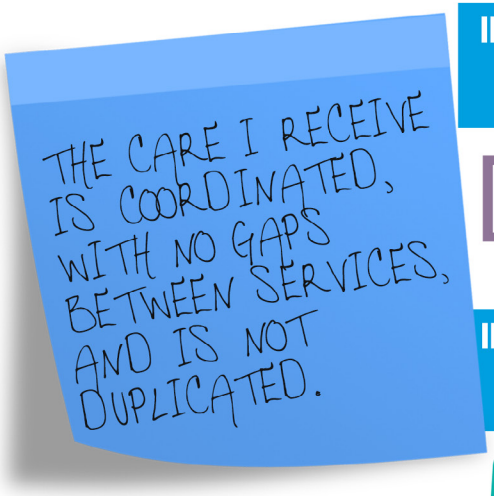
EXHIBIT 17 Number of individuals seen for mental health and addictions–related care by a general practitioner/family physician or a psychiatrist per 1,000 population aged 16 to 105 years, overall and by sex, in Ontario, 2006 to 2014

Key Finding

- Between 2006 and 2014, the rate of individuals who saw a general practitioner or family physician for mental health and addictions–related care declined, whereas the rate of individuals who saw a psychiatrist increased slightly.



Quality Dimension: Efficient



INDICATOR: **Repeat unscheduled ED visit** within 30 days / Rate of inpatient **readmission within 30 days** of discharge

About **1 in 10** adults who visited the ED or were hospitalized for mental health or addictions returned to the ED or were readmitted within 30 days.

INDICATOR: **Doctor visit within 7 days** of leaving hospital after treatment for mental health or addictions

Only **1 in 3** individuals hospitalized for mental health or addictions saw a physician within 7 days of leaving the hospital.

PERFORMANCE INDICATOR

Repeat unscheduled emergency department visits within 30 days

Repeat unscheduled emergency department visits are common. Variability in visit rates by age, type of disorder and neighbourhood income level suggests that health care system gaps may be driving at least some of the visits.

EXHIBIT 18 Number of repeat unscheduled emergency department (ED) visits within 30 days per 100 crude population aged 16 to 105 years with an incident mental health and addictions–related ED visit, overall and by type of disorder, in Ontario, 2006 to 2014

Key Finding

- Among individuals with a mental health and addictions–related emergency department visit who were discharged home, about 1 in 10 returned to the emergency department within 30 days. This rate remained stable over time and was highest for individuals with schizophrenia.

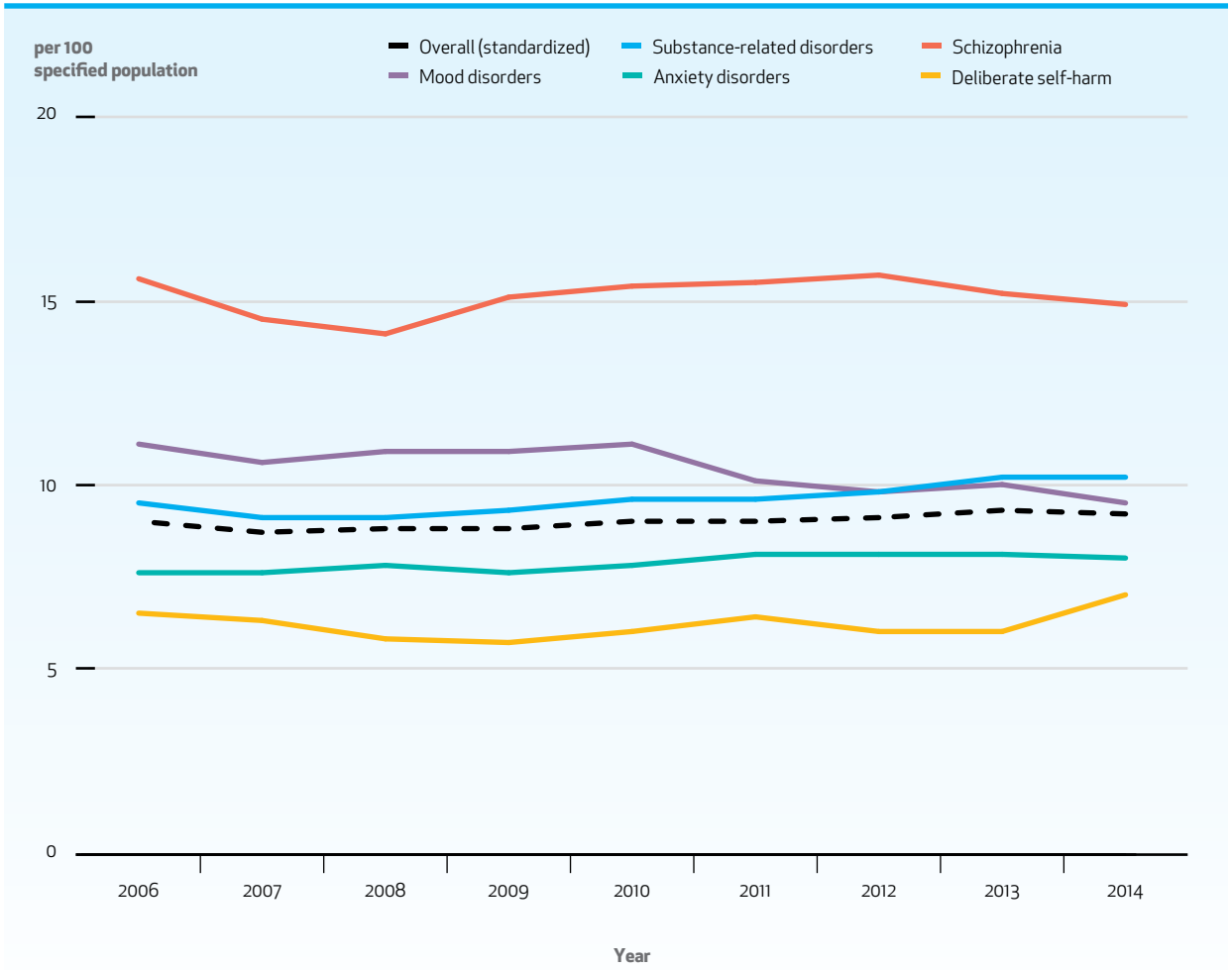
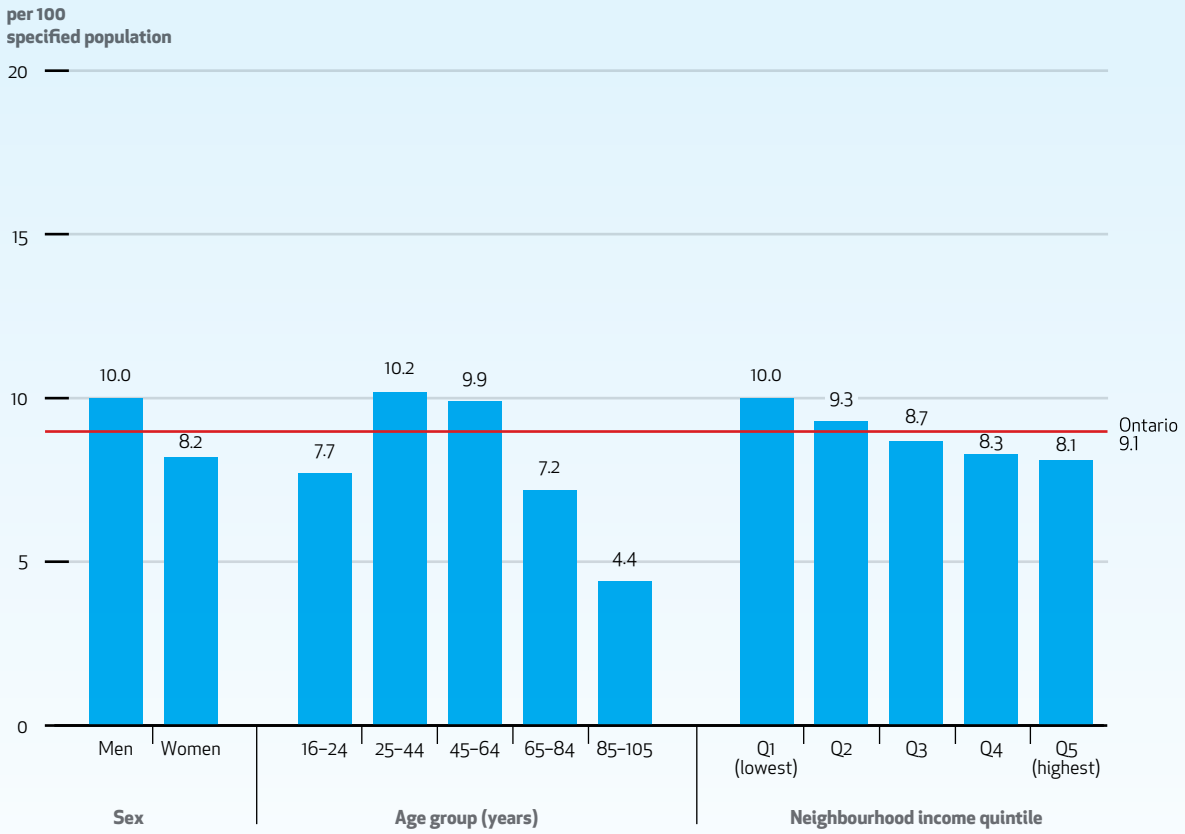


EXHIBIT 19 Number of repeat unscheduled emergency department (ED) visits within 30 days per 100 crude population aged 16 to 105 years with an incident mental health and addictions–related ED visit, by sex, age group and neighbourhood income quintile, in Ontario, three-year average for 2012 to 2014

Key Finding

- The highest rates of repeat unscheduled emergency department visits were among men, adults aged 25 to 64, and those living in lower-income neighbourhoods.



CONTEXTUAL INDICATOR

Emergency department visits for mental health and addictions–related reasons

Emergency departments are an important resource for individuals in crisis with a mental illness or addiction. Emergency departments can serve as a gateway to a needed hospital admission; they can also deliver a brief intervention to stabilize an individual in acute crisis. Emergency departments are sometimes used as a point of contact in the health care system that provides a rapid connection to outpatient services.

EXHIBIT 20 Number of mental health and addictions–related emergency department visits per 1,000 population aged 16 to 105 years, overall and by age group, 2006 to 2014

Key Finding

- There was a slight increase in the overall rate of mental health and addictions–related emergency department visits between 2006 and 2014. This was most pronounced among youth aged 16 to 24, where the rate increased by 22%.

