



Mental Health Profile of Windsor and Essex County

WINDSOR-ESSEX COUNTY HEALTH
UNIT

August 2016

Author: Mackenzie J. Slifierz

Epidemiologist

Citation: Windsor-Essex County Health Unit. (2016). Mental Health Profile of Windsor and Essex County. Windsor, Ontario.

Windsor-Essex County
Health Unit

1005 Ouellette Avenue
Windsor, Ontario N9A 4J8

www.wechu.org

519-258-2146

© Windsor-Essex County Health Unit, August 2016.

Contents

Mental Health Profile of Windsor and Essex County	1
List of Tables	4
List of Figures	5
Executive Summary	6
Key Findings	6
Recommendations	7
Introduction	8
Intentional Self-Harm	8
Work Stress	8
Methods: Indicators and Data Sources	10
Canadian Community Health Survey (CCHS):	10
National Ambulatory Care Reporting System (NACRS).....	10
Vital Statistics:	10
Rapid Risk Factor Surveillance System (RRFSS):	11
General Mental Health and Well-Being	14
Windsor-Essex County and Ontario.....	14
Sex	15
Age	16
Household Income.....	18
Education.....	20
Occupation	22
Work Stress and Satisfaction.....	24
Intentional Self-Harm	27
Emergency Department (ED) Visits for Intentional Self-Harm Injuries	27
Mortalities due to Intentional Self-Harm Injuries	31
Causes of Intentional Self-Harm Injuries	35
Summary and Conclusions	38
References	39

List of Tables

Table 1. Mental health and intentional self-harm indicators used in this report.

Table 2. The Stress and Satisfaction Offset Scores (SSOS) for the Windsor-Essex County adult workforce (Jan – Apr 2016).

Table 3. The top ten causes of emergency department visits (total from 2014) and mortalities (total from 2007-2011) due to intentional self-harm in Windsor-Essex County.

List of Figures

Figure 1. Comparison of mental health indicators for the populations of Windsor-Essex County and Ontario.

Figure 2. Comparison of mental health indicators by sex for the Windsor-Essex County population.

Figure 3. Comparison of mental health indicators by age groups for the Windsor-Essex County population.

Figure 4. Comparison of mental health indicators by annual household income for the Windsor-Essex County population.

Figure 5. Comparison of mental health indicators by highest education for the Windsor-Essex County population.

Figure 6. Comparison of mental health indicators by occupation categories for the Windsor-Essex County population.

Figure 7. The total number (count) and the age-standardized rate of emergency department (ED) visits for intentional self-harm injuries for the population (10 years old and over) of Windsor-Essex County (WEC) and Ontario, 2003-2015.

Figure 8. The age-specific rates of emergency department (ED) visits for intentional self-harm injuries in Windsor-Essex County, 2003-2015.

Figure 9. Distribution of patients (≥ 10 years old) by postal code of residence who visited the emergency department for an intentional self-harm injury in Windsor-Essex County, 2015.

Figure 10. Distribution of patients (≥ 10 years old) by postal code of residence who visited the emergency department for an intentional self-harm injury in the City Windsor, 2015.

Figure 11. The total number (count) and the age-standardized rate of intentional self-harm mortalities for the population (10 years old and over) of Windsor-Essex County (WEC) and Ontario, 2003-2011.

Figure 12. The average annual number of intentional self-harm mortalities among males and females in Windsor-Essex County (WEC), 2003-2011.

Figure 13. The age-specific rate (12-year average) for intentional self-harm mortalities in Windsor-Essex County, 2003-2011.

Figure 14. Geographical distribution of the rate (per 10,000 population) of intentional self-harm mortalities in Windsor-Essex County, 2007-2011.

Executive Summary

The ***Mental Health Profile of Windsor and Essex County*** was prepared by the Windsor-Essex County Health Unit with the objective of capturing the current status of mental health in our community. This report describes local statistics, emerging trends, and at-risk populations in regards to mental health, work stress, and intentional self-harm using various indicators and data sources. The key findings of this mental health status report are summarized below.

Key Findings

- Poorer mental health and well-being among the Windsor-Essex County population was associated with older adults (45-64 years old), low household income, and lower educational attainment. The mental health and well-being of the Windsor-Essex County population was similar to Ontario based on the indicator estimates.
- Nearly 72% of Windsor-Essex County residents reported very good or excellent mental health and 81% reported feeling happy every day or almost every day in the past month.
- Over 1 in 10 workers in Windsor-Essex County experience unhealthy workplace conditions that contribute to disproportionate work stress that exceeds work satisfaction. Work stress is particularly prevalent among older adults (45-64 years old) as over 30% reported that most days at work are quite a bit or extremely stressful.
- The rate of emergency department (ED) visits for intentional self-harm increased by 28% in Windsor-Essex County between 2011 and 2015 (in fact, the 2015 rate was at a 9-year high for the region). This increase is primarily driven by increased ED visits among youth for self-harm injuries; from 2010 to 2015 the local rate of ED visits for self-harm among youth increased by 143% (that is, the rate was 2.4-times greater in 2015 compared to 2010).
- Nearly 80% of self-harm ED visits were caused by intentional self-poisoning and in almost all cases the poison was some form of medication.
- The rate and number of self-harm mortalities showed an increasing local trend between 2003 and 2011 (most current year that mortality data is available). Males accounted for nearly 3 in 4 intentional self-harm deaths and the mortality rate was greatest among residents aged 45-64 years old.
- Most patients treated for self-harm injuries were from the downtown core of Windsor and this area also had one of the highest mortality rates for self-harm injuries.
- The rates of ED visits for self-harm were significantly lower in Windsor-Essex County compared to the provincial rates; however, the self-harm mortality rates did not differ between Windsor-Essex County and Ontario.

The findings of this report – in combination with the Ontario Public Health Standards – were used to develop recommendations to guide local public health strategies and initiatives involving mental health and intentional self-harm.

Recommendations

- The considerable increase in the rate of emergency department visits for intentional self-harm injuries among youth (10-19 years old) requires immediate priority action and warrants on-going assessment and surveillance.
- Self-harm reduction strategies should target residents from the City of Windsor who live in low income households and have lower educational attainment. Youth (10-19 years old) and older adults (45-64 years old) from these populations are at a higher risk.
- Enhance mental health literacy and awareness in the community, particularly among target populations. Residents should have access to mental health resources, including educational material, crisis help-lines, and other mental health supports.
- Support policies and initiatives that reduce and restrict access to the methods of intentional self-harm; restricting unnecessary access to medications, particularly among youth, should be a priority.
- Form active collaborations and partnerships with external organizations involved with self-harm reduction and mental health. Engagement with schools and workplaces regarding mental health and well-being initiatives would be an asset.
- Self-harm reduction strategies should implement activities that are clearly supported by scientific evidence. These activities should be evaluated regularly to determine their impact and to find opportunities for improvement.

The findings and recommendations of this report can be used to inform decision-making processes, support planning, and provide direction for new or existing programs and initiatives in our community. Promoting positive mental health and preventing intentional self-harm injuries in our community will require a collaborative and comprehensive strategy that involves partners and leaders from across all sectors. The Windsor-Essex County Health Unit is willing to collaborate with community partners to move this work forward.

Introduction

The Ontario Ministry of Health and Long-Term Care's (OMHLTC) Ontario Public Health Standards (OPHS) provide direction for the provision of mandatory health programs and services pursuant to the *Health Promotion and Protection Act*. The roles and responsibilities of public health as it relates to mental health and well-being are established in the OPHS under the Chronic Diseases and Injuries Program Standard. The primary areas of focus are: (i) injuries resulting from intentional self-harm (suicide) and (ii) work stress. The OPHS requirements for these two topics related to mental health and well-being are detailed below:

Intentional Self-Harm

- *The board of health shall conduct epidemiological analysis of surveillance data, including monitoring over time, emerging trends, and priority populations (OMHLTC, 2008).*
- *The board of health shall work with community partners, using a comprehensive health promotion approach, to influence the development and implementation of healthy policies and programs, and the creation or enhancement of safe and supportive environments to address this topic (OMHLTC, 2008).*
- *The board of health shall increase public awareness of the prevention of injury in this area (OMHLTC, 2008).*
- *The board of health shall use a comprehensive health promotion approach in collaboration with community partners, including enforcement agencies, to increase public awareness of and adoption of behaviours that are in accordance with current legislation related to the prevention of injury in this area (OMHLTC, 2008).*

Work Stress

- The board of health shall use a comprehensive health promotion approach to increase the capacity of workplaces to develop and implement health policies and programs, and to create or enhance supportive environments to address this topic (OMHLTC, 2008).

The assessment and surveillance of population health indicators related to mental well-being provide insight into current and evolving health issues in Windsor-Essex County. The overarching aim of this report is to capture the current mental health status of our community using various mental health indicators. The specific objectives of this health status report are:

- i. To describe the current status and emerging trends of indicators for general mental health, work stress, and intentional self-harm in Windsor-Essex County.
- ii. To identify priority populations that are disproportionately affected by poor mental health, work stress, and intentional self-harm in Windsor-Essex County.

It is anticipated that the findings of this health status report will be used to inform decision-making processes, support planning, and provide direction for new or existing programs and initiatives in our community.

Methods: Indicators and Data Sources

The data analyzed and presented in this report comes from multiple data sources that capture provincial and local level data. The mental health and intentional self-harm indicators used in this report are summarized in **Table 1** and the indicator data sources are described below.

Canadian Community Health Survey (CCHS):

The CCHS is an annual cross-sectional survey that collects information related to health status, health care utilization, and health determinants for non-institutionalized Canadians aged 12 years and older in all provinces and territories. The CCHS contains a core component which collects data annually and non-core components which collect data less frequently. In Windsor-Essex County, there are approximately 650 responses per year. Reliable estimates for health regions (e.g., Windsor-Essex County) can be produced by using a collated 2-year data set (e.g., 2013-2014). The estimates presented in this report adhere to the guidelines in the 2014 CCHS User Guide and were generated using bootstrapped weights. If the coefficient of variation (CV) was ≥ 16.6 and ≤ 33.3 the estimates was accompanied by a cautionary statement of high sampling variability. If the CV was > 33.3 the estimate was excluded from the reported due to very high sampling variability.

National Ambulatory Care Reporting System (NACRS):

This database captures client visits for ambulatory care in facilities and the community. It is administered by the Canadian Institute for Health Information and distributed by IntelliHEALTH (Ministry of Health and Long-Term Care). This data source contains ambulatory care data for outpatient and community-based clinics, emergency department visits, and day surgeries. In addition to service-specific information, it also collects demographic information. Data for emergency department visits for intentional self-harm injuries (ICD10 codes: X60-X84, X87) in Windsor-Essex County (2003-2015) were extracted from this database and presented in this report.

