

## Supplemental Tables

Table 1a: Data Sources

<b>Data source</b>	<b>Description</b>
Canadian Community Health Survey (CCHS)	Nationally-representative survey conducted every 2 years through telephone and in-person interviews. Collects information related to health status, healthcare utilization, and health determinants.
Continuing Care Reporting System (CCRS)	Provides demographic and clinical information about individuals receiving facility-based continuing care services.
Discharge Abstract Database (CIHI-DAD)	Maintained by the Canadian Institute for Health Information; captures demographic, administrative, and clinical information regarding hospital discharges in Canada.
Homecare Database (HCD)	Provides information on all homecare services from the Ontario Association of Community Care Access Centres.

National Ambulatory Care Reporting System (NACRS)	Maintained by the Canadian Institute for Health Information; captures demographic, administrative and clinical information regarding emergency department visits in Canada.
Ontario Drug Benefit (ODB)	Contains claims for prescription drugs received under the Ontario Drug Benefit Program (which all Ontario residents aged 65 and above are eligible for).
Ontario Health Insurance Plan (OHIP)	Captures all claims for reimbursement by Ontario physicians for inpatient and ambulatory visits, consultations and procedures.
Ontario Mental Health Reporting System (OMHRS)	Provides information regarding mental health-related inpatient admissions (i.e. admission to beds in all psychiatric facilities).
Primary Care Population (PCPOP)	Created by ICES, derived from other databases. Provides information regarding primary care visits and enrollment in various models of primary care (e.g. family health team).
Registered Persons Database (RPDB)	Holds demographic information about all individuals with an Ontario health card number.

Table 1b: Measures and Descriptions

Variable	Data source	Description
Age	RPDB	N/A
Sex	RPDB	N/A
Immigration status	CCHS	<p>“Were you born a Canadian citizen?”</p> <p>“In what year did you first come to Canada to live?”</p>
Level of education	CCHS	<p>“What is the highest degree, certificate, or diploma you have obtained?”</p>
Income quintiles	RPDB	Household income based on the 2006 Canadian census.
Marital status	CCHS	<p>“What is your marital status? Are you... married?</p> <p>Living common-law? Widowed? Separated?</p> <p>Divorced? Single, never married?”</p>

Living arrangement	CCHS	Derived variable by Statistics Canada based on questions asked in the CCHS.
Alcohol Consumption	CCHS	<p>“During the past 12 months, how often did you drink alcoholic beverages?”</p> <p>Average daily alcohol consumption derived from the following question: Starting with yesterday, how many drinks did you have: Sunday? Monday? Tuesday? ...</p>
Smoking status	CCHS	“At the present time, do you smoke cigarettes daily, occasionally, or not at all?”
Opioid Use	ODB	Based on prescription claims. Chronic opioid user defined as: 120 or more cumulative calendar days of filled opioid prescriptions.
Food Security	CCHS	“The food that you bought just didn’t last, and there wasn’t any money to get more. Was that often true, sometimes true, or never true in the past 12 months?”

Self-perceived general health	CCHS	“In general, would you say your health is: poor, fair, good, very good, excellent?”
Self-perceived mental health	CCHS	“In general, would you say your mental health is: poor, fair, good, very good, excellent?”
Sense of belonging to local community	CCHS	“How would you describe your sense of belonging to your local community?”
Enrollment in a primary care model	PCPOP	N/A
Enrollment in a family health team	PCPOP	Family health teams are primary healthcare organizations that include other professionals such as mental health care workers through Ontario health insurance records.
Johns Hopkins Aggregated Diagnostic Group	OHIP, CIHI-DAD	The ACG system uses Ontario health insurance codes along with data from the Canadian Discharge Abstract Database (ICD-9 and ICD-10 codes) to categorize patients into one or more of 32 adjusted diagnosis

		groups (ADGs). The ADGs are a morbidity cluster that represent the severity and persistence of a patient's condition.
Continuity of care	OHIP, PCPOP	Percent of visits to the usual provider of care based on visits to any general practitioner, family physician or community medicine practitioner through OHIP records in the previous 2 years.
Visit to a psychiatrist	OHIP	Based on reimbursement claims from a psychiatrist (any visit 2 years prior to and within 5 years after index interview date).
Anti-depressant use	ODB	Any anti-depressant use based on prescription claims.
General emergency department visit	NACRS	Any emergency department visit within 5 years after index interview date.
Mental health-related emergency department visit	NACRS	Any mental health/addiction-related emergency department visit within 5 years after index interview date.