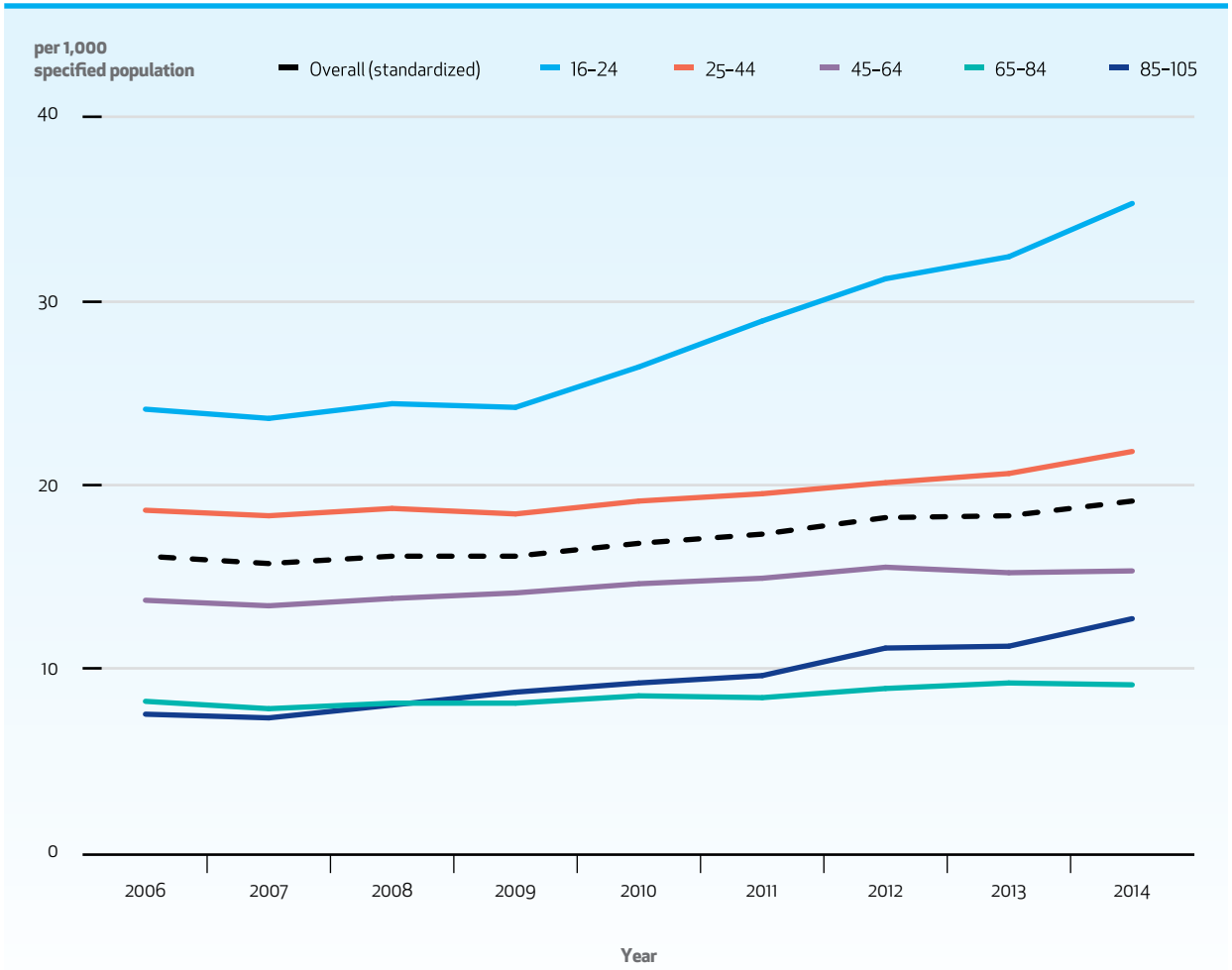
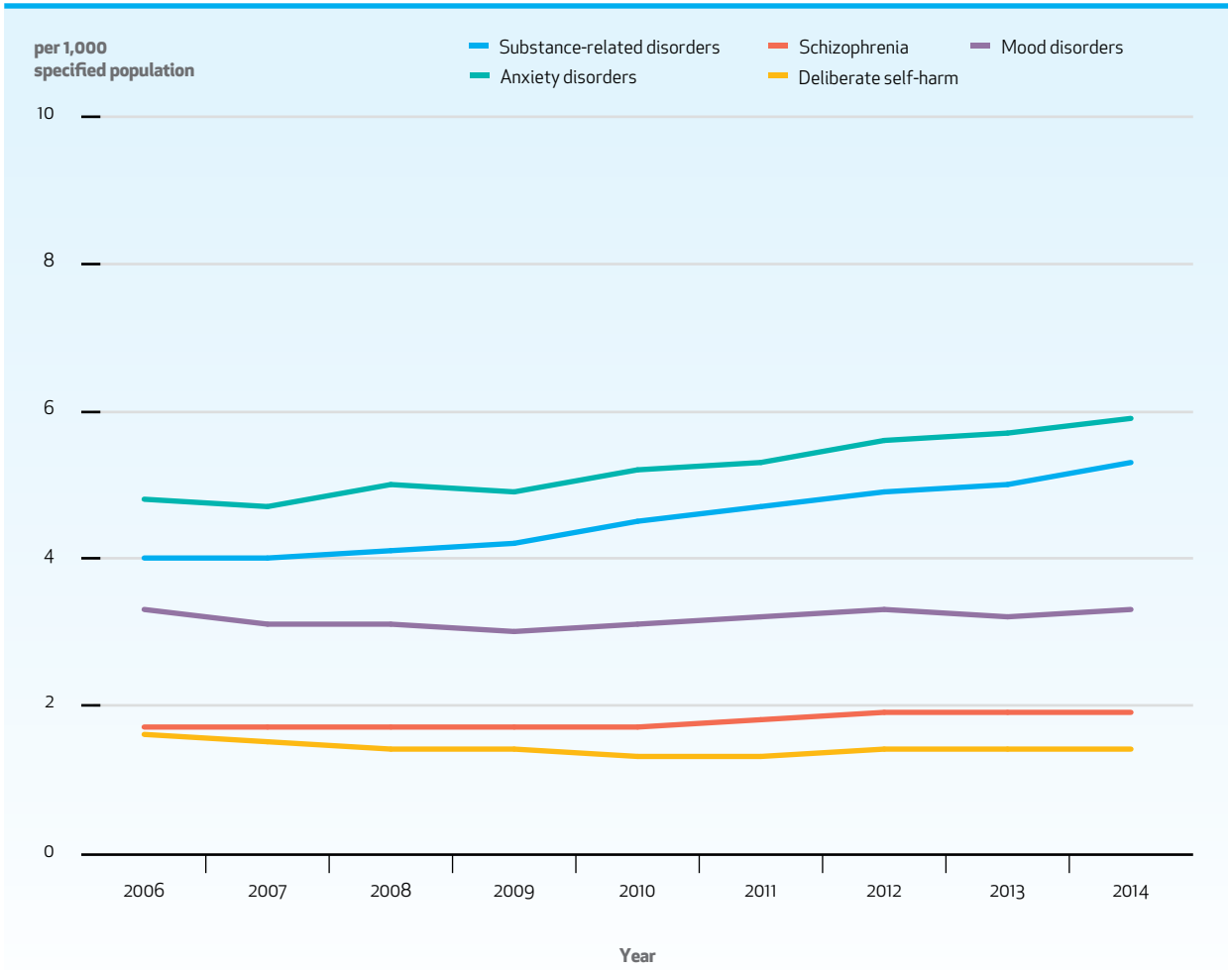


EXHIBIT 21 Number of mental health and addictions–related emergency department visits per 1,000 crude population aged 16 to 105 years, by type of disorder, 2006 to 2014*

Key Finding

- Anxiety and substance-related disorders were the most common reasons for a mental health and addictions–related emergency department visit, and the rate of presentation for both of these disorders increased over time. In contrast, the rate of emergency department visits for mood disorders, schizophrenia and deliberate self-harm without a psychiatric diagnosis remained stable over time.



*Emergency department visits by diagnosis are denominated over the entire Ontario population aged 16 to 105 years, resulting in rates that appear to be lower than rates for other exhibits in this indicator series.

EXHIBIT 22 Number of mental health and addictions–related emergency department visits per 1,000 crude population aged 16 to 105 years, by neighbourhood income quintile, in Ontario, three-year average for 2012 to 2014

Key Finding

- Mental health and addictions–related emergency department visits were highest among individuals in the poorest neighbourhoods, where the rate was more than double that of the wealthiest neighbourhoods.

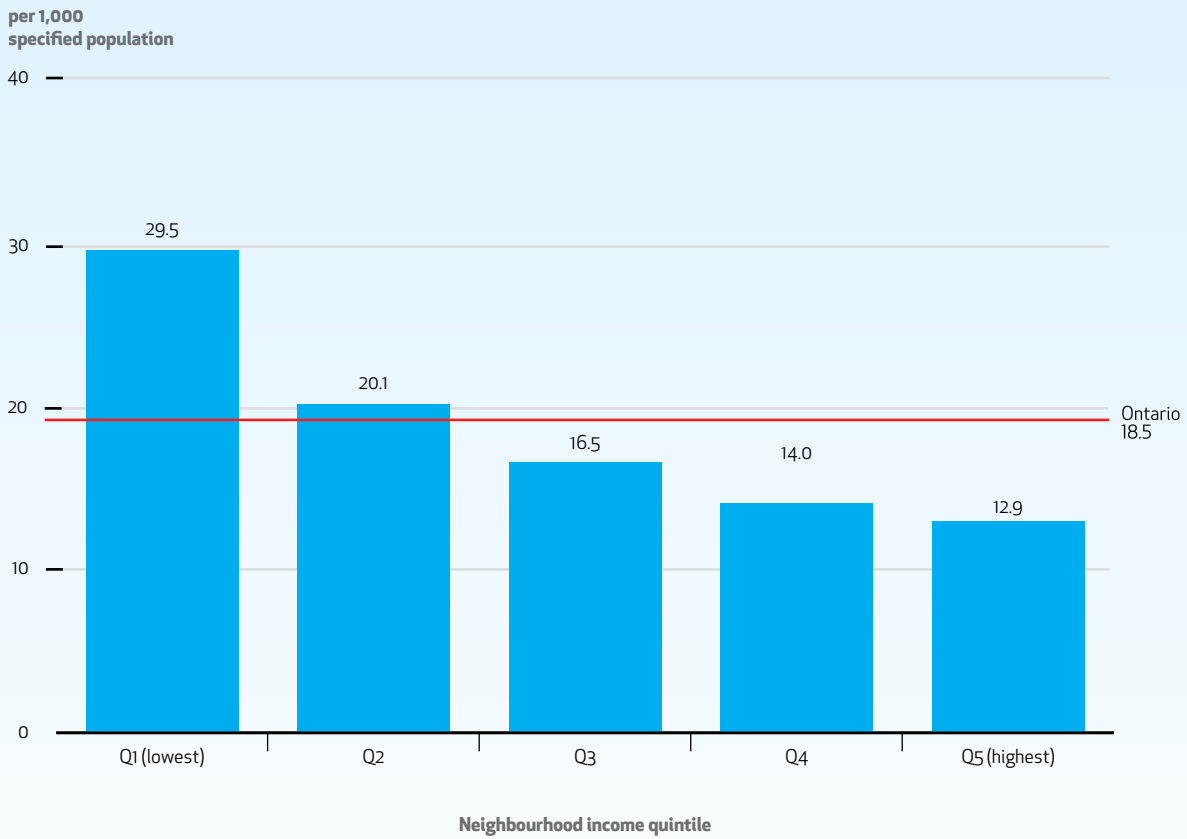
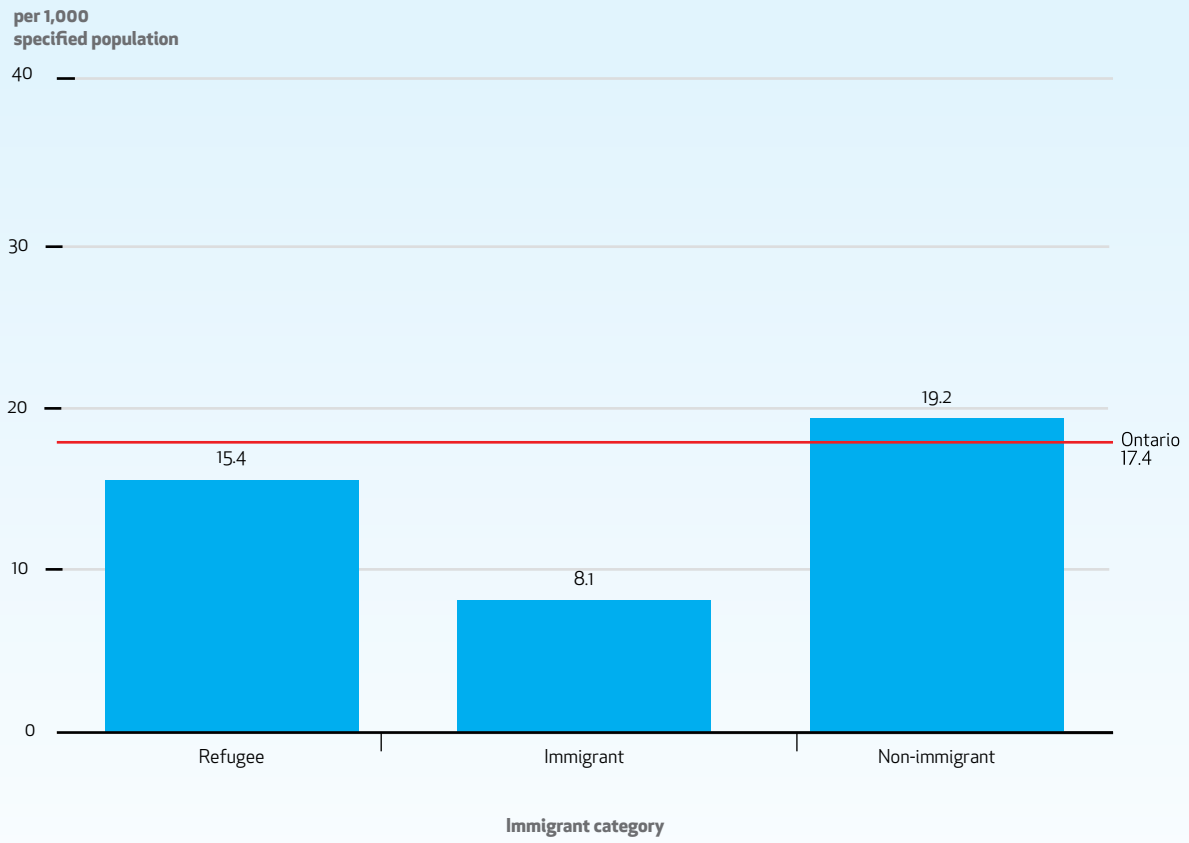