Vital Statistics:

This data source is administered by the Ontario Office of the Registrar General and data is distributed by IntelliHEALTH (Ministry of Health and Long-Term Care). This data source contains mortality information from death certificates which are completed by physicians. All deaths within Ontario must be registered. Mortality data available through IntelliHEALTH only contains the primary cause of death; that is, the disease or injury which initiated the chain of events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury. Demographic data (i.e., age, sex, and resident's address) is also associated with mortality data. Data for intentional self-harm mortalities (ICD10 codes: X60-X84, X87) in Windsor-Essex County (2003-2011) were extracted from this database and presented in this report (note: there is a greater data lag for mortality data).

Rapid Risk Factor Surveillance System (RRFSS):

The Institute for Social Research at York University collects data through a telephone survey of adults (≥ 18 years old) every cycle (4 month period). The release of data follows the same standards as Statistics Canada's CCHS. This data source is available to health units at a cost, but it does allow health units to select and customize the survey modules for their particular region.

Table 1. Mental health and intentional self-harm indicators used in this report.

Indicator	Definition	Data Source
Perceived mental health, very good or excellent	The proportion of residents (≥ 12 years old) who self-reported having very good or excellent mental health.	CCHS 2013/2014
Perceived life stress, quite a bit or extremely stressful	The proportion of residents (≥ 12 years old) who self-reported that most days in life are quite a bit or extremely stressful.	CCHS 2013/2014
Perceived work stress, quite a bit or extremely stressful	The proportion of residents (15 – 75 years old) who were employed in the past 12 months who self-reported that most days at work are quite a bit or extremely stress.	CCHS 2013/2014
Satisfied or very satisfied with their life	The proportion of residents (≥ 12 years old) who self-reported being satisfied or very satisfied with life in general.	CCHS 2013/2014
Very strong or somewhat strong sense of community belonging	The proportion of residents (≥ 12 years old) who self-reported having a somewhat strong or very strong sense of community belonging.	CCHS 2013/2014
Felt happy every day or almost every day in the past month	The proportion of residents (≥ 12 years old) who self-reported feeling happy every day or almost every day in the past month.	CCHS 2011/2012
Felt interested in life every day or almost every day in the past month	The proportion of residents (≥ 12 years old) who self-reported feeling interested in life every day or almost every day in the past month.	CCHS 2011/2012
Flourishing Mental Health	The proportion of residents (≥ 12 years old) who have flourishing mental health based on the Mental Health Continuum Short Form (Keyes, 2009).	CCHS 2011/2012
Stress & Satisfaction Offset Score (SSOS)	To measure the level of work stress in the adult (≥ 18 years old) workforce. It was developed by Dr. Martin Shain in collaboration with Health Canada and the Centre for Addiction and Mental	RRFSS Jan – Apr 2016

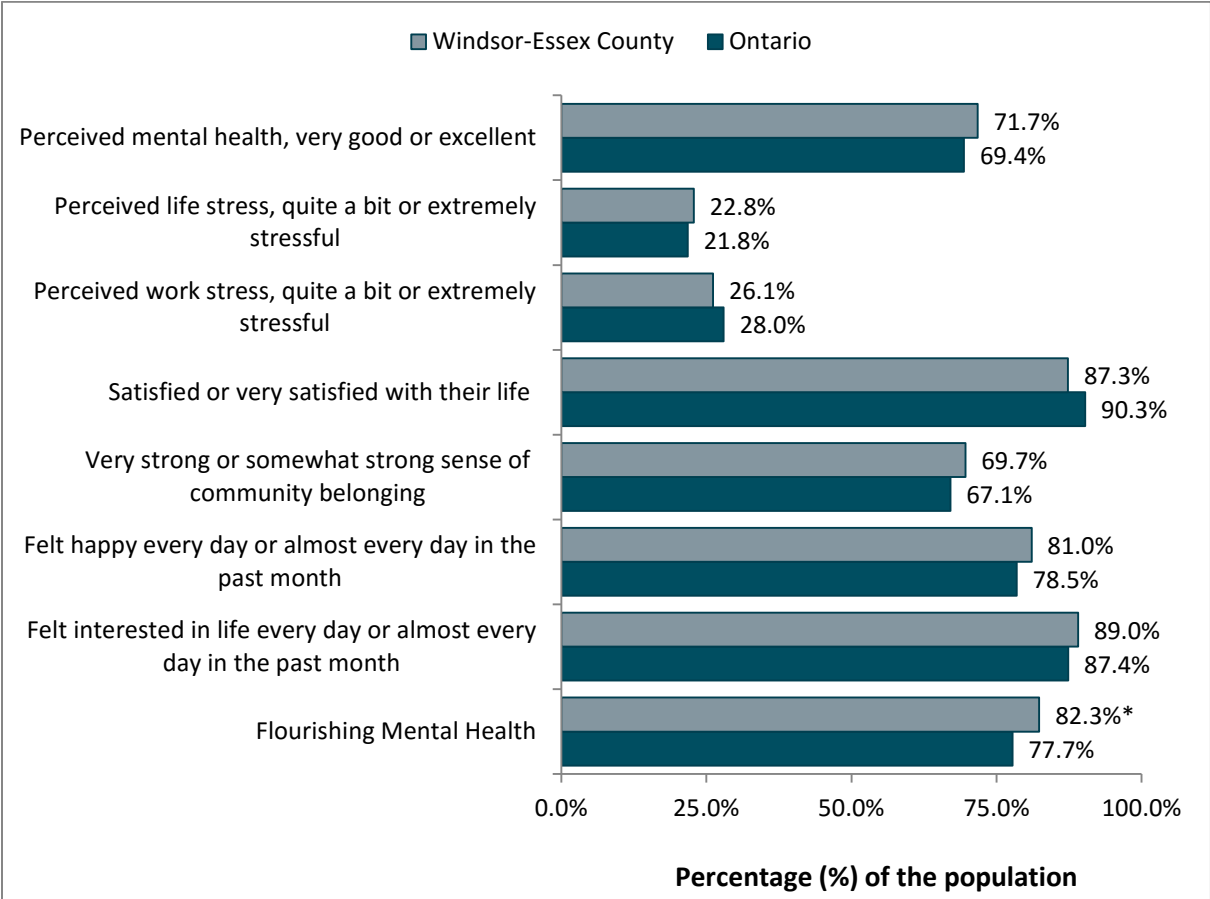
Indicator	Definition	Data Source
	Health (IAPA, 2008).	
Emergency Department Visits: Intentional Self-Harm	The rate of emergency department visits (per 100,000 population) for injuries resulting from intentional self-harm (ICD10 codes: X60-X84, X87).	NACRS
Mortalities: Intentional Self-Harm	The rate of mortalities (per 100,000 population) for injuries resulting from intentional self-harm (ICD10 codes: X60-X84, X87).	Vital Statistics

General Mental Health and Well-Being

Windsor-Essex County and Ontario

Mental health indicators are reported in **Figure 1** for the populations of Windsor-Essex County and Ontario (2013/2014). There were no statistically significant differences between Windsor-Essex County and Ontario except for the 'Flourishing Mental Health' indicator which was significantly greater in Windsor-Essex County.

Figure 1. Comparison of mental health indicators for the populations of Windsor-Essex County (WEC) and Ontario.



Source: Canadian Community Health Survey [2011/2012 and 2013/2014], Statistics Canada, Share File, Ontario Ministry of Health and Long-Term Care.

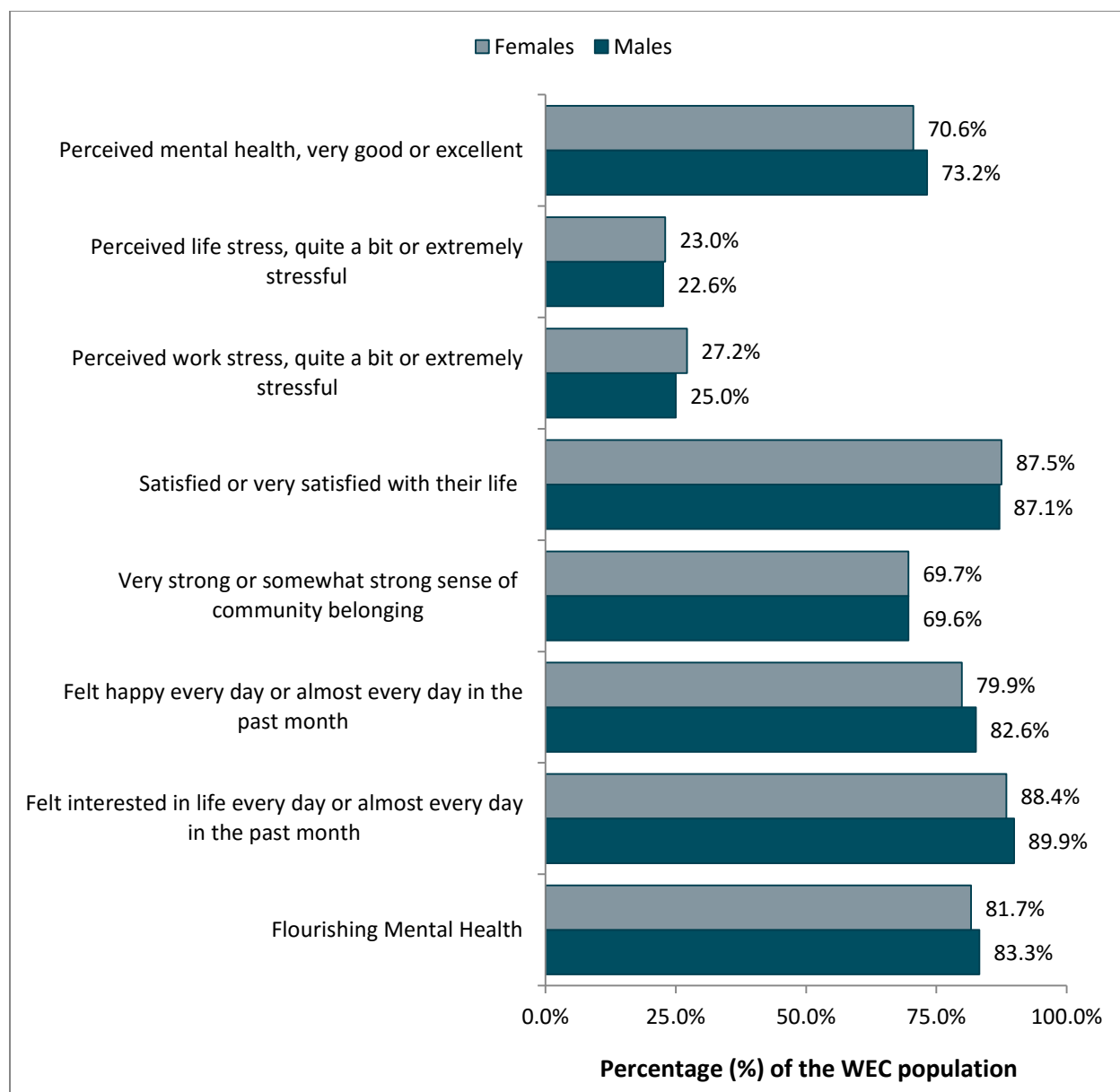
Note:

(*) - The Windsor-Essex County estimate is significantly different from the Ontario estimate.