General hospitalization	CIHI-DAD	Any acute, non-elective hospital admission within 5 years after index interview date.
Mental health-related hospitalization	OMHRS	Any mental health/addiction-related acute admission to hospital or mental health facility.
Admission to long-term care	ODB, CCRS, or OHIP	Record of admission to long-term care in any of the ODB, CCRS, or OHIP databases.
Death	RPDB	N/A

Table 2a. Weighted Logistic Regression Results Quantifying Associations between Potential Risk Factors and Mood Disorder



<b>Variable</b>	<b>Crude OR (95% CI)</b>	<b>Model 1 OR (95% CI)</b>	<b>Model 2 OR (95% CI)</b>	<b>Model 3 OR (95% CI)</b>	<b>Model 4 OR (95% CI)</b>
<b>Age Category</b>					
65-74	1.00	1.00	1.00	1.00	1.00
75-84	0.76 (0.64-0.89)	0.74 (0.63-0.88)	0.76 (0.64-0.90)	0.76 (0.64-0.91)	0.72 (0.60-0.85)
85 or older	0.60 (0.45-0.80)	0.57 (0.43-0.76)	0.59 (0.44-0.79)	0.57 (0.43-0.77)	0.53 (0.39-0.72)
<b>Sex</b>					
Male	1.00	1.00	1.00	1.00	1.00
Female	1.49 (1.27-1.75)	1.53 (1.30-1.79)	1.49 (1.27-1.74)	1.39 (1.19-1.63)	1.39 (1.18-1.64)
<b>Immigration status</b>					
Non-immigrant	1.00	N/A	1.00	1.00	1.00
Immigrant	0.86 (0.72-1.01)		0.83 (0.70-0.99)	0.85 (0.71-1.02)	0.86 (0.72-1.03)
<b>Income Quintile</b>					
1	1.37 (1.09-1.71)	N/A	1.26 (1.01-1.59)	1.07 (0.85-1.36)	1.09 (0.86-1.38)
2	1.30 (1.02-1.66)		1.27 (1.00-1.62)	1.16 (0.91-1.47)	1.17 (0.92-1.49)

3	1.27 (0.99-1.64)		1.26 (0.98-1.62)	1.15 (0.89-1.48)	1.17 (0.91-1.50)
4	1.37 (1.06-1.76)		1.34 (1.05-1.73)	1.27 (0.98-1.64)	1.29 (1.00-1.66)
5	1.00		1.00	1.00	1.00
<b>Education</b>					
Secondary or less	1.01 (0.85-1.19)	N/A	0.96 (0.81-1.13)	0.88 (0.74-1.04)	0.87 (0.75-1.05)
Some post-secondary	0.98 (0.68-1.39)		0.94 (0.66-1.32)	0.89 (0.63-1.25)	0.89 (0.63-1.27)
Post-secondary degree/diploma	1.00		1.00	1.00	1.00
<b>Food security</b>					
Secure	1.00	N/A	1.00	1.00	1.00
Sometimes/often insecure	2.82 (2.06-3.86)		2.62 (1.90-3.62)	2.16 (1.55-3.01)	2.07 (1.48-2.90)
<b>Alcohol Consumption</b>					
< weekly	1.30 (1.01-1.66)	N/A	N/A	1.14 (0.88-1.49)	1.13 (0.87-1.47)
1-6 x weekly	1.04 (0.81-1.33)			0.97 (0.76-1.25)	0.97 (0.76-1.25)

Everyday	1.00			1.00	1.00
Not Answered	1.82 (1.44-2.28)			1.63 (1.28-2.07)	1.60 (1.26-2.03)
Chronic Opioid Use					
Non-user	1.00	N/A	N/A	1.00	1.00
User	3.25 (2.62-4.04)			2.76 (2.21-3.45)	2.32 (1.84-2.92)
Smoking Status					
Non-smoker	1.00	N/A	N/A	1.00	1.00
Smoker	2.08 (1.66-2.61)			1.84 (1.42-2.37)	1.95 (1.50-2.52)
Morbidity (JH ADG)					
0-4	1.00	N/A	N/A	N/A	1.00
5-9	1.55 (1.23-1.96)				1.56 (1.23-1.99)
≥10	2.48 (2.01-3.06)				2.46 (1.97-3.08)