EXHIBIT 23 Number of mental health and addictions–related emergency department visits per 1,000 crude population aged 16 to 105 years, by immigrant category, in Ontario, three-year average for 2010 to 2012

Key Finding

- Immigrants had a lower rate of mental health and addictions–related emergency department visits than non-immigrants. The rate of visits among refugees was almost twice that of immigrants.



PERFORMANCE INDICATOR

Doctor visit within 7 days of leaving hospital after treatment for mental health and addictions

Timely follow-up after a psychiatric hospitalization has been shown to reduce readmissions to the hospital among individuals with a diagnosis of schizophrenia.[14] Very few Ontarians have a follow-up mental health visit with a physician in the 7 days after hospital discharge. Follow-up rates are lowest in the regions with the highest overall hospitalization rates.

EXHIBIT 24 Number of outpatient visits within 7 days of leaving hospital per 100 crude population aged 16 to 105 years with an incident mental health and addictions–related hospital discharge, by type of disorder and physician specialty, in Ontario, three-year average for 2012 to 2014

Key Finding

- Only about 1 in 3 individuals had a physician visit within 7 days of discharge from a psychiatric hospitalization. This is consistent with rates of follow-up for some physical illnesses, such as chronic obstructive pulmonary disease, but lower for others, such as heart failure where 45.3% of individuals received follow-up care after hospital discharge.[15] About two-thirds of these patients were seen by a family physician and did not receive a psychiatrist's care. Follow-up rates were lowest among individuals with schizophrenia and highest among those with deliberate self-harm without a psychiatric diagnosis.

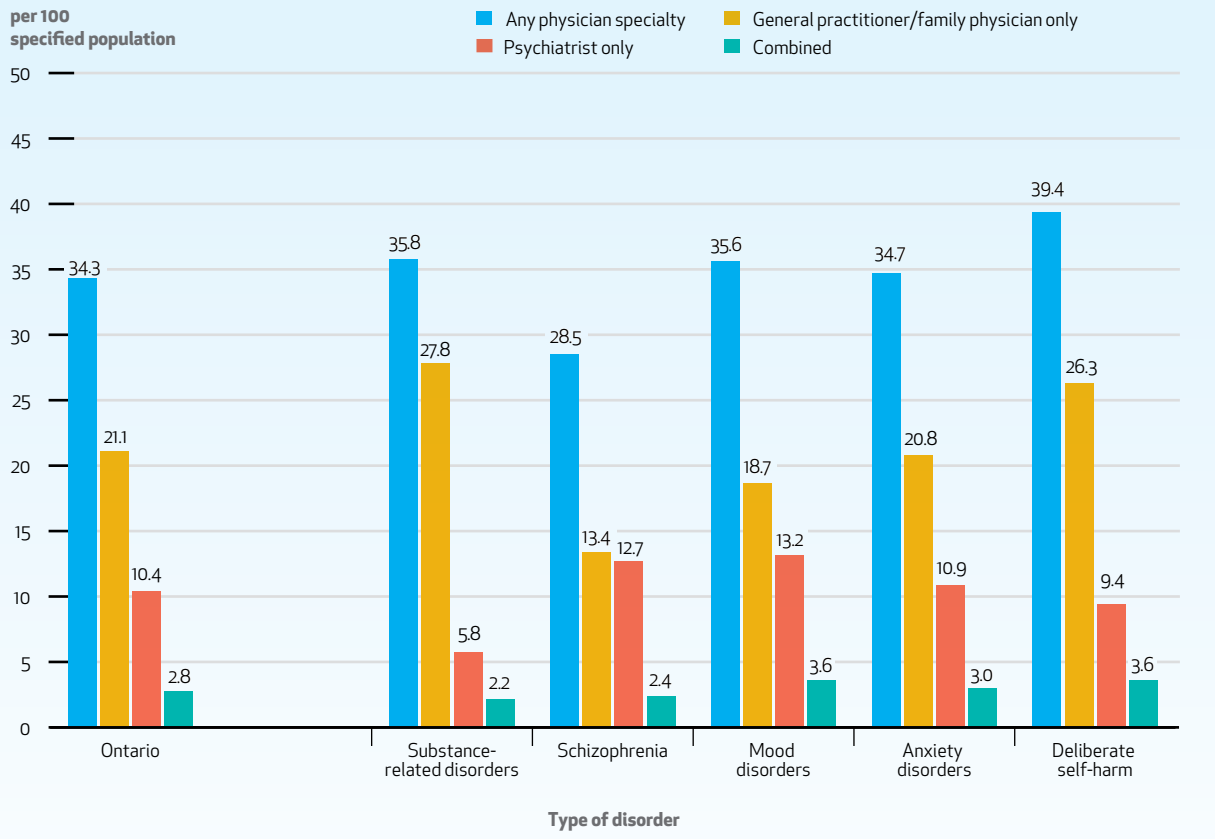


EXHIBIT 25 Number of outpatient visits within 7 days of leaving hospital per 100 crude population aged 16 to 105 years with an incident mental health and addictions–related hospital discharge, by age group and physician specialty, in Ontario, three-year average for 2012 to 2014

Key Finding

- Youth aged 16 to 24 had the lowest rate of follow-up to any physician specialty but were more likely than older age groups to receive follow-up care from a psychiatrist. Older adults had the highest rates of follow-up, with the majority receiving follow-up care from a family physician.

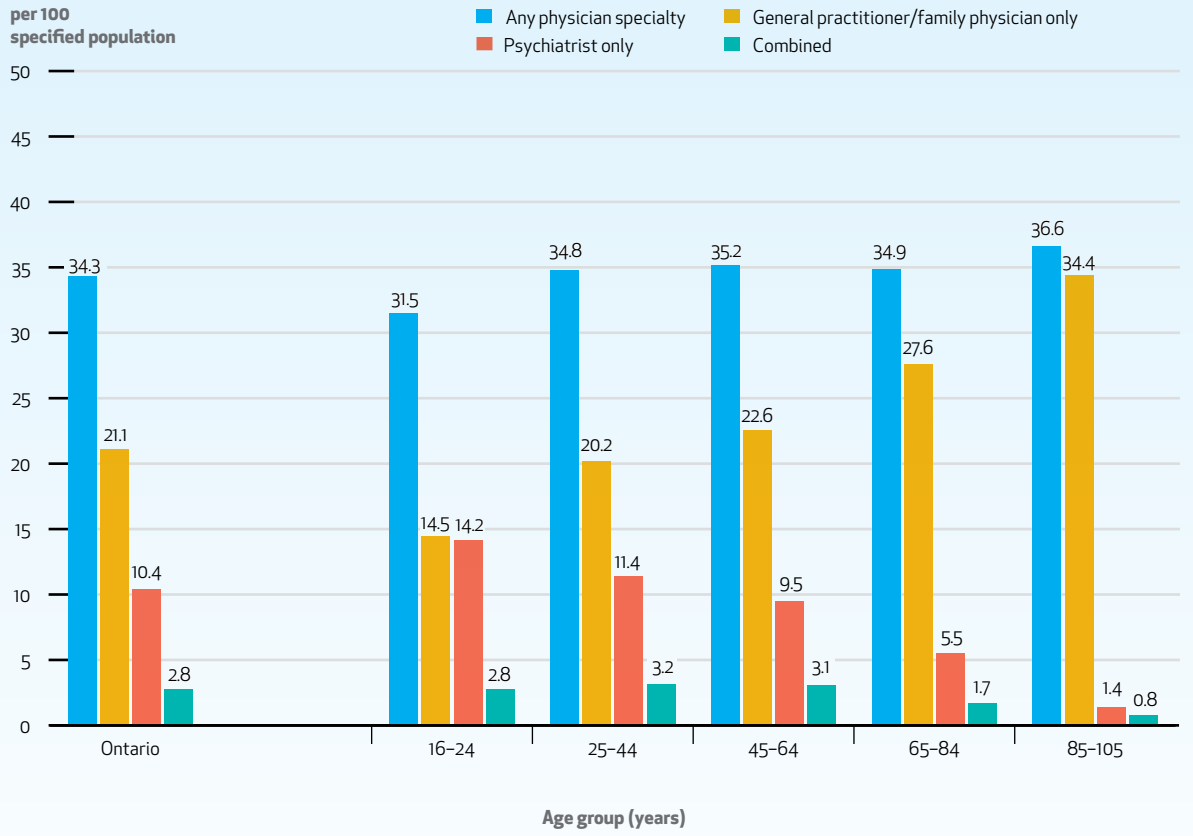
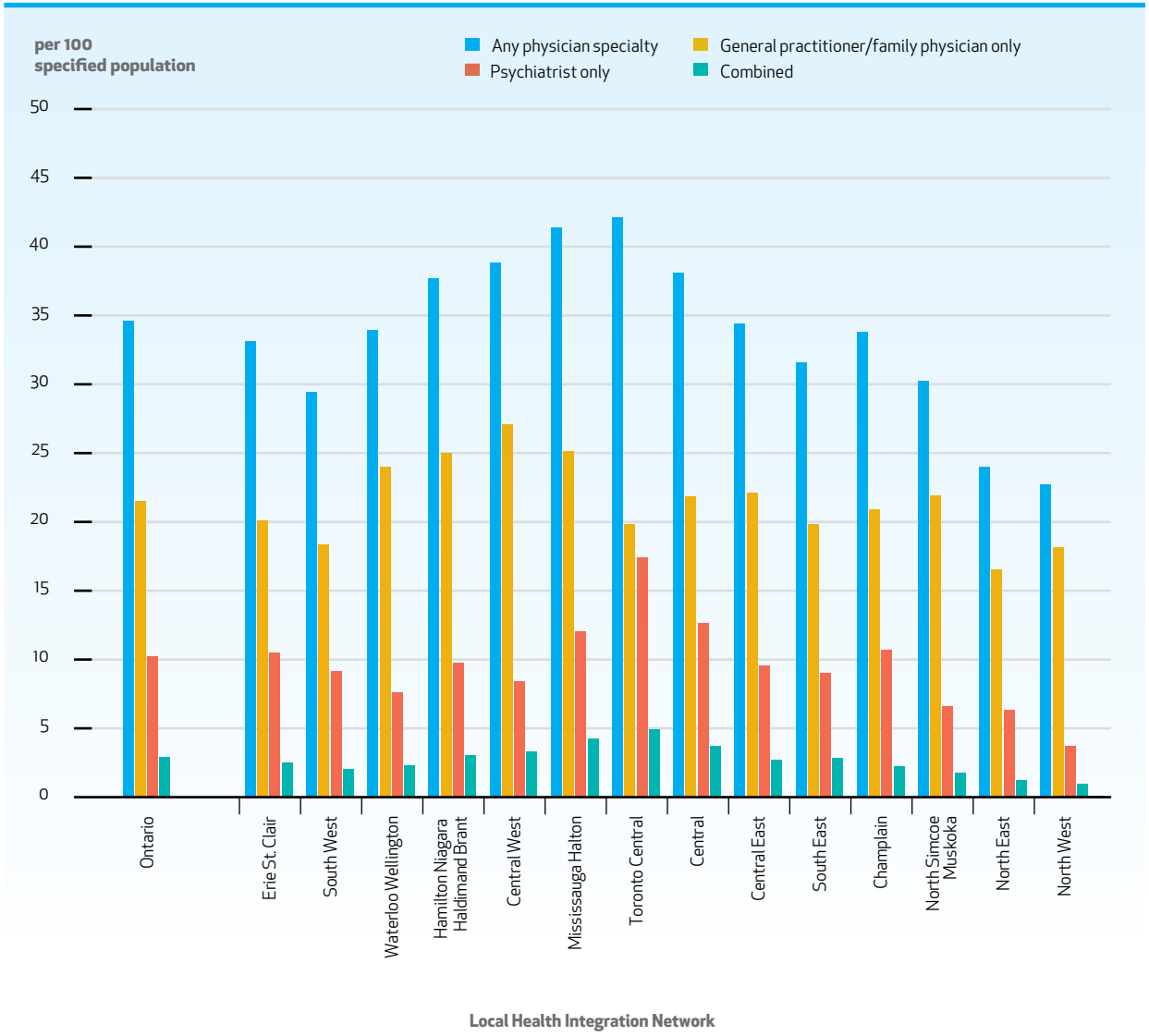