Sex

Mental health indicators were compared between sexes for Windsor-Essex County residents and the results are reported in **Figure 2**. There were no statistically significant differences between males and females in Windsor-Essex County for the reported mental health indicators.

Figure 2. Comparison of mental health indicators by sex for the Windsor-Essex County (WEC) population.



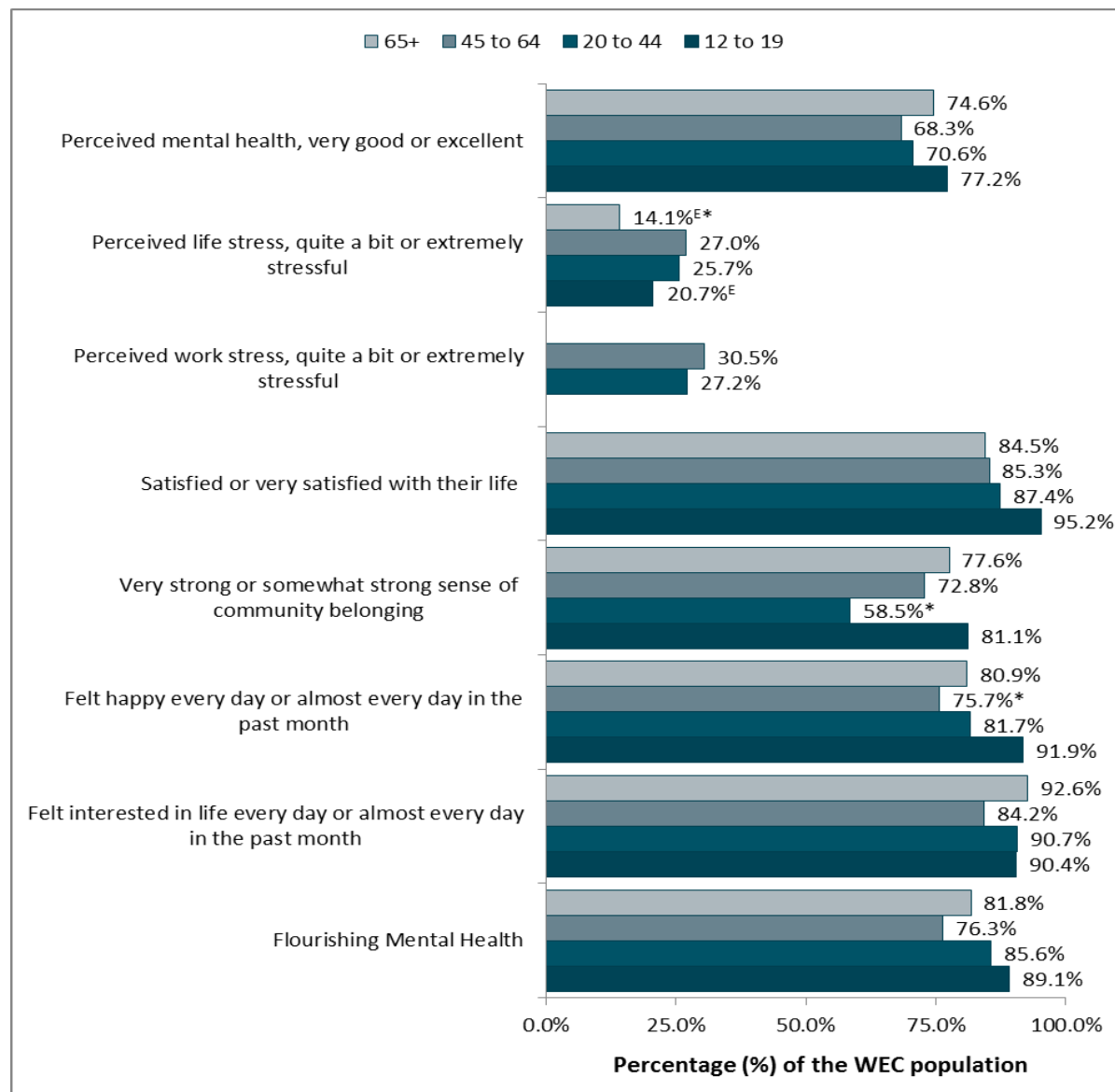
Source: Canadian Community Health Survey [2011/2012 and 2013/2014], Statistics Canada, Share File, Ontario Ministry of Health and Long-Term Care.

Age

Mental health indicators were compared between age groups for Windsor-Essex County residents and the results are reported in **Figure 3**. The indicators were also compared between males and females of equivalent age groups. Some of the key findings for Windsor-Essex County are summarized below:

- In general, youth (12-19 years old) tended to self-report better mental health and older adults (45-64 years old) tended to self-report poorer mental health; however, only some indicators were statistically different between age groups.
- Seniors (65+ years old) reported less stress in their lives compared to other adults (>19 years old) (statistically significant difference).
- Every 3 in 10 older adults (45-64 years old) self-reported that most days at work are quite a bit or extremely stress.
- Young adults (20-44 years old) were less likely to report feelings of belonging to their community compared to all other age groups (statistically significant difference).
- Older adults (45-64 years old) were less likely to report feeling happy every day or almost every day in the past month compared to youth (12-19 years old) (statistically significant difference).
- Male youth (12-19 years old) were more likely to report being satisfied or very satisfied with their life compared to all other male age groups (statistically significant difference).
- Female adults (20-44 years old) were less likely to report feeling a strong or somewhat strong sense of community belonging compared to all other female age groups (statistically significant difference).
- There were no differences between equivalent age groups of different genders (males did not differ from females for any age group comparisons).

Figure 3. Comparison of mental health indicators by age groups for the Windsor-Essex County (WEC) population.



Source: Canadian Community Health Survey [2011/2012 and 2013/2014], Statistics Canada, Share File, Ontario Ministry of Health and Long-Term Care.

Notes:

- The estimate for “perceived work stress” for youth (12-19 years old) and seniors (65+ years old) had very high sampling variability and was redacted.
- (E) - This estimate should be used with caution due to high sampling variability.

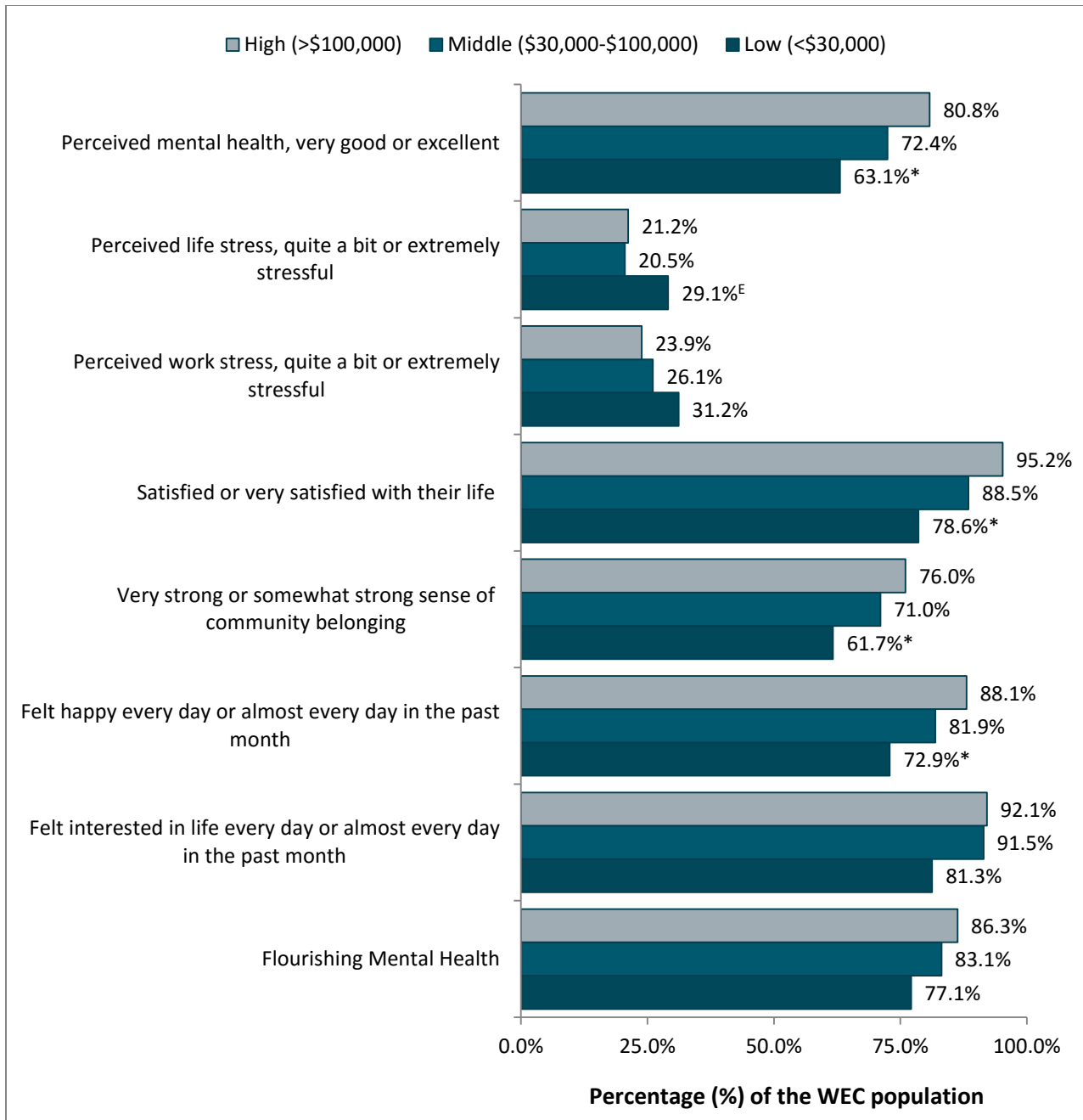
(*) - The estimate is significantly different than at least one other age group

Household Income

Mental health indicators were compared between levels of annual household income (high, middle, and low income households) for Windsor-Essex County residents and the results are reported in **Figure 4**. Some of the key findings for Windsor-Essex County are summarized below:

- In general, residents from high income households (>\$100,000) tended to self-report having better mental health and residents from low income households (<\$30,000) tended to self-report having poorer mental health.
- Residents from low income households (<\$30,000) were less likely to report having very good or excellent mental health than residents from high income households (>\$100,000) (statistically significant difference).
- Residents from low income households (<\$30,000) were less likely to report being satisfied or very satisfied with life compared to residents from high income households (>\$100,000) (statistically significant difference).
- Residents from low income households (<\$30,000) were less likely to report having a very strong or somewhat strong sense of community belonging compared to residents from high income households (>\$100,000) (statistically significant difference).
- Residents from low income households (<\$30,000) were less likely to report feeling happy every day or almost every day in the past month compared to residents from high income households (>\$100,000) (statistically significant difference).