Unweighted n=31,717, sum of weights = 6,431,221

Abbreviations: OR=odds ratio, CI=confidence interval, JH ADG=John Hopkins Aggregated Diagnostic Group

Table 2b. Weighted Logistic Regression Results Quantifying Associations between Potential Risk Factors and Mood Disorder

Stratified by Sex

	<b>Male</b>	<b>Female</b>
--	-------------	---------------



<b>Education</b>								
Secondary or less	0.84 (0.64-1.11)	0.84 (0.64-1.11)	0.75 (0.56-1.00)	0.75 (0.57-1.00)	1.03 (0.84-1.26)	1.04 (0.85-1.28)	0.97 (0.79-1.19)	0.98 (0.80-1.20)
Some post-secondary	0.86 (0.52-1.43)	0.86 (0.52-1.42)	0.77 (0.46-1.29)	0.77 (0.46-1.28)	1.03 (0.64-1.67)	1.01 (0.63-1.60)	0.98 (0.61-1.56)	0.99 (0.61-1.59)
Post-secondary degree/diploma	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>Food Security</b>								
Secure	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Sometimes/often insecure	3.10 (1.94-4.94)	3.15 (1.94-5.14)	2.27 (1.31-3.93)	2.19 (1.26-3.80)	2.58 (1.74-3.83)	2.41 (1.61-3.61)	2.09 (1.40-3.12)	2.00 (1.33-3.01)
<b>Alcohol Consumption</b>								
< weekly	1.14 (0.73-1.77)	N/A	1.11 (0.72-1.73)	1.10 (0.71-1.70)	1.21 (0.90-1.64)	N/A	1.14 (0.83-1.56)	1.14 (0.84-1.56)
1-6 x weekly	1.01 (0.69-1.47)		0.96 (0.66-1.41)	0.95 (0.65-1.38)	1.01 (0.75-1.37)		0.98 (0.72-1.32)	0.99 (0.73-1.34)
Everyday	1.00		1.00	1.00	1.00		1.00	1.00
Not Answered	1.78 (1.24-2.55)		1.74 (1.18-2.55)	1.67 (1.13-2.48)	1.60 (1.21-2.12)		1.55 (1.16-2.08)	1.54 (1.15-2.07)
<b>Chronic Opioid Use</b>								

Non-user	1.00	N/A	1.00	1.00	1.00	N/A	1.00	1.00
User	3.45 (2.39-4.97)		3.05 (2.09-4.45)	2.41 (1.64-3.56)	3.02 (2.33-3.91)		2.69 (2.07-3.49)	2.32 (1.76-3.04)
<b>Smoking Status</b>								
Non-smoker	1.00	N/A	1.00	1.00	1.00	N/A	1.00	1.00
Smoker	2.61 (1.71-3.98)		2.43 (1.49-3.97)	2.62 (1.59-4.30)	1.81 (1.46-2.26)		1.54 (1.23-1.93)	1.62 (1.29-2.03)
<b>JH ADG</b>								
0-4	1.00	N/A	N/A	1.00	1.00	N/A	N/A	1.00
5-9	1.67 (1.07-2.60)			1.72 (1.09-2.71)	1.48 (1.13-1.94)			1.48 (1.13-1.95)
≥10	2.83 (1.90-4.21)			2.96 (1.93-4.54)	2.28 (1.77-2.94)			2.22 (1.70-2.91)

Males: unweighted n=13,214, sum of weights = 2,886,467 Females: unweighted n =18,503 sum of weights = 3,543,711

Abbreviations: OR=odds ratio, CI=confidence interval, JH ADG= John's Hopkins Aggregated Diagnostic Group

Table 3a. Adjusted Weighted Associations Between Mood Disorder and Health Service Utilization Outcomes