EXHIBIT 26 Number of outpatient visits within 7 days of leaving hospital per 100 standard population aged 16 to 105 years with an incident mental health and addictions–related hospital discharge, by Local Health Integration Network and physician specialty, in Ontario, three-year average for 2012 to 2014

Key Finding

- Post-discharge follow-up rates varied by region. The North West and North East LHINs had the lowest rates of follow-up care.



PERFORMANCE INDICATOR

Rate of inpatient readmission within 30 days of discharge

The stable rate of inpatient readmission over time may indicate that the small increase in the number of mental health and addictions–related hospitalizations has not had a negative impact on service quality (see **Exhibit 29**). Whether some of these readmissions could be avoided with improved outpatient care has yet to be established.

EXHIBIT 27 Number of inpatient readmissions within 30 days of discharge per 100 crude population aged 16 to 105 years with an incident mental health and addictions–related hospital admission, overall and by age group, in Ontario, 2006 to 2014

Key Finding

- About 1 in 10 individuals were readmitted to hospital within 30 days of discharge, a rate that remained stable over time. Youth and adults up to age 64 were much more likely to be readmitted, with rates close to three times those of senior adults.

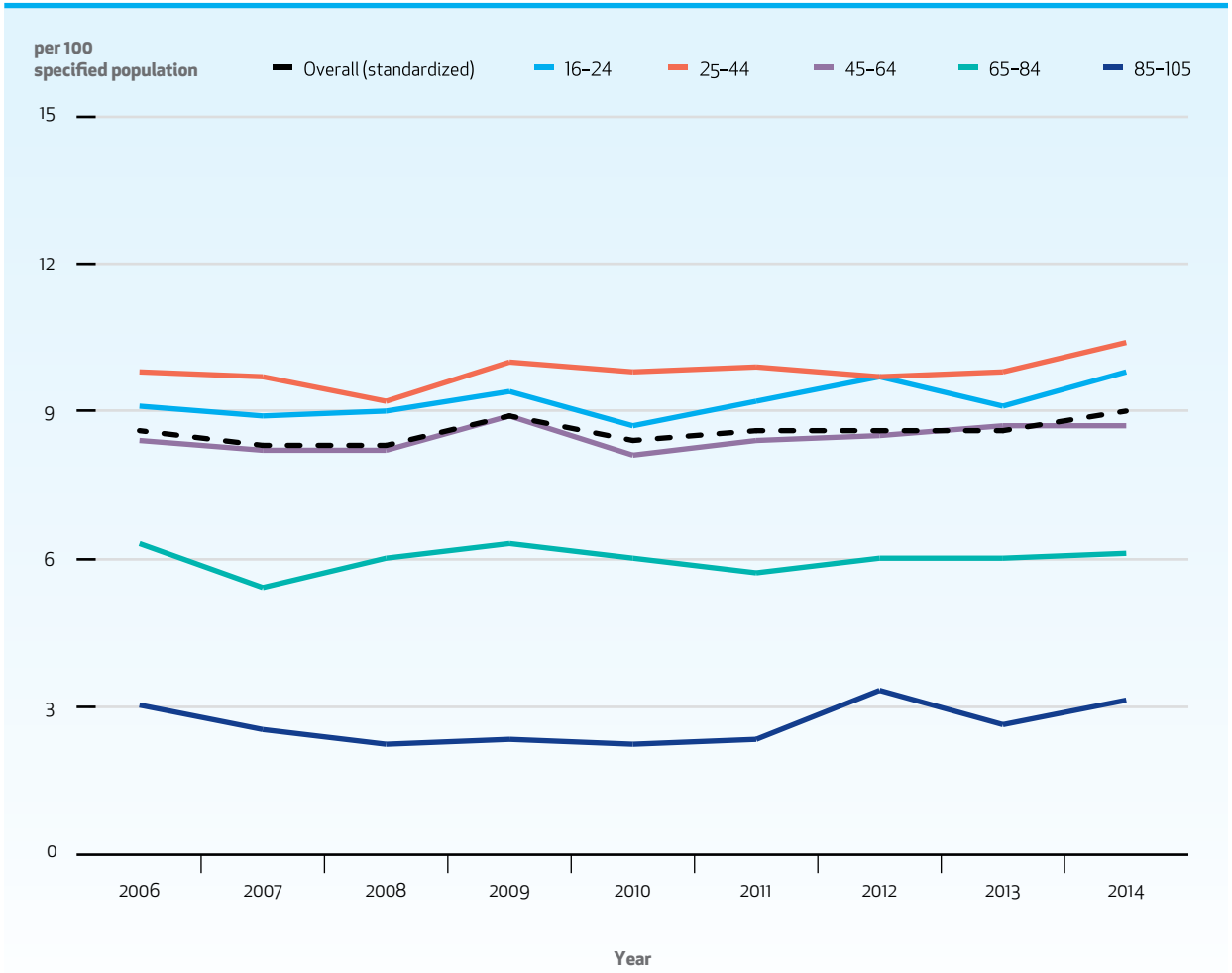
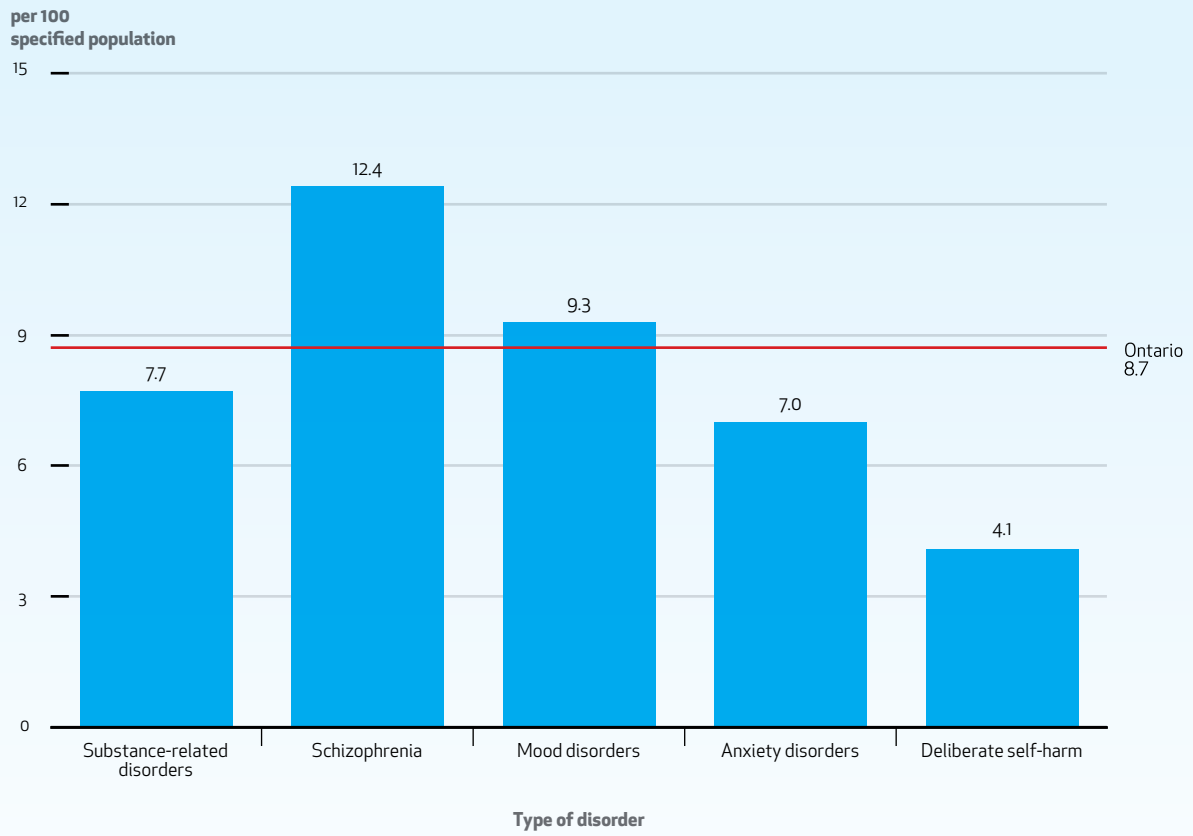


EXHIBIT 28 Number of inpatient readmissions within 30 days of discharge per 100 crude population aged 16 to 105 years with an incident mental health and addictions–related hospital admission, by type of disorder, in Ontario, three-year average for 2012 to 2014

Key Finding

- Individuals with schizophrenia had the highest rate of inpatient readmission within 30 days. Their rate was three times that of individuals who presented with deliberate self-harm in the absence of a co-morbid psychiatric diagnosis, who had the lowest rates of readmission.