Figure 4. Comparison of mental health indicators by annual household income for the Windsor-Essex County (WEC) population.



Source: Canadian Community Health Survey [2011/2012 and 2013/2014], Statistics Canada, Share File, Ontario Ministry of Health and Long-Term Care.

Notes:

(E) - This estimate should be used with caution due to high sampling variability.

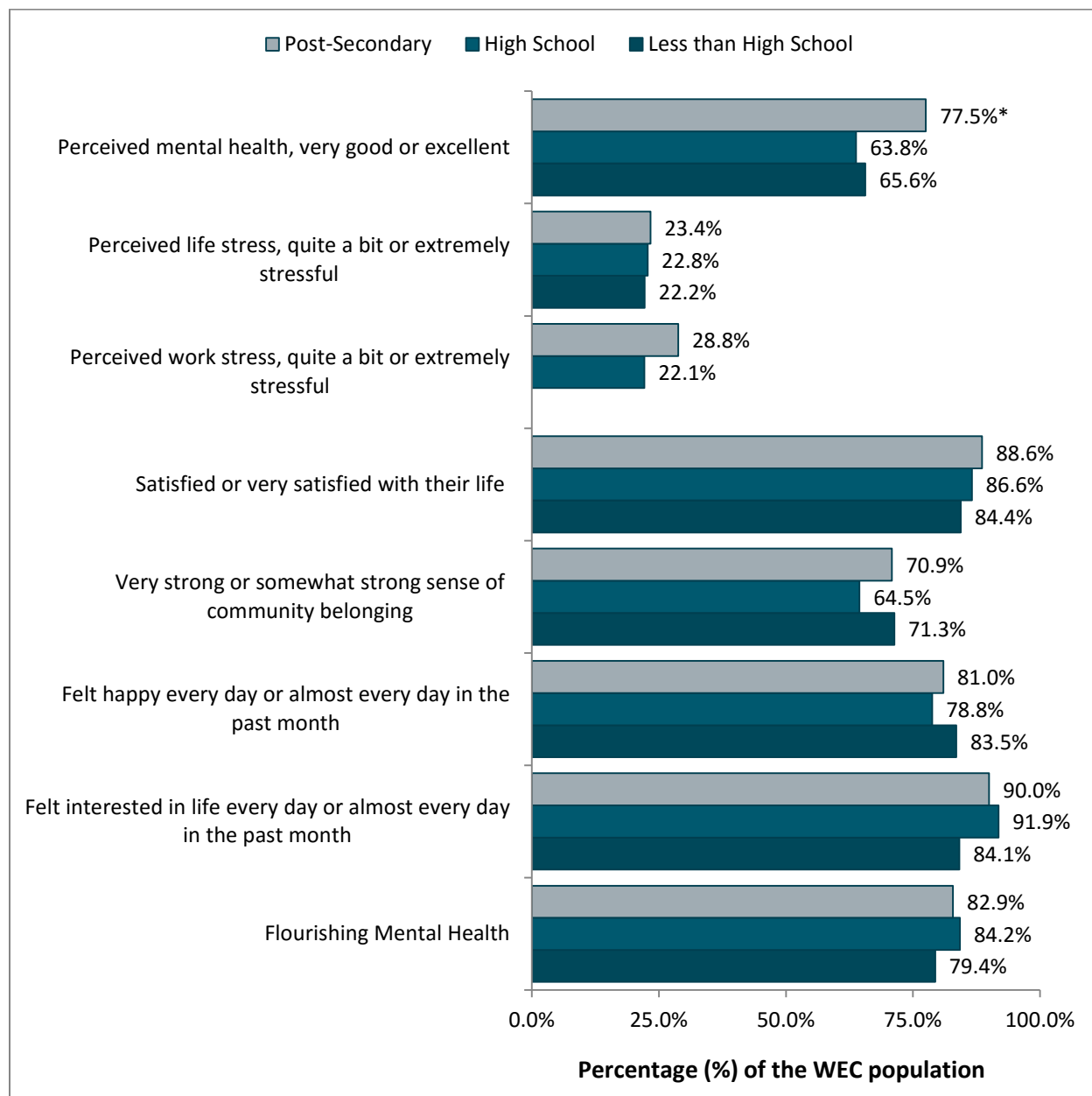
(*) - The estimate is significantly different than at least one other income group.

Education

Mental health indicators were compared between levels of education attainment (residents with less than high school, high school, or post-secondary education) for Windsor-Essex County residents and the results are reported in **Figure 5**. Some of the key findings for Windsor-Essex County are summarized below:

- In general, residents with a post-secondary education tended to self-report having better mental health and residents with less than high school education tended to self-report having poorer mental health.
- Residents with a post-secondary education were more likely to report having very good or excellent mental health when compared to residents without a post-secondary education (statistically significant difference).

Figure 5. Comparison of mental health indicators by highest education for the Windsor-Essex County (WEC) population.



Source: Canadian Community Health Survey [2011/2012 and 2013/2014], Statistics Canada, Share File, Ontario Ministry of Health and Long-Term Care.

Notes:

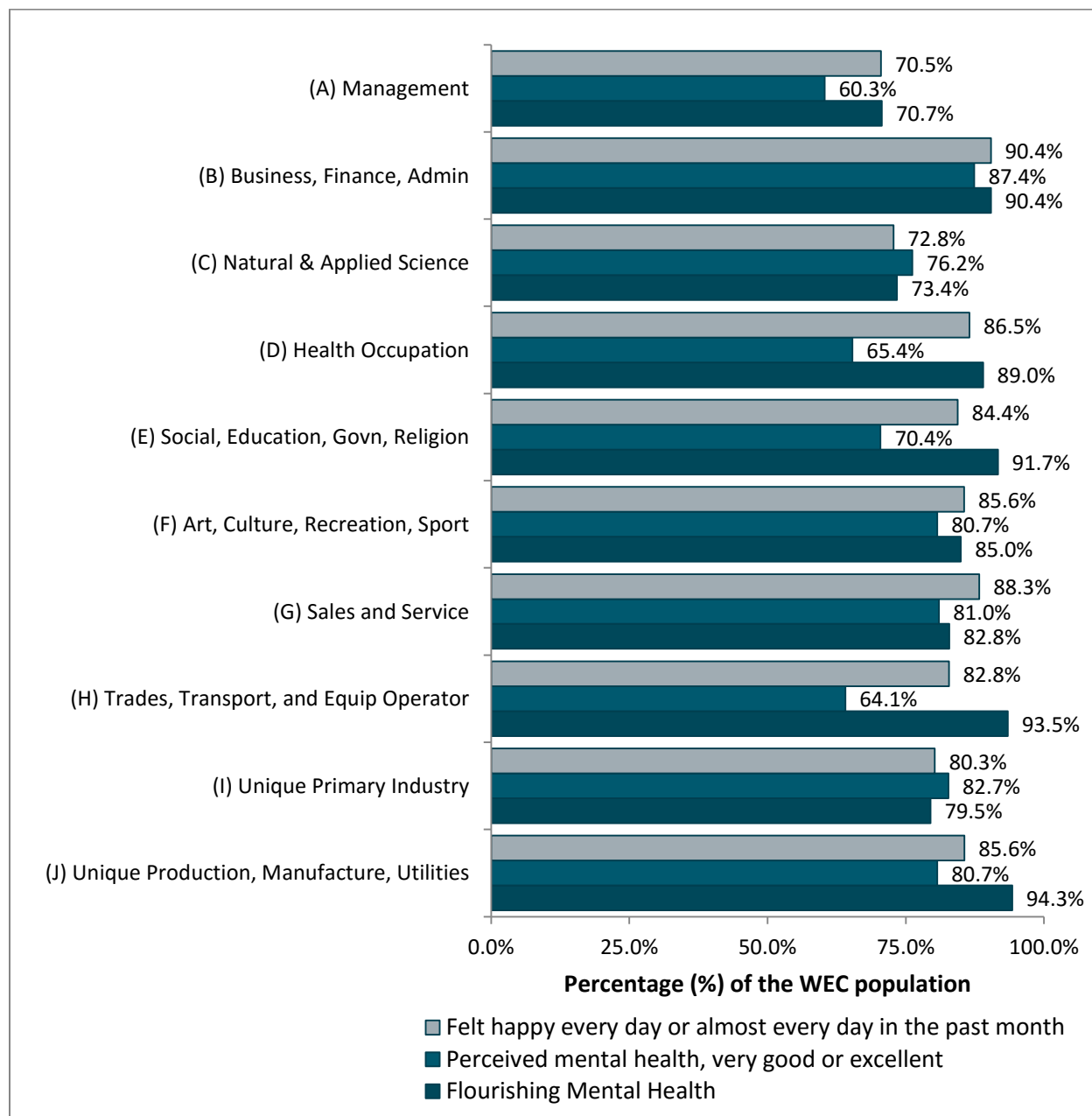
- The estimate for “perceived work stress” for residents with less than a high school education had very high sampling variability and was redacted.
- (*) - The estimate is significantly different than at least one other education group.

Occupation

Mental health indicators were compared between broad occupation categories (based on Statistic Canada's 2006 occupational classification system) for Windsor-Essex County residents and the results are reported in **Figure 6**. Due to the limited sample size and high estimate variability in many of the occupation categories, only three of the mental health indicators could be reported. Some of the key findings for Windsor-Essex County are summarized below:

- There was no occupation category that demonstrated a clear tendency to have better mental health than all the others.
- Although there was observed variation in the estimates, none of the occupation-specific indicator estimates were significantly different than the general Windsor-Essex County estimates for those equivalent indicators.