<b>Outcome</b>	<b>Crude OR (95% CI)</b>	<b>Model 1 OR (95% CI)</b>	<b>Model 2 OR (95% CI)</b>	<b>Model 3 OR (95% CI)</b>	<b>Model 4 OR (95% CI)</b>
General Emergency Department Visits	1.73 (1.42-2.12)	1.85 (1.51-2.28)	1.81 (1.47-2.22)	1.69 (1.37-2.09)	1.49 (1.20-1.85)
Mental Health-Related Emergency Department Visits	3.83 (2.86-5.12)	3.95 (2.95-5.29)	3.83 (2.87-5.12)	3.55 (2.62-4.82)	3.36 (2.47-4.56)
General Hospitalizations	1.65 (1.41-1.93)	1.93 (1.65-2.26)	1.88 (1.61-2.21)	1.69 (1.43-1.99)	1.55 (1.31-1.83)
Mental Health-Related Hospitalizations	3.27 (2.43-4.39)	3.61 (2.69-4.86)	3.55 (2.65-4.77)	3.18 (2.37-4.27)	3.01 (2.23-4.07)
Admission to Long-term Care	2.22 (1.72-2.87)	2.75 (2.09-3.62)	2.66 (2.02-3.50)	2.36 (1.78-3.11)	2.28 (1.71-3.02)
Death	1.41 (1.18-1.67)	1.74 (1.46-2.07)	1.71 (1.44-2.04)	1.46 (1.21-1.74)	1.35 (1.13-1.63)

Unweighted n=32,300, sum of weights=6,558,881

Abbreviations: OR=odds ratio, CI=confidence interval

Table 3b. Adjusted Weighted Associations Between Mood Disorder and Health Service Utilization Outcomes Stratified by Sex

	Male					Female				
Outcome	Crude OR (95% CI)	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)	Model 4 OR (95% CI)	Crude OR (95% CI)	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)	Model 4 OR (95% CI)
General Emergency Department Visits	1.70 (1.12-2.60)	1.80 (1.17-2.76)	1.77 (1.16- 2.70)	1.64 (1.09- 2.49)	1.41 (0.93- 2.15)	1.76 (1.41- 2.19)	1.88 (1.51- 2.35)	1.84 (1.47-2.31)	1.73 (1.38-2.18)	1.55 (1.23- 1.96)
MentalHealth- Related Emergency Department Visits	3.43 (1.96-5.99)	3.54 (2.03-6.17)	3.48 (1.96- 6.17)	3.11 (1.67- 5.82)	2.99 (1.59- 5.63)	3.86 (2.72- 5.47)	4.16 (2.92- 5.93)	4.03 (2.86-5.68)	3.80 (2.68-5.39)	3.56 (2.50- 5.07)
General Hospitalizations	1.64 (1.25-2.14)	1.86 (1.41-2.46)	1.84 (1.39- 2.44)	1.63 (1.21- 2.18)	1.47 (1.10- 1.95)	1.68 (1.40- 2.02)	1.97(1.64- 2.36)	1.92 (1.59-2.30)	1.73 (1.43-2.09)	1.73 (1.43- 2.09)
MentalHealth- Related Hospitalizations	2.65 (1.62-4.34)	2.86 (1.75-4.68)	2.91 (1.79- 4.72)	2.52 (1.53- 4.15)	2.38 (1.44- 3.95)	3.66 (2.53- 5.30)	4.12 (2.85- 5.96)	3.97 (2.73-5.78)	3.60 (2.47-5.24)	3.40 (2.30- 5.02)

Admission to Long-term Care	2.25 (1.53-3.32)	2.77 (1.83-4.18)	2.72 (1.82- 4.09)	2.41 (1.60- 3.64)	2.25 (1.49- 3.39)	2.10 (1.51- 2.90)	2.75 (1.94- 3.91)	2.62 (1.84-3.73)	2.32 (1.62-3.33)	2.27 (1.57- 3.28)
Death	1.60 (1.23-2.08)	1.93 (1.49-2.50)	1.93 (1.49- 2.51)	1.61 (1.24- 2.10)	1.48 (1.14- 1.92)	1.34 (1.06- 1.70)	1.61 (1.28- 2.04)	1.59 (1.25-2.01)	1.37 (1.06-1.76)	1.29 (1.00- 1.67)

Males: unweighted n=13,465, sum of weights=2,951,097 Females: unweighted n=18,835 sum of weights=3,607,784

Abbreviations: OR=odds ratio, CI=confidence interval