CONTEXTUAL INDICATOR

Mental health and addictions–related hospitalizations

Hospitalizations represent the most intensive and costly form of service in the mental health and addictions sector. In 2014, there were over 67,000 psychiatric hospitalizations, including readmissions, in Ontario among individuals aged 16 to 105. Tracking mental health and addictions–related hospitalizations, including the number of hospitalizations and their duration, provides important context for performance indicators such as readmission and postdischarge follow-up.

EXHIBIT 29 Number of mental health and addictions–related hospitalizations per 1,000 crude population aged 16 to 105 years, overall and by age group, in Ontario, 2006 to 2014

Key Finding

- While the overall rate of mental health and addictions–related hospitalizations increased slightly over time, there were large increases in hospitalization rates for youth aged 16 to 24 years and adults aged 85 years and older.

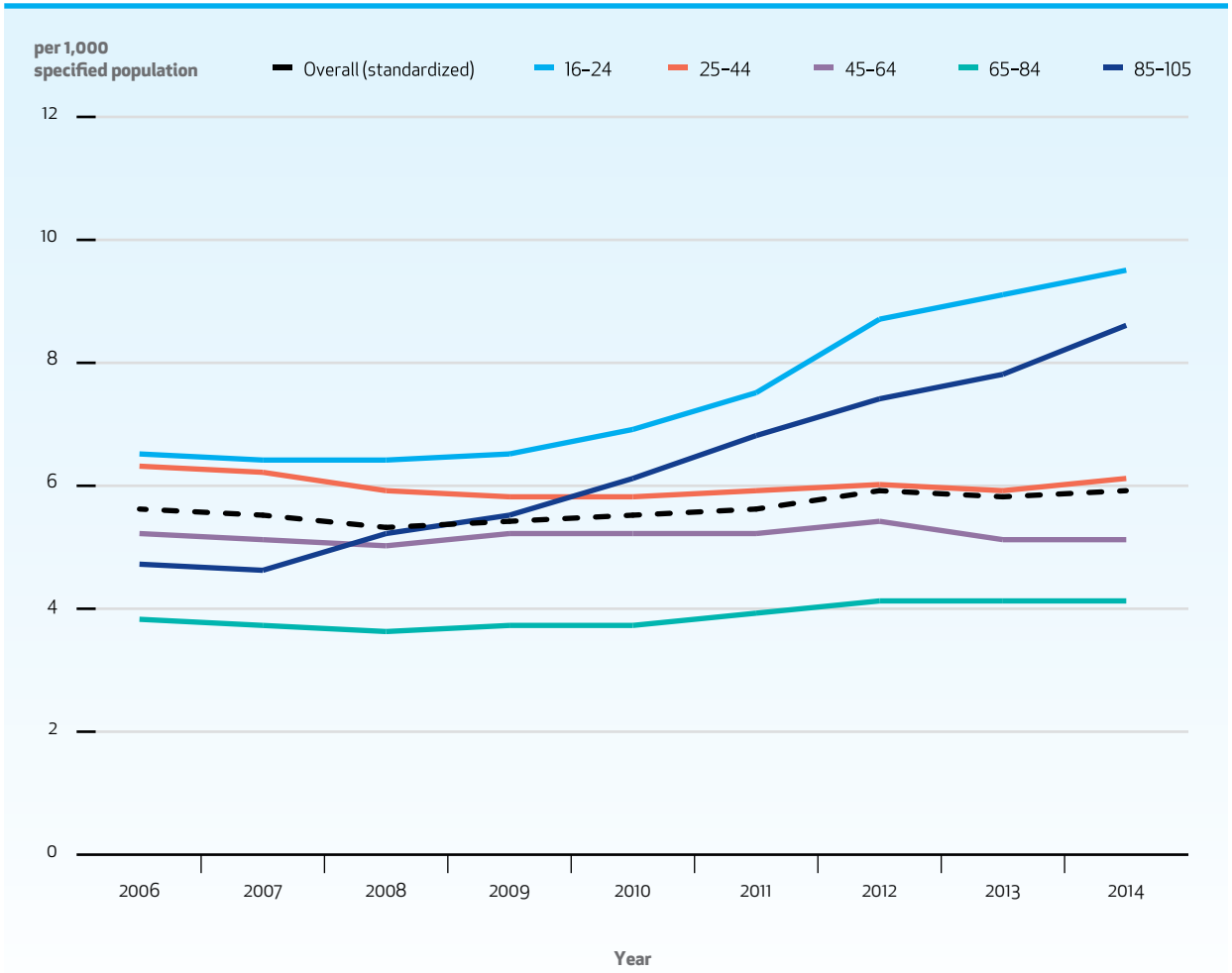


EXHIBIT 30 Length of stay for psychiatric hospitalizations among individuals aged 16 to 105 years, by 25th, 50th and 75th percentile, in Ontario, 2006 to 2014

Key Finding

- Between 2006 and 2014, the median length of stay in hospital remained stable at about 8 days.

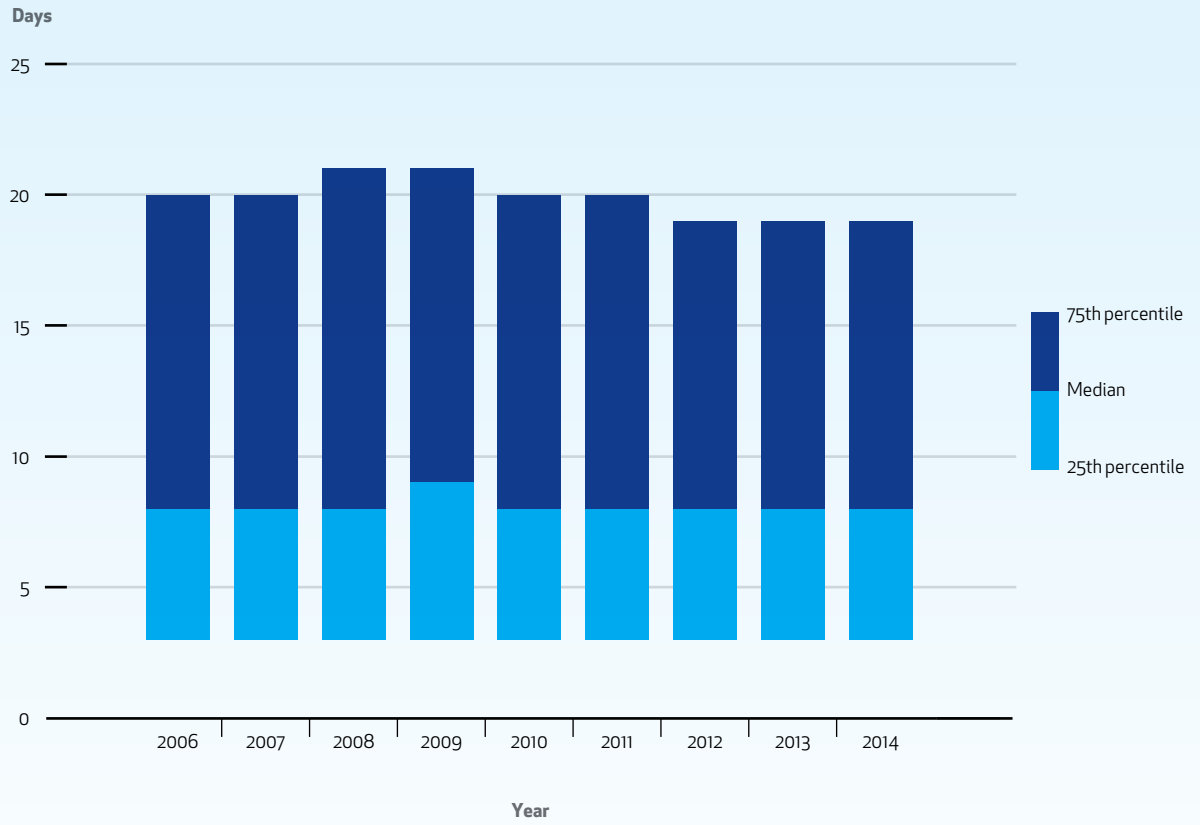
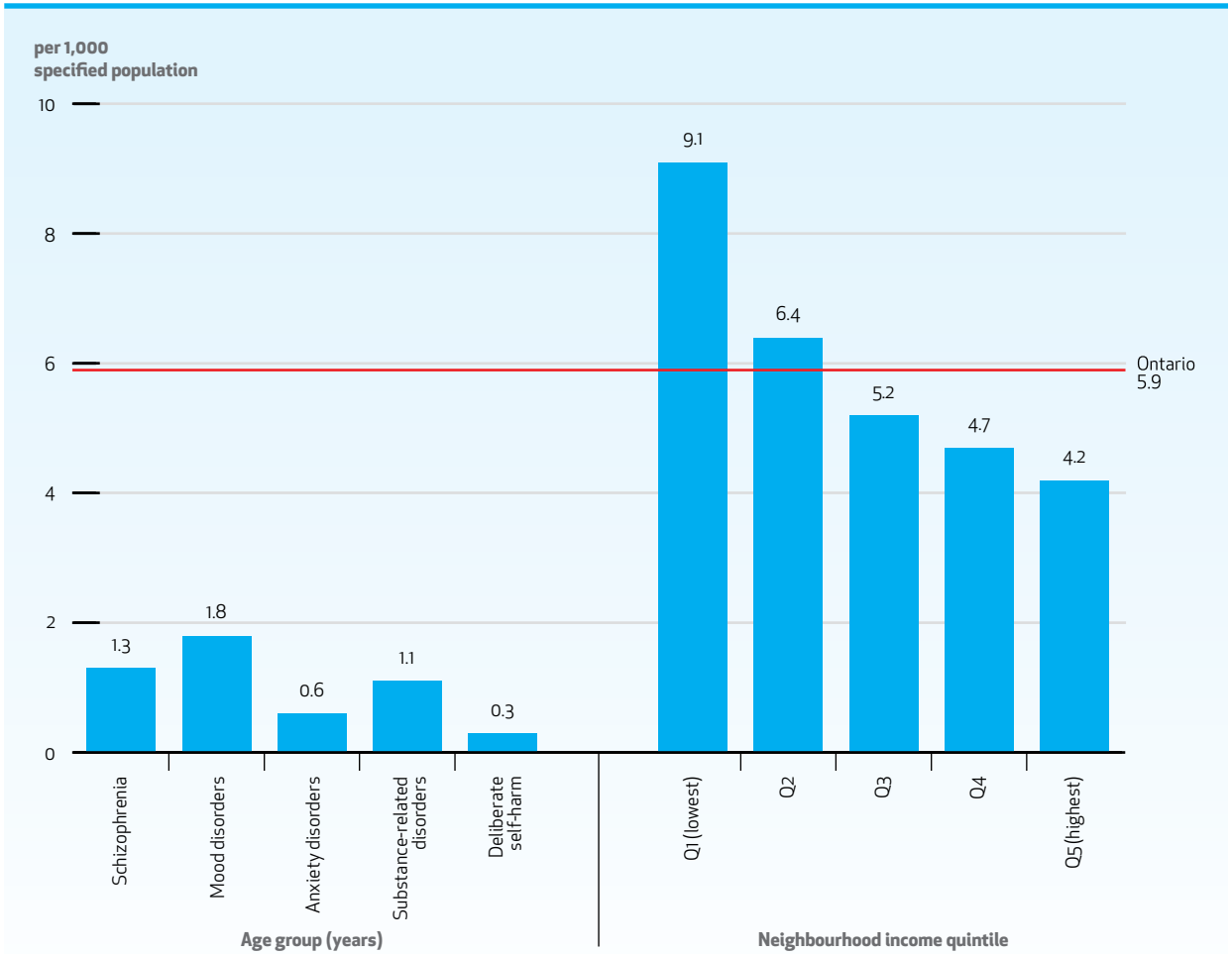


EXHIBIT 31 Number of mental health and addictions–related hospitalizations per 1,000 crude population aged 16 to 105 years, by type of disorder and neighbourhood income quintile, in Ontario, three-year average for 2012 to 2014

Key Findings

- Mood disorders were the most common reason for hospitalization.
- The hospitalization rate for individuals in the poorest neighbourhoods was twice that of those in the wealthiest neighbourhoods.