Figure 6. Comparison of mental health indicators by occupation categories for the Windsor-Essex County (WEC) population.



Source: Canadian Community Health Survey [2011/2012 and 2013/2014], Statistics Canada, Share File, Ontario Ministry of Health and Long-Term Care.

Note:

- Occupations are grouped according to Statistic Canada's 2006 occupational classification system [Click here to visit the Statistic Canada website for more information.](#)

Work Stress and Satisfaction

The Stress and Satisfaction Offset Score (SSOS) is a measure of the level of work stress in the adult population. Four questions are used to gauge work stress and work satisfaction, and then individuals are assigned a score between 2 and -2. The scores for the Windsor-Essex County adult workforce are reported in **Table 2**. Over 1 in 10 workers in Windsor-Essex County experience unhealthy workplace conditions that contribute to disproportionate work stress that exceeds work satisfaction. The workers who experience the highest level of workplace stress (score of -2) may be at an increased risk for various health outcomes such as heart problems, back pain, certain cancers, injury, mental health problems, substance misuse, and other health issues (IAPA, 2008). The majority of workers (64.9%) in Windsor-Essex County had a balance of work stress and work satisfaction which cancel each other out, but a lot more could still be done to improve workplace health. Nearly 1 in 4 workers in Windsor-Essex County experience healthy workplace conditions that positively contribute to their well-being. These findings indicate that there is a great deal of opportunity for improvement in workplace health (both mental and physical well-being) among the adult workforce of Windsor-Essex County.

Table 2. The Stress and Satisfaction Offset Scores (SSOS) for the Windsor-Essex County (WEC) adult workforce (Jan – Apr 2016).

Score	Interpretations [†]	Percentage (%) of the WEC adult workforce
-2	You experience more stress than satisfaction at work. You likely feel you are treated very unfairly at work. You are likely inadvertently working against the achievement of your employer’s business objectives, whether these objectives are product-related or service-related. Your self-reported health is likely to be poor. Your mental health at work may be characterized by disengagement, demoralization and depression. You are at risk for a wide variety of health and capacity impairments.	5.0 ^E
-1	You experience slightly more stress than satisfaction at work. You may feel you are treated unfairly at work. You may be inadvertently working against the achievement of your employer’s business objectives, whether these objectives are product-related or service-related. Your self-reported health is likely only fair. Your mental health at work may be characterized by disengagement and demoralization. You are at risk for a variety of health and capacity impairments. Your employer should take notice of the unhealthy workplace conditions that are contributing to your poor health and a lack of productivity in the business. There is much that can be done to improve both!	5.4 ^E
0	The satisfaction you get from your job and the stress you experience at work tend to cancel each other out. Your self-reported health is likely to be neutral, or moderately good. Your mental health related to work may be characterized by complacency or disengagement. You are neither contributing to, nor detracting from, your employer’s business objectives. Your employer could do a lot more to improve the health of your workplace, and gain your commitment and engagement.	64.9
1	You experience slightly more satisfaction than stress at work. On the whole, you feel you are being treated relatively fairly at work. Your self-reported health is likely to be very good. Your mental health related to work is characterized by quite high commitment to your employer	11.9

Score	Interpretations [†]	Percentage (%) of the WEC adult workforce
	and your job. Your employer is doing many things right, but there is still some room for improvement.	
2	You experience more satisfaction than stress at work. On the whole, you feel you are valued and are being treated fairly at work. Your self-reported health is likely to be excellent, and you have a sense of well-being. Your mental health related to work is characterized by high levels of commitment and engagement in your work. You are undoubtedly contributing to achieving your employer's business objectives. Congratulations! You are one of the fortunate ones, experiencing a very healthy workplace.	12.8

Notes:

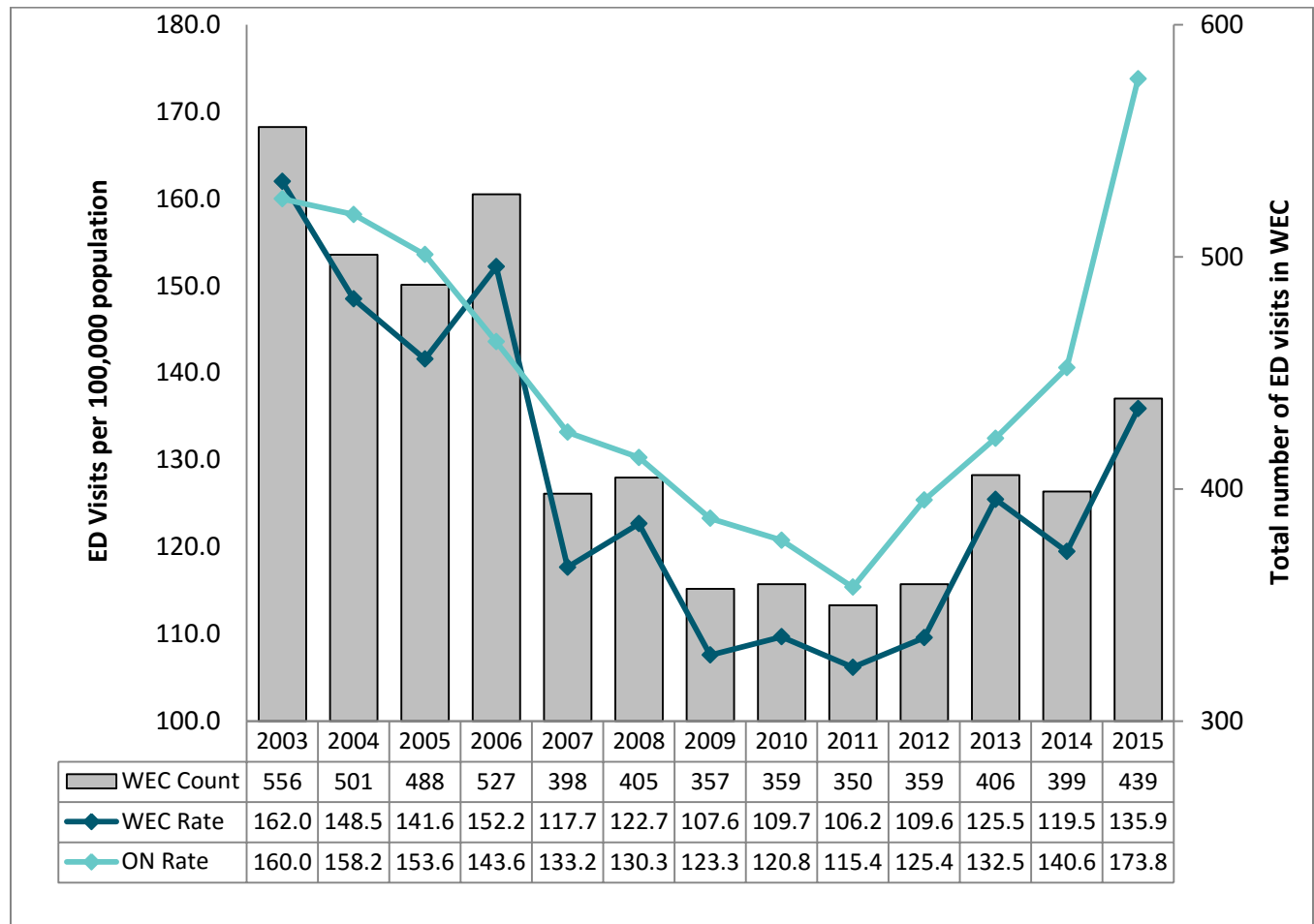
- (†) - Interpretations of the SSOS come from IAPA, 2008: [Click here to visit the IAPA website for more information.](#)
- (E) - This estimate should be used with caution due to high sampling variability.

Intentional Self-Harm

Emergency Department (ED) Visits for Intentional Self-Harm Injuries

The total number and the age-standardized rate of ED visits for intentional-self harm injuries are reported in **Figure 7** for Windsor-Essex County and Ontario (2003-2015). From 2003 to 2011, the rate of self-harm ED visits declined by 34.6% in Windsor-Essex County and 28.1% in Ontario. However, from 2011 to 2015 there was a rebound in the rate of self-harm ED visits with a 28.0% increase in Windsor-Essex County and a 50.6% increase in Ontario. In 2015, the rate of self-harm ED visits was at a 9-year high in Windsor-Essex County. In Windsor-Essex County, the rate of ED visits for intentional-self harm was statistically lower than the provincial rate in 2007, 2009, 2012, 2014, and 2015 (no statistical difference for all other years).

Figure 7. The total number (count) and the age-standardized rate of emergency department (ED) visits for intentional self-harm injuries for the population (10 years old and over) of Windsor-Essex County (WEC) and Ontario, 2003-2015.

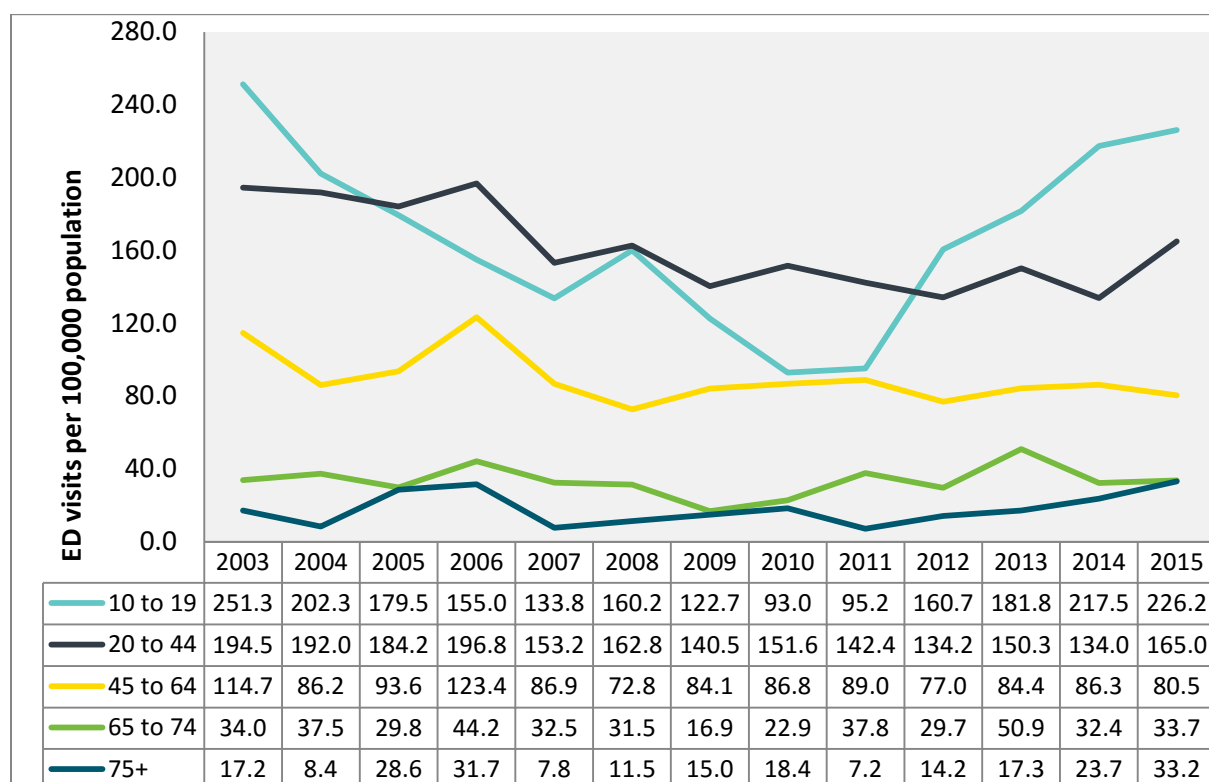


Source: Public Health Ontario. Snapshots: Windsor-Essex County Health Unit: Emergency department visits for injuries due intentional self-harm - age standardized

rate (both sexes combined) 2003-2014. Toronto, ON: Ontario Agency for Health Protection and Promotion; 2016 Feb 1 [cited 2016 May 6].

