



# INTENTIONAL SELF-HARM 2007-2017 REPORT

WINDSOR-ESSEX COUNTY  
**HEALTH UNIT**

Department of  
Epidemiology and Evaluation



## Introduction

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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 specified by the *Health Promotion and Protection Act*. The roles and responsibilities of public health as it relates self-harm injuries are established in the OPHS under the Substance Use and Injury Prevention standard. The OPHS requirements for topics related to injuries resulting from intentional self-harm (suicide) are detailed below:

- The board of health shall collect and analyze relevant data to monitor trends over time, emerging trends, priorities, and health inequities related