PERFORMANCE INDICATOR

Alternate level of care

In the health care system, hospital beds are an important and finite resource. Efficient use of these beds requires the ability to discharge patients when they no longer need the intensity of care provided in the hospital setting. Alternate level of care, or ALC, is a designation given to patients who occupy acute care hospital beds but do not require that intensity of care. Patients in mental health beds are typically designated ALC because supportive housing (the alternative to hospitalization) is in relatively short supply.

EXHIBIT 32 Volume of cases designated ALC for supportive housing/group homes/assisted living among patients aged 16 to 105 in mental health beds, by type of case, in Ontario, 2012 to 2015

Key Finding

- Between 2012 and 2015, the volume of ALC-designated mental health cases waiting for supportive housing decreased. Open cases, defined as those who were still waiting at the end of the reporting period, decreased as a proportion of all ALC cases.

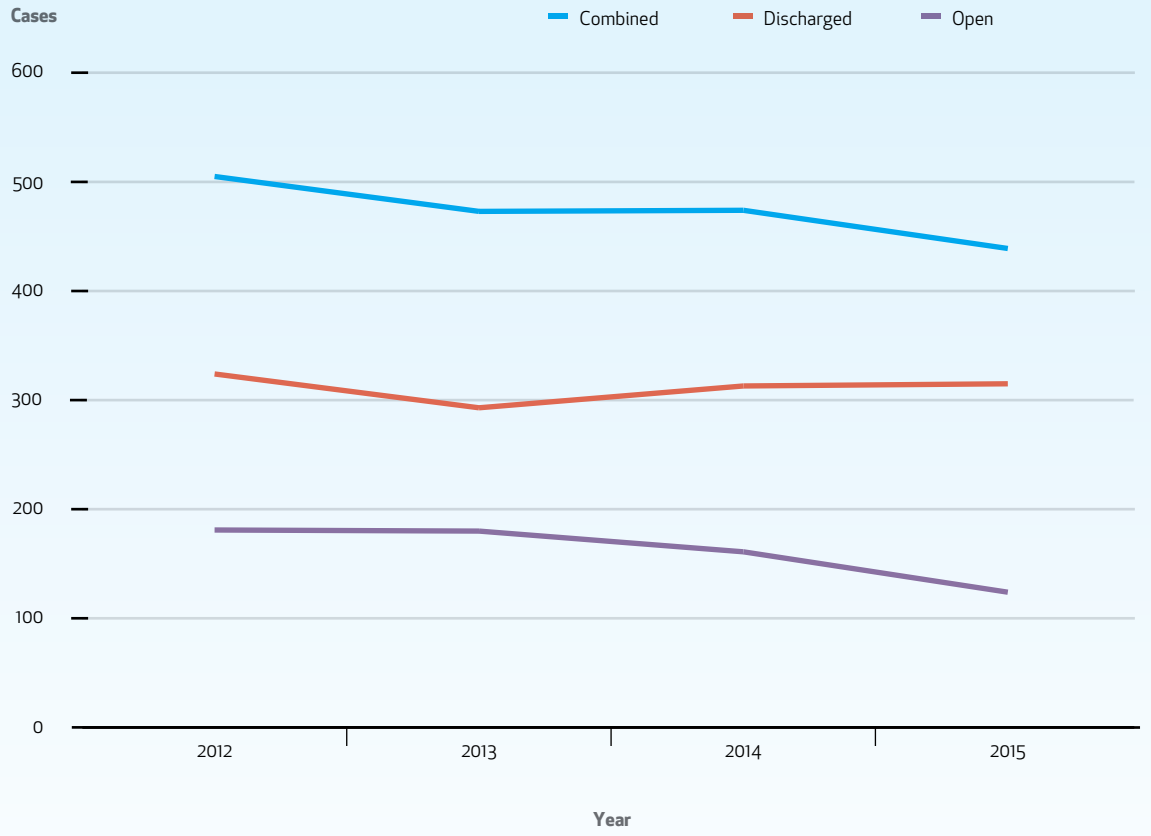


EXHIBIT 33 Median wait time for supportive housing/group homes/assisted living for open and discharged mental health cases aged 16 to 105 designated alternate level of care, overall and by sex, 2012 to 2015

Key Finding

- The median wait time for both open cases and discharged cases increased between 2012 and 2015. There was a noticeably large difference between the median wait times for open and discharged cases.

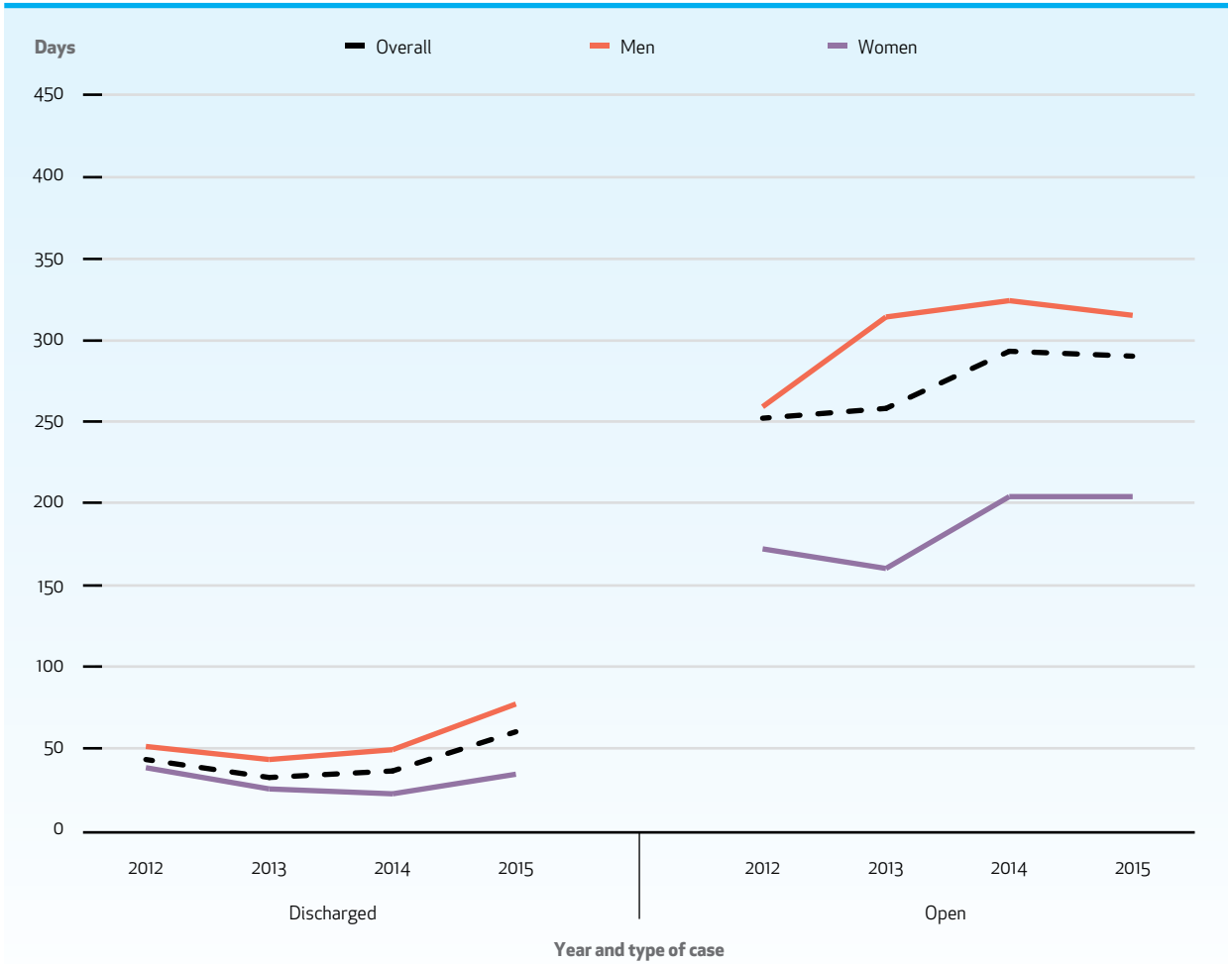
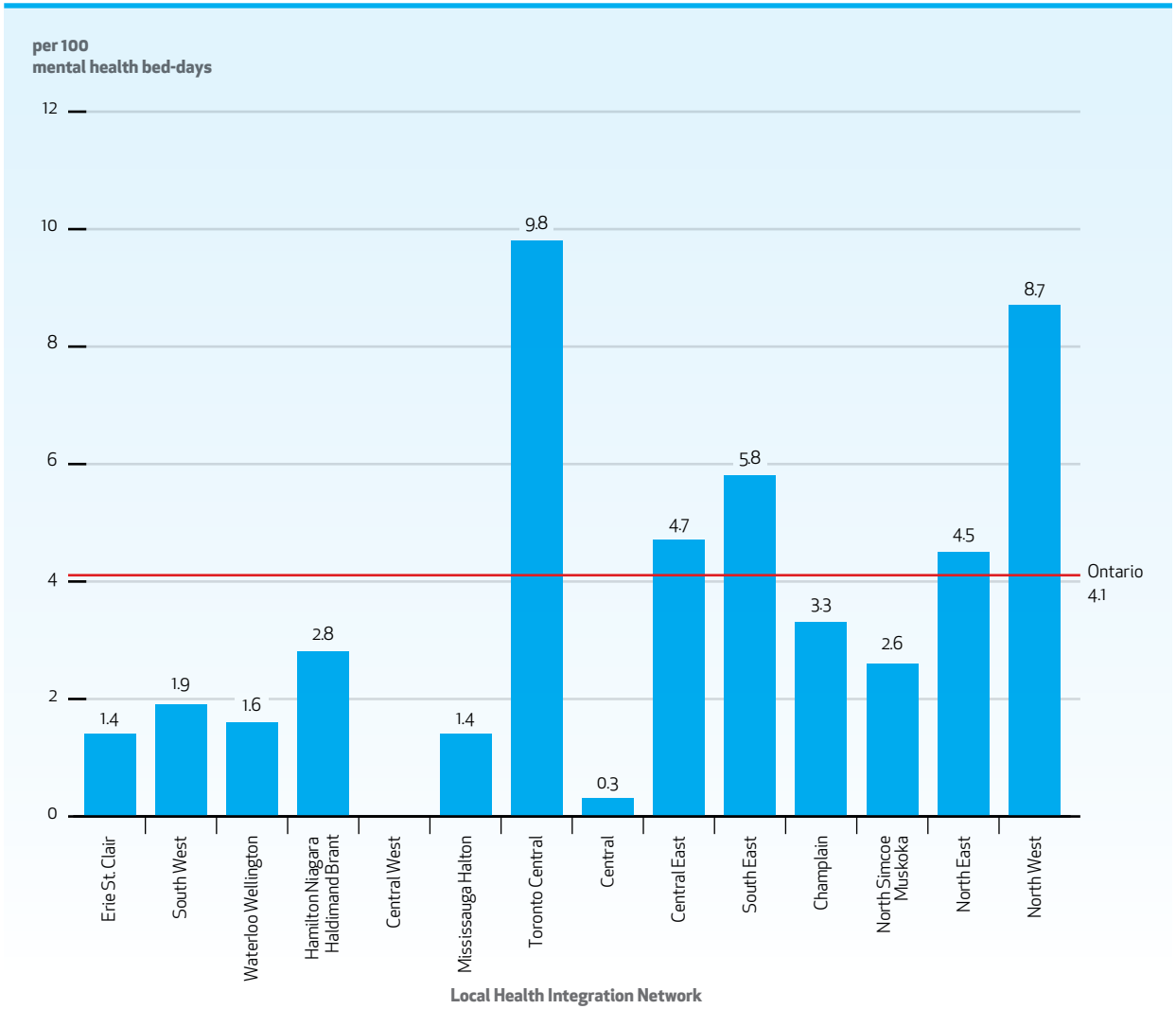