Differences in ED visits for self-harm differ according to sex and age groups. When examining the average number of ED visits for intentional self-harm injuries in Windsor-Essex County between 2003 and 2015, 59.5% of visits were females and 40.5% were males. There are also differences by age groups; the age-specific rates of ED visits for intentional self-harm injuries are reported in **Figure 8** for the Windsor-Essex County population (2003-2015). From 2003 to 2015 there were age-specific changes in the rates of ED visits for intentional self-harm. During this time period, this rate has steadily decreased by 15.2% for adults (20-44 years old). The rate also decreased by 63.0% for youth (10-19 years old) from 2003 to 2010, but from 2010 to 2015 there was an alarming increase of 143.2% in the rate of ED visits for intentional self-harm among the youth population of Windsor-Essex County (that is, the rate was 2.4-times greater in 2015 compared to 2010). The rate of ED visits for intentional self-harm also may be on the rise among seniors (≥ 75 years old) as the 2015 rate was higher than any other reported year.

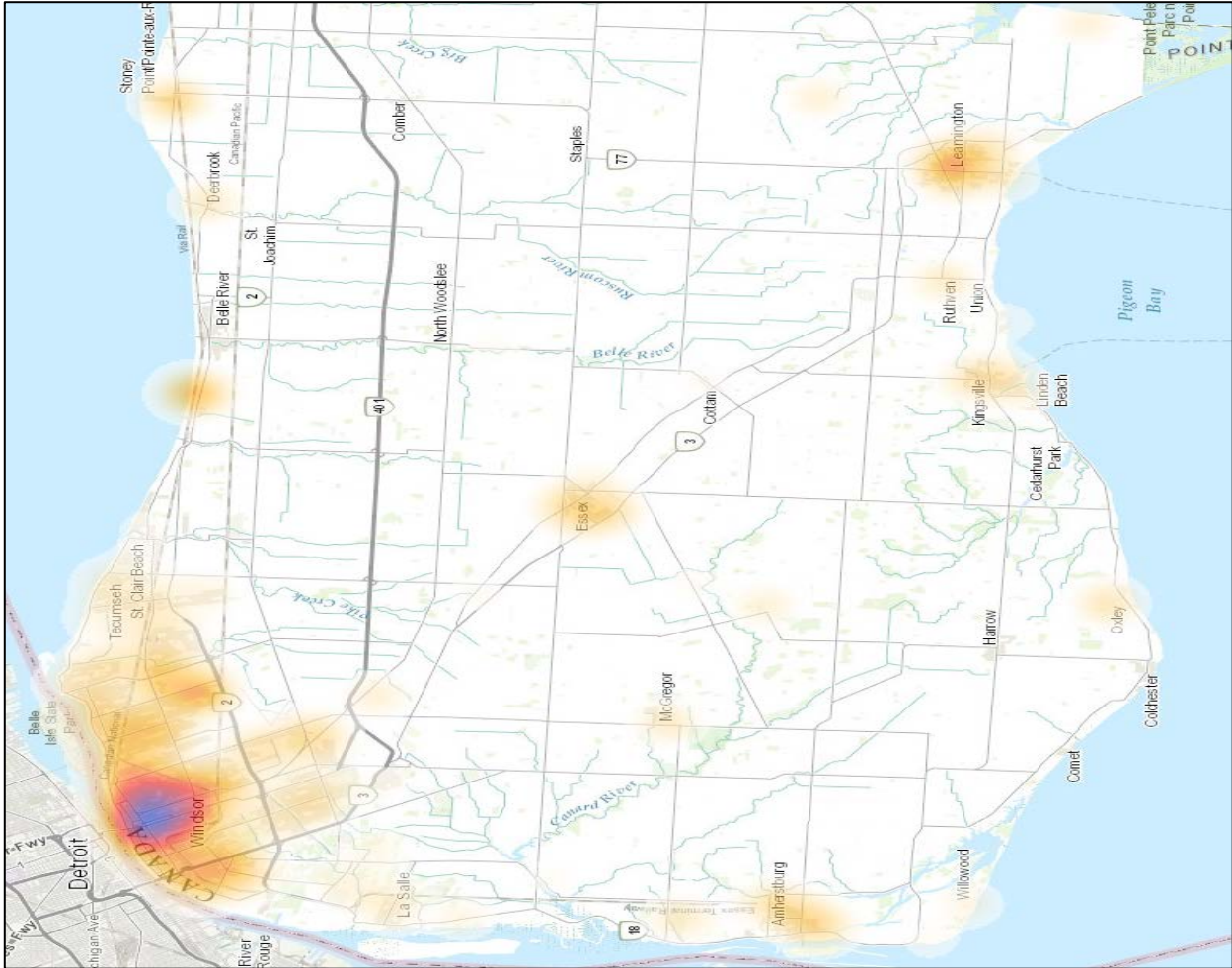
Figure 8. The age-specific rates of emergency department (ED) visits for intentional self-harm injuries in Windsor-Essex County, 2003-2015.



Source: Public Health Ontario. Snapshots: Windsor-Essex County Health Unit: Emergency department visits for injuries due intentional self-harm – age-specific rates 2003-2014. Toronto, ON: Ontario Agency for Health Protection and Promotion; 2016 Feb 1 [cited 2016 May 6].

The postal codes of the residence of patients who visited the ED for intentional self-harm injuries were mapped for Windsor-Essex County (see **Figure 9**) and the City of Windsor (see **Figure 10**). When looking at the county-wide distribution of patients' residence, there are defined clusters within each urban centre, including Amherstburg, Emeryville, Essex, Kingsville, Leamington, and Windsor. Most patients treated for self-harm injuries were from Windsor; in particular, the greatest density of patients resided around the downtown core (community around the intersection of Ouellette Avenue and Wyandotte Street). There also was a high density of self-harm injuries in the Fontainebleau neighbourhood (around Jefferson Boulevard and E.C. Row Expressway). Effective public health strategies should target populations from urban centres and high-risk neighbourhoods in Windsor-Essex County

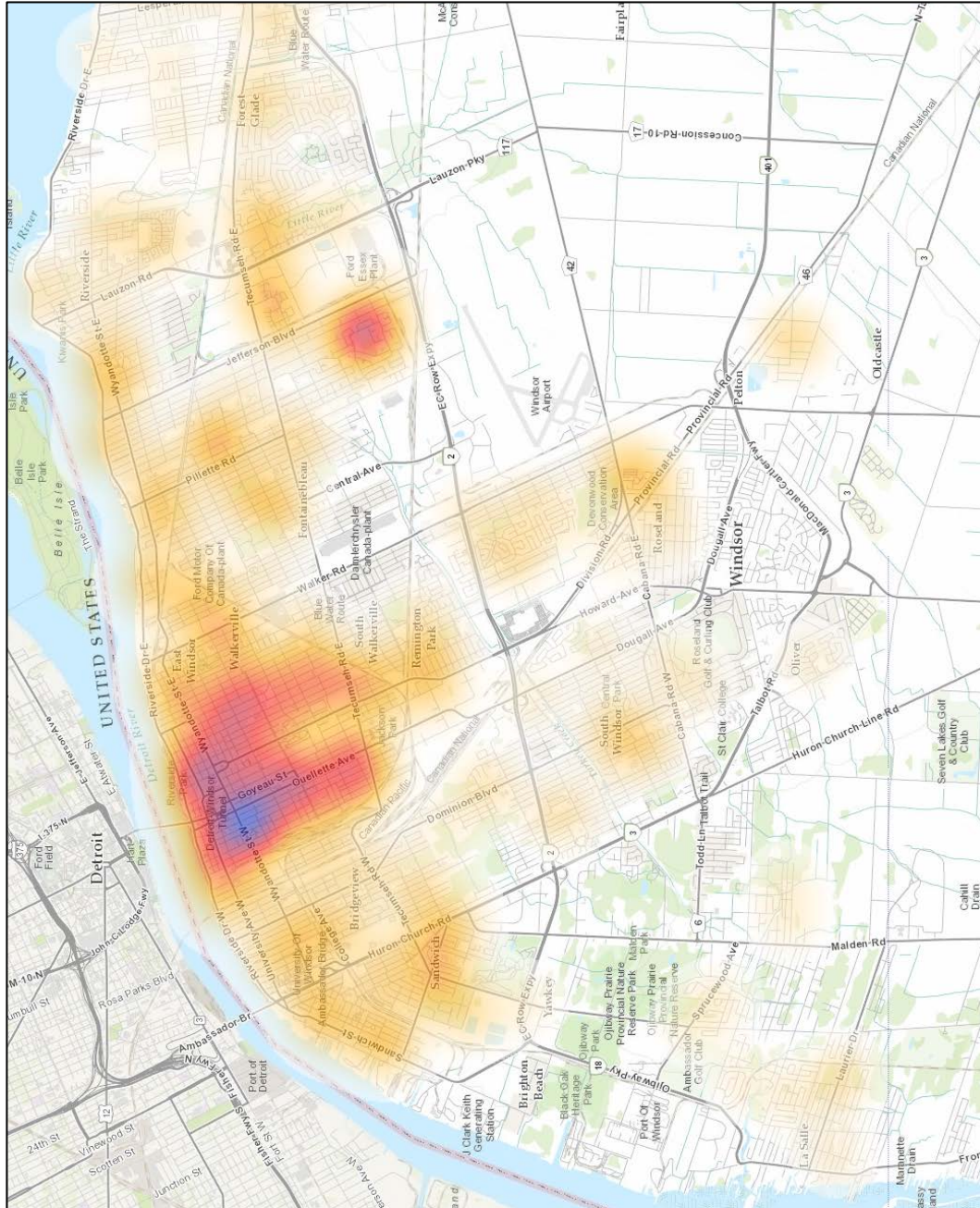
Figure 9. Distribution of patients (≥10 years old) by postal code of residence who visited the emergency department for an intentional self-harm injury in Windsor-Essex County, 2015.



Source: Ambulatory Emergency External Cause [2015], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [2 June 2016].

Figure 10. Distribution of patients (≥10 years old) by postal code of residence who visited the emergency department for an intentional self-harm injury in the City Windsor, 2015.

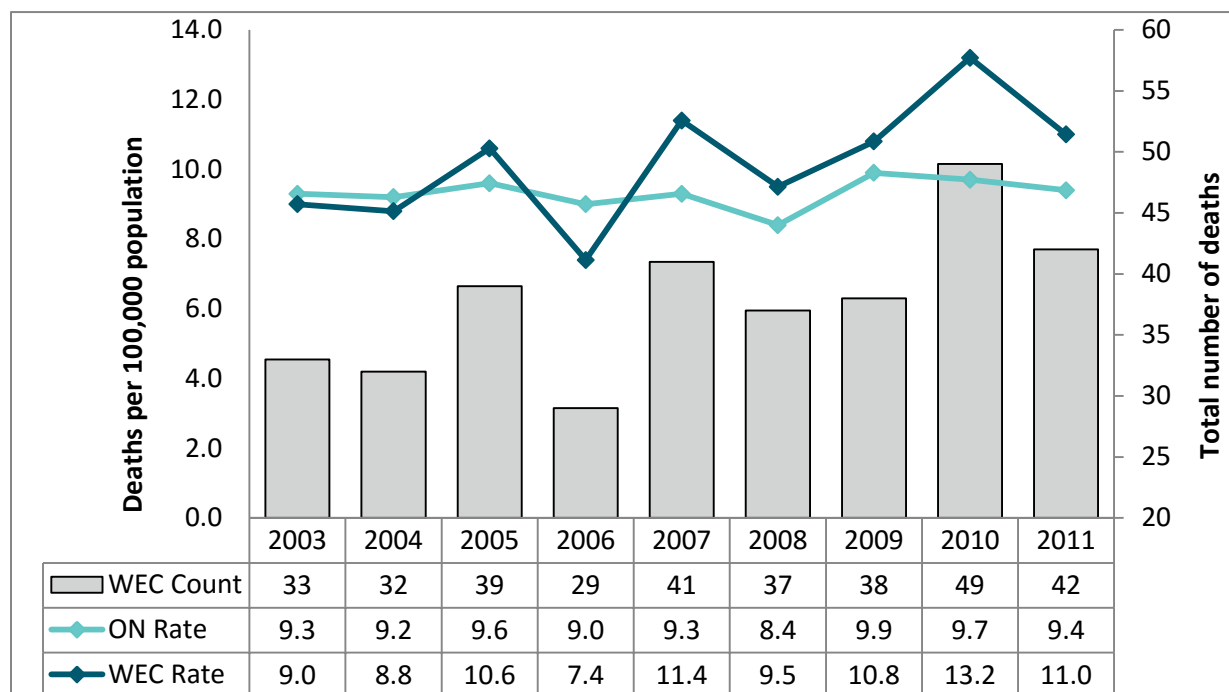
Source: Ambulatory Emergency External Cause [2015], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [2 June 2016].



Mortalities due to Intentional Self-Harm Injuries

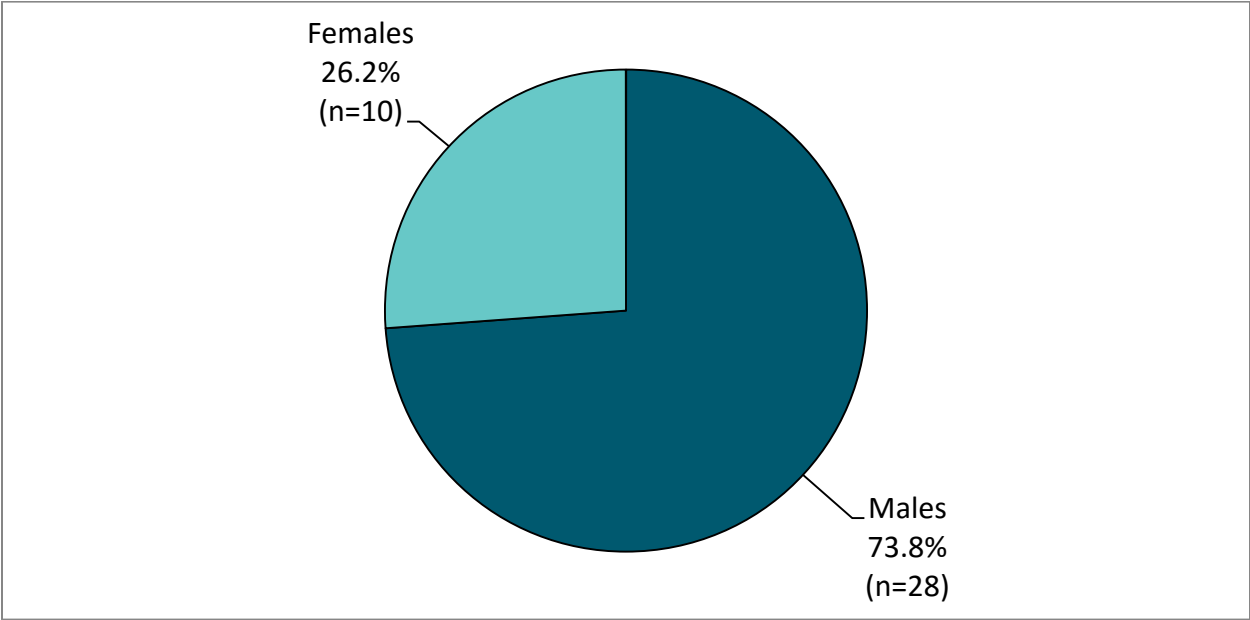
The total number and rate of intentional self-harm mortalities is reported in **Figure 11** for Windsor-Essex County and Ontario (2003-2011). In 2011, there were 42 deaths caused by intentional self-harm in Windsor-Essex County. The rate of intentional self-harm deaths has remained relatively unchanged in Ontario during this period, but there has been an increasing trend in Windsor-Essex County with 2010 being a 9-year high. The Windsor-Essex County rate was not statistically different than the Ontario rate for any of the years reported. Residents who died due to intentional self-harm were predominantly male; nearly 3 in 4 intentional self-harm deaths were males (see **Figure 12**). Residents aged 45-64 years old had the greatest age-specific rate of intentional self-harm mortalities and those aged 10-19 years old had the lowest rate (see **Figure 13**); in fact, the rate was 5.9-times greater among older adults (45-64 years old) compared to youth (10-19 years old). The distribution of the rate of intentional self-harm mortalities in Windsor-Essex County is reported in **Figure 14**. This rate was greatest in the N9A, N9C, and N8T forward sortation areas which cover east, west, and downtown Windsor, and the rate was lowest in the areas covering LaSalle and Tecumseh.

Figure 11. The total number (count) and the age-standardized rate of intentional self-harm mortalities for the population (10 years old and over) of Windsor-Essex County (WEC) and Ontario, 2003-2011.



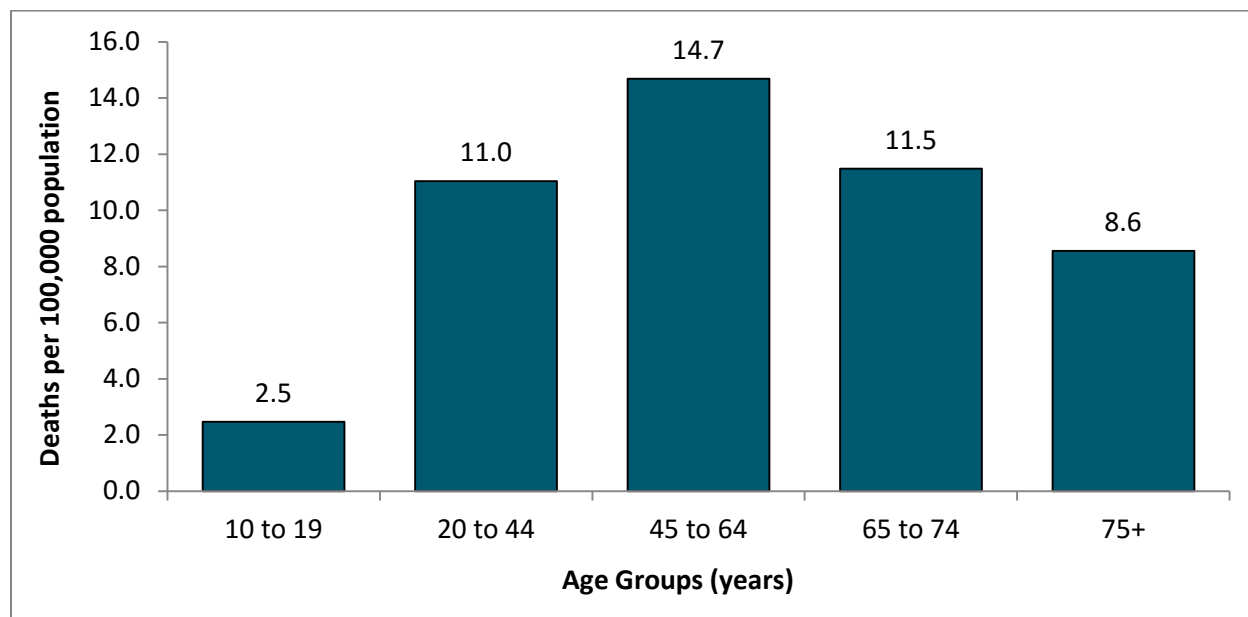
Source: Public Health Ontario. Snapshots: Windsor-Essex County Health Unit: Mortality due to intentional self-harm – age-standardized rate (both sexes combined) 2003-2011. Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 Mar 12 [cited 2016 May 6].