EXHIBIT 34 Number of bed-days designated alternate level of care for supportive housing/group homes/assisted living per 100 mental health bed-days, by Local Health Integration Network, in Ontario, 2015

Key Finding

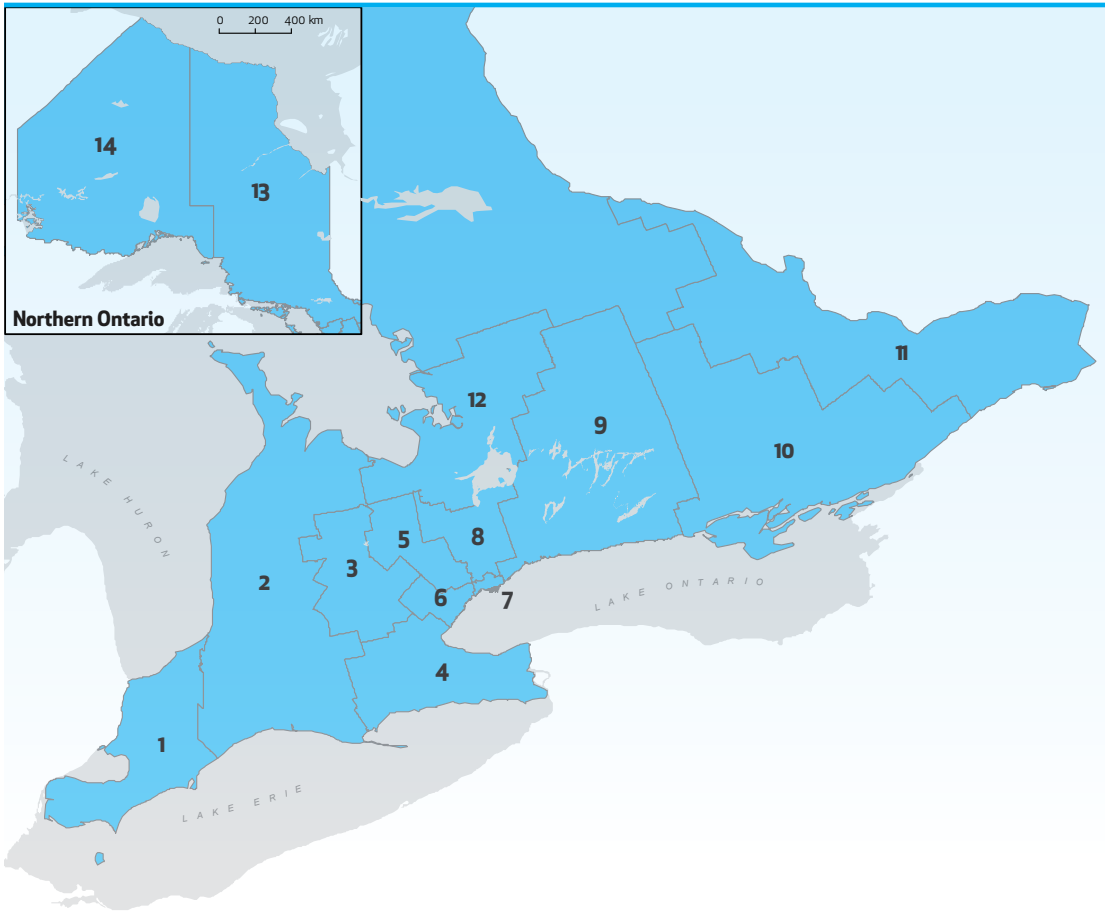
- In 2015, bed-days designated ALC for supportive housing made up 4% of all mental health bed-days in the province. This proportion varied widely by geography, with close to 10% of mental health bed-days dedicated to ALC for supportive housing in some regions. The highest rates in 2015 were found in the Toronto Central and North West LHINs.



Indicator variability by Local Health Integration Network

The performance indicators reported in this scorecard vary by geography in their results. This variation can signal populations with differing needs or it can point to health care system gaps. **Exhibit 35** identifies Local Health Integration Networks with the lowest and highest value for each performance indicator.

EXHIBIT 35 Indicator variability by Local Health Integration Network



3 WATERLOO WELLINGTON LHIN
Median ALC wait time for discharged cases
(longest wait time)

4 HAMILTON NIAGARA HALDIMAND BRANT LHIN
Use of physical retraints
(lowest rate)

5 CENTRAL WEST LHIN
Outpatient follow-up visits to a GP/FP within 7 days of an MHA-related hospital discharge
(highest rate)

6 MISSISSAUGA HALTON LHIN
30-day MHA-related repeat ED visits
(lowest rate)

7 TORONTO CENTRAL LHIN
ED as first point of contact for MHA care
(lowest rate)

Outpatient follow-up visits to psychiatrists or combined care within 7 days of an MHA-related hospital discharge
(highest rate)

30-day MHA-related hospital readmissions
(highest rate)

8 CENTRAL LHIN
Deaths by suicide
(lowest rate)

9 CENTRAL EAST LHIN
Use of physical retraints
(highest rate)

13 NORTH EAST LHIN
Outpatient follow-up visits to GP/FPs within 7 days of an MHA-related hospital discharge
(lowest rate)

14 NORTH WEST LHIN
Deaths by suicide
(highest rate)

ED as first point of contact for MHA care
(highest rate)

30-day MHA-related repeat ED visits
(highest rate)

Outpatient follow-up visits to psychiatrists or combined care within 7 days of an MHA-related hospital discharge
(lowest rate)

30-day MHA-related hospital readmissions
(lowest rate)

Note: For more information on rates by LHIN, please refer to the *Chart Pack*
ALC: alternate level of care; ED: emergency department; GP/FP: general practitioner/family physician; LHIN: Local Health Integration Network; MHA: mental health and addictions

Indicators In Development

The development of the performance indicators for the mental health and addictions system in Ontario revealed critical gaps in our ability to measure system performance. The Data and Performance Measurement Task Group, which oversaw scorecard development, highlighted several high-priority indicators that the health system is currently unable to measure as a result of data limitations. These are displayed in grey boxes in **Exhibit 1**.

As noted earlier, data from the community-based mental health and addictions setting are not readily available for performance monitoring. Examples of performance indicators that are not being measured presently include wait times and client-centred metrics, such as satisfaction with services. Access to care is one of the most fundamental performance issues in Ontario's mental health and addictions system. We have indirect evidence of this with our existing measurement capacity (e.g., first contact in the emergency department for mental health and addictions), but wait times are the best way to measure access in a way that identifies areas for improvement. Similarly, client-centred feedback on services is an essential form of feedback for the mental health and addictions system in general, and for programs and services specifically.

The Data and Performance Measurement Task Group drafted a data strategy report that was informed by the process of creating the scorecard and identifying measurement gaps.[16] The creation of a more fully integrated data infrastructure is critical to address the performance issues of the mental health and addictions system. Implementation of the data strategy will also shed light on aspects of the mental health and addictions system that are currently invisible, for example, wait times and the performance of the community-based sector.

Community Business Intelligence

Mental health and addictions care is provided across multiple settings, including doctors' offices, hospitals and the community. At both the provincial and local levels,[1,17] there is recognition of a need for closer cross-sector collaboration to better coordinate the various services adults may be receiving. By linking primary care data, acute care data and community-based data, a person's journey through the health care system can be more completely captured.

The Community Business Intelligence (CBI) initiative is a data collection project established by the Toronto Central LHIN in 2012. CBI captures information on over 60,000 adults receiving community health services in the LHIN from three subsectors: community addictions, community mental health and community support services.

CBI data were linked to health administrative data at ICES to examine adults who had a repeat, unscheduled emergency department visit within 30 days of an incident visit related to mental health and addictions in 2015.[18] Overall, 2.91% of adults in the CBI data set had a repeat emergency department visit, compared to 0.09% in the Toronto Central LHIN general population. Adults in the community addictions sector had the highest rate of repeat visits at nearly 9%; across services, rates were as high as 14.6% among those enrolled in the Residential Addictions functional centre. In general, repeat visits were lowest among those in community support services. (See **Exhibits 36 and 37**.)

The linkage of CBI data to ICES health administrative data highlights the potential to examine patterns of health service utilization across sectors. The potential to measure cross-sectorally is currently limited to the Toronto Central LHIN via CBI, but were CBI to be expanded across the province, it would be possible to measure the entirety of publicly funded mental health and addictions services in Ontario and their intersection.

EXHIBIT 36 Percentage of adults in the CBI data set with an emergency department (ED) revisit within 30-days of an incident ED visit related to mental health and addictions, by community sector, 2015

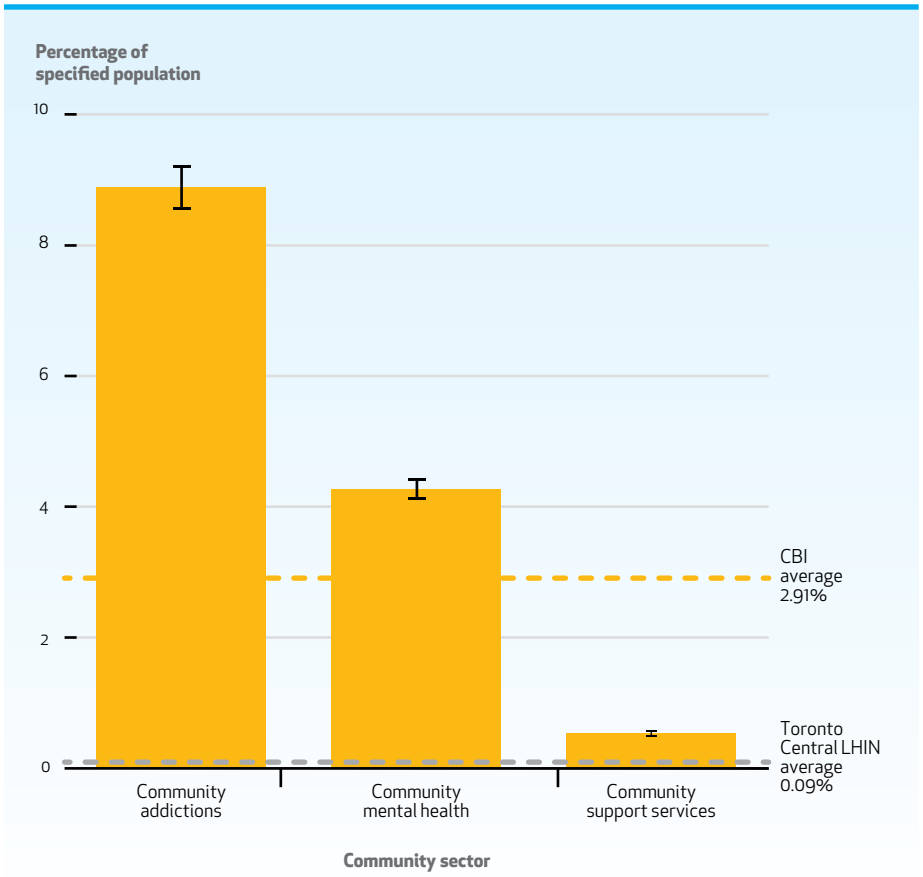
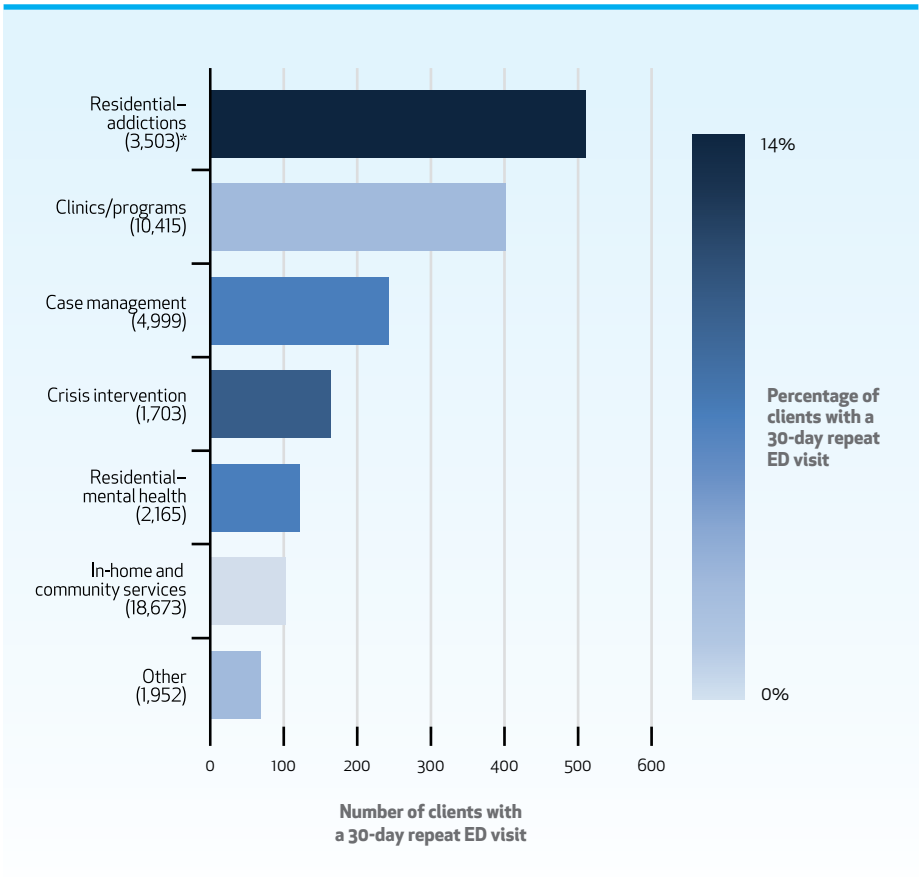


EXHIBIT 37 Number and percentage of adults in the CBI dataset with an emergency department (ED) revisit within 30-days of an incident ED visit related to mental health and addictions, by functional centre category of services received, 2015



*Value in parentheses represents the total number of CBI clients enrolled in that functional centre category.

Source: Adapted from Amartey et al. *Community Business Intelligence Project: Second Report. Collaboration between the Institute for Clinical Evaluative Sciences and Reconnect Community Health Services.* Toronto, ON: ICES; 2018.

Summary and Future Directions

There are a number of high level themes that emerged from the performance indicators. First, the high mortality rate among individuals with severe mental illnesses and addictions and the high, unchanging suicide rates are of concern. The high rate of emergency department visits for deliberate self-harm among transitional-aged youth is particularly worrying and may reflect an emerging, greater need for services in this demographic.

Second, access to mental health and addictions–related care is lagging behind demand for services. More than one in three adults who seek help for mental health and addictions–related care in an emergency department have had no prior contact with physicians. There has been a dramatic rise in mental health and addictions–related emergency department use among transitional-aged youth.

Third, there are gaps in care transitions (such as doctor visits within 7 days of leaving hospital) for too many people with mental illnesses and addictions. There is a persistently low rate of follow-up after a psychiatric hospitalization despite the fact that the days and weeks post-discharge constitute a high-risk period. There is also a high ALC rate in mental health beds reflecting a need for more high support community services to provide people with what they need and to ensure psychiatric hospital beds are used to treat the population who need that level of care.

This performance indicator scorecard is the first to depict the status quo of Ontario's mental health and addictions system for adults. We will continue to monitor mental health and addictions system performance and will produce another scorecard report in two years. We will also address shortcomings in our existing ability to monitor performance measurement. This entails:

- A continuous quality improvement process to ensure that our indicators are accurately measuring system performance
- Developing new indicators to increase our capacity to monitor system performance

- Linking new data sources to measure the entire client journey through the mental health and addictions system. This work involves identifying data sources and linking them to ICES' existing data holdings. The following data sources are currently linked or will be linked in the near future:
  - Ministry of Community and Social Services (MCSS): captures social service data for participants in the Ontario Disability Support Program and Ontario Works
  - Drug and Alcohol Treatment Information System (DATIS): captures all community-based addiction treatment services funded by the Ministry of Health and Long-Term Care
  - Ontario Common Assessment of Need (OCAN): captures assessments done by provincial community-based mental health agencies
  - Community Business Intelligence (CBI): captures community-based mental health, addictions and social service provision funded by the Toronto Central LHIN

To address issues highlighted in this report, ICES is collaborating with the Ministry of Health and Long-Term Care to implement some aspects of the provincial mental health and addictions data strategy. The key components of the data strategy as articulated by the Data and Performance Measurement Task Group include:

- Providing strategic leadership and governance for data and performance measurement
- Measuring the client journey
- Establishing a cohesive approach to measurement
- Building information infrastructure and capacity.[17]

If implemented, the strategy will facilitate improved measurement, analysis and reporting for Ontario's mental health and addictions system.

References

1. Government of Ontario. *Open Minds, Healthy Minds: Ontario's Comprehensive Mental Health and Addictions Strategy.* Toronto, ON: Queen's Printer for Ontario; 2011. Accessed January 15, 2018 at **http://www.health.gov.on.ca/en/common/ministry/publications/reports/mental_health2011/mentalhealth_rep2011.pdf**.

2. *Moving Forward: Better Mental Health Means Better Health.* 2016 Annual Report of Ontario's Mental Health and Addictions Leadership Advisory Group. Toronto, ON: Queen's Printer for Ontario; 2016. Accessed January 15, 2018 at **http://www.health.gov.on.ca/en/common/ministry/publications/reports/bmhmbh_2016/moving_forward_2016.pdf**.

3. Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century.* Washington, DC: National Academy Press; 2001. Access January 15, 2018 at **http://nationalacademies.org/hmd/~/media/Files/Report%20Files/2001/Crossing-the-Quality-Chasm/Quality%20Chasm%202001%20%20report%20brief.pdf.**

4. Health Quality Ontario. *Quality Matters: Realizing Excellent Care for All.* Toronto, ON: Queen's Printer for Ontario; 2015. Accessed January 15, 2018 at **http://www.hqontario.ca/Portals/0/documents/health-quality/realizing-excellent-care-for-all-en.pdf**.

5. MHASEF Research Team. *The Mental Health of Children and Youth in Ontario: A Baseline Scorecard.* Toronto, ON: Institute for Clinical Evaluative Sciences; 2015. Accessed January 15, 2018 at **https://www.ices.on.ca/~/media/Files/Atlases-Reports/2015/Mental-Health-of-Children-and-Youth/Full-report.ashx**.

6. MHASEF Research Team. *The Mental Health of Children and Youth in Ontario: 2017 Scorecard.* Toronto, ON: Institute for Clinical Evaluative Sciences; 2017. Accessed January 15, 2018 at **https://www.ices.on.ca/~/media/Files/Atlases-Reports/2017/MHASEF/Report.ashx**.

7. Canadian Institute for Health Information. *Restraint Use and Other Control Interventions for Mental Health Inpatients in Ontario: Executive Summary*. Toronto, ON: CIHI; 2011. Accessed January 15, 2018 at **https://secure.cihi.ca/free_products/Restraint_Use_and_Other_Control_Interventions_AIB_EN.pdf**.

8. Gatov E, Rosella L, Chiu M, Kurdyak P. Trends in standardized mortality among individuals with schizophrenia, 1993-2012: a population-based, repeated cross-sectional study. *CMAJ*. 2017; 189(37):E1177–87.

9. American Foundation for Suicide Prevention. Suicide Statistics. Accessed January 15, 2018 at **https://afsp.org/about-suicide/suicide-statistics/**.

10. Wunderlich U, Bronisch T, Wittchen HU, Carter R. Gender differences in adolescents and young adults with suicidal behaviour. *Acta Psychiatr Scand*. 2001; 104(5):332–9.

11. Rhodes AE, Bethell J, Spence J, Links PS, Streiner DL, Jaakkimainen RL. Age-sex differences in medicinal self-poisonings: a population-based study of deliberate intent and medical severity. *Soc Psychiatry Psychiatr Epidemiol*. 2008; 43(8):642–52.

12. Perry IJ, Corcoran P, Fitzgerald AP, Keeley HS, Reulbach U, Arensman E. The incidence and repetition of hospital-treated deliberate self harm: findings from the world's first national registry. *PLoS One* 2012; 7(2):e31663.

13. Ontario Ministry of Health and Long-Term Care. *Early Psychosis Intervention Program Standards*. Toronto, ON: Queen's Printer for Ontario; 2011. Accessed January 15, 2018 at **http://www.health.gov.on.ca/english/providers/pub/mental/epi_program_standards.pdf**.

14. Kurdyak P, Vigod SN, Newman A, Giannakeas V, Mulsant BH, Stukel T. Impact of physician follow-up care on psychiatric readmission rates in a population-based sample of patients with schizophrenia. *Psychiatr Serv*. 2018; 69(1):61–8.

15. Health Quality Ontario. *Measuring Up 2017: A Yearly Report on How Ontario's Health System Is Performing*. Toronto, ON: Queen's Printer for Ontario; 2017. Accessed January 15, 2018 at **http://www.hqontario.ca/portals/0/Documents/pr/measuring-up-2017-en.pdf**.

16. Ontario Ministry of Health and Long-Term Care. *Patients First: Action Plan for Health Care*. Toronto, ON: Queen's Printer for Ontario; 2015. Accessed January 15, 2018 at **http://www.health.gov.on.ca/en/ms/ecfa/healthy_change/docs/rep_patientsfirst.pdf**.

17. Canadian Mental Health Association Ontario. Data and Performance Measurement. Accessed October 10, 2017 at **https://ontario.cmha.ca/provincial-policy/health-systems-transformation/data-and-performance-measurement/**.

18. Amartey A, Liadsky D, Solomon R, et al. *Community Business Intelligence Project: Second Report – Collaboration between the Institute for Clinical Evaluative Sciences and Reconnect Community Health Services*. Toronto, ON: Institute for Clinical Evaluative Sciences; 2018. Accessed January 22, 2018 at **http://pmservices.reconnect.on.ca/wp-content/uploads/2018/01/CBI-Second-Report-2018.pdf**.

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