Figure 12. The average annual number of intentional self-harm mortalities among males and females in Windsor-Essex County (WEC), 2003-2011.



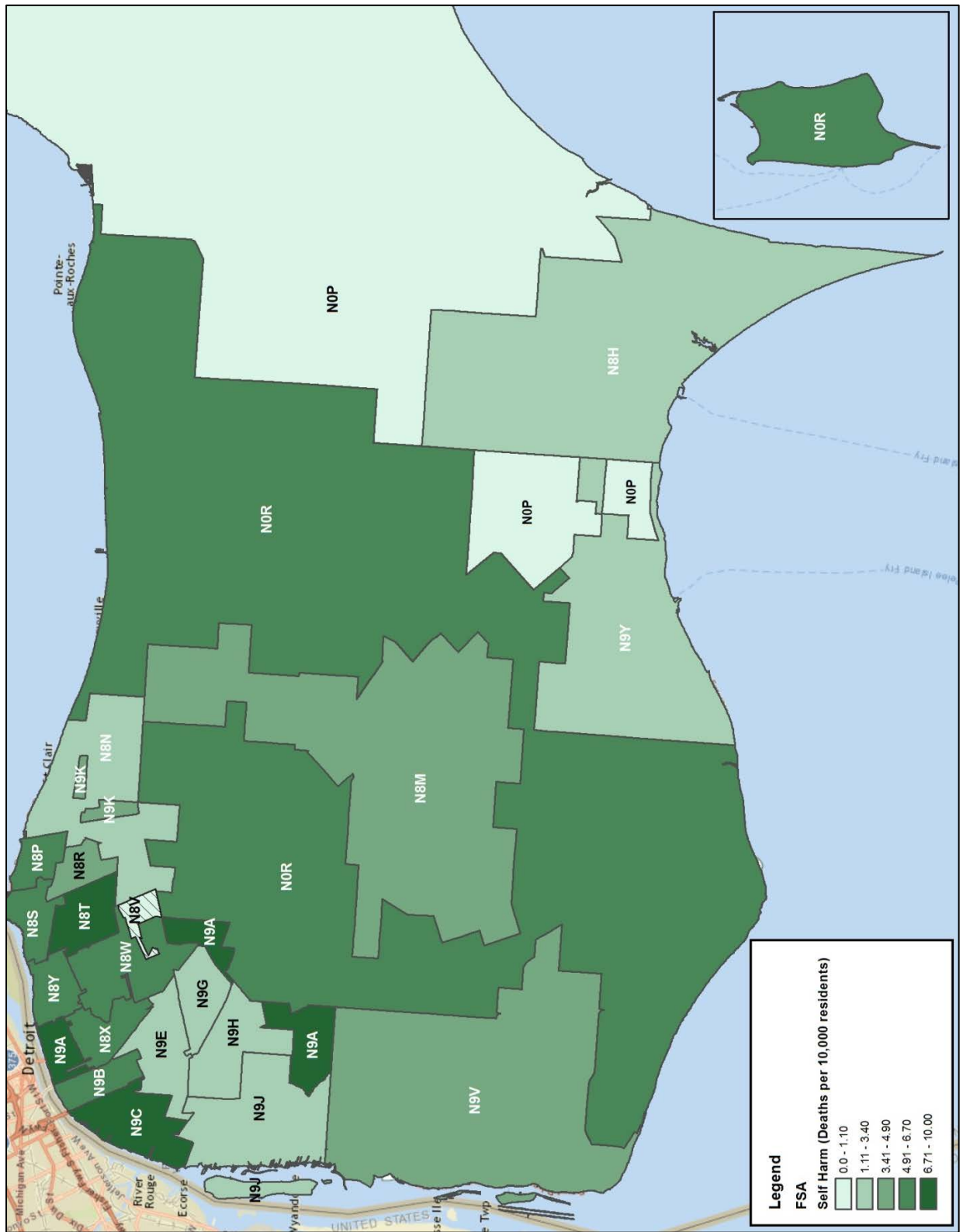
Source: Public Health Ontario. Snapshots: Windsor-Essex County Health Unit: Mortality due to intentional self-harm – age-standardized rate (both sexes combined) 2003-2011. Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 Mar 12 [cited 2016 May 6].

Figure 13. The age-specific rate (12-year average) for intentional self-harm mortalities in Windsor-Essex County, 2003-2011.



Source: Public Health Ontario. Snapshots: Windsor-Essex County Health Unit: Mortality due to intentional self-harm – age-specific rates 2003-2011. Toronto, ON: Ontario Agency for Health Protection and Promotion; 2014 Mar 12 [cited 2016 May 6].

Figure 14. Geographical distribution of the rate (per 10,000 population) of intentional self-harm mortalities in Windsor-Essex County, 2007-2011.



Source: Death [2007-2011], Ontario MOHLTC, IntelliHEALTH, Extracted: [Oct 22, 2015].

Causes of Intentional Self-Harm Injuries

The top ten leading causes of intentional self-harm for both ED visits (2014) and mortalities (2007-2011) are reported in **Table 3** for Windsor-Essex County. These causes are categorized according to the World Health Organization's 10th revision of the International Classification of Diseases (ICD10) codes. The following is a summary of the key findings related to the causes of intentional self-harm injuries in Windsor-Essex County:

- The primary cause of ED visits for intentional self-harm injuries is intentional self-poisoning with antiepileptic, sedative-hypnotic, anti-parkinsonism and psychotropic drugs not elsewhere classified. This type of self-poisoning resulted in 177 ED visits, accounting for 35% of intentional self-harm ED visits in Windsor-Essex County in 2014.
- Nearly 80% of self-harm ED visits in 2014 were caused by intentional self-poisoning and in almost all cases the poison was some form of medication.
- The leading cause of ED visits that was not a self-poisoning event was injury caused by a sharp object which accounted for 16% of ED visits for intentional self-harm in 2014.
- The leading cause of intentional self-harm mortality, by a wide margin, was self-harm by hanging, strangulation, or suffocation which accounted for 48% of self-harm mortalities between 2007 and 2011 in Windsor-Essex County.
- The next leading causes of mortality (2007-2011) were self-poisoning with gas or vapour (7% of self-harm mortalities) and self-harm by rifle, shotgun, or large firearm (7% of self-harm mortalities).
- Intentional self-poisoning with medications caused nearly 20% of self-harm mortalities between 2007 and 2011 in Windsor-Essex County.

Table 3. The top ten causes of emergency department visits (total from 2014) and mortalities (total from 2007-2011) due to intentional self-harm in Windsor-Essex County.

Rank	Cause of ED visits (ICD10 Code)	ED visits	Cause of Mortality (ICD10 Code)	Deaths
1	Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified (X61)	177	Intentional self-harm by hanging, strangulation and suffocation (X70)	100
2	Intentional self-poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics (X60)	86	Intentional self-poisoning by and exposure to other gases and vapours (X67)	14
3	Intentional self-harm by sharp object (X78)	79	Intentional self-harm by rifle, shotgun and larger firearm discharge (X73)	14
4	Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances (X64)	62	Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, anti-parkinsonism and psychotropic drugs, not elsewhere classified (X61)	12
5	Intentional self-poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified (X62)	27	Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances (X64)	11
6	Intentional self-poisoning by and exposure to other and unspecified chemicals and noxious substances (X69)	16	Intentional self-harm by drowning and submersion (X71)	11
7	Intentional self-harm by hanging, strangulation and suffocation (X70)	12	Intentional self-poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified (X62)	10
8	Intentional self-poisoning by and exposure to alcohol (X65)	12	Intentional self-harm by sharp object (X78)	7
9	Intentional self-poisoning by and exposure to other drugs acting on the autonomic nervous system (X63)	7	Intentional self-harm by other and unspecified firearm discharge (X74)	6

Rank	Cause of ED visits (ICD10 Code)	ED visits	Cause of Mortality (ICD10 Code)	Deaths
10	Intentional self-harm by other specified means (X83)	7	Intentional self-harm by jumping from a high place (X80)	5

Source: Ambulatory Emergency External Cause [2014], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [Oct 22, 2015]. Death [2007-2011], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [Oct 22, 2015].

Summary and Conclusions

Estimates for mental health and self-harm indicators in Windsor-Essex County were either better or similar to provincial estimates for the equivalent indicators. Poorer mental health and well-being among the Windsor-Essex County population was associated with age (adults aged 45-64 years old), low household income, and lower educational attainment. The rate of emergency department visits for intentional self-harm injuries was greatest among females and youth (10-19 years old); in fact, the rate among youth has increased by 143.2% since 2011. For intentional self-harm mortalities, males, older adults (45-64 years old), and residents of east, west, and downtown Windsor were disproportionately affected.

The assessment and surveillance findings detailed in this report – in combination with relevant OPHS requirements (OMHLTC, 2008) – were used to formulate recommendations to guide local public health strategies and initiatives involving mental health and intentional self-harm:

- The considerable increase in the rate of emergency department visits for intentional self-harm injuries among youth (10-19 years old) requires immediate priority action and warrants on-going assessment and surveillance.
- Self-harm reduction strategies should target residents from the City of Windsor who live in low income households and have lower educational attainment. Youth (10-19 years old) and older adults (45-64 years old) from these populations are at a higher risk.
- Enhance mental health literacy and awareness in the community, particularly among target populations. Residents should have access to mental health resources, including educational material, crisis help-lines, and other mental health supports.
- Support policies and initiatives that reduce and restrict access to the methods of intentional self-harm; restricting unnecessary access to medications, particularly among youth, should be a priority.
- Form active collaborations and partnerships with external organizations involved with self-harm reduction and mental health. Engagement with schools and workplaces regarding mental health and well-being initiatives would be an asset.
- Self-harm reduction strategies should implement activities that are clearly supported by scientific evidence. These activities should be evaluated regularly to determine their impact and to find opportunities for improvement.

The ultimate goal of these recommendations is to reduce the frequency, severity, and impact of preventable health issues related to mental well-being and intentional self-harm. Promoting positive mental health and preventing intentional self-harm injuries in the community will require a collaborative and comprehensive strategy.

References

Industrial Accident Prevention Association (IAPA). (2008). Stress & Satisfaction Offset Score (SSOS): A Self-Assessment [Click here to visit the Industrial Accident Prevention Association website for more information](#)

Ontario Ministry of Health and Long-Term Care (OMHLTC). (2008). Ontario Public Health Standards. Toronto, ON: Queen's Printer of Ontario.

Keyes, C. L. M. (2009). Atlanta: Brief description of the mental health continuum short form (MHC-SF). [Click here to review the mental health continuum short form](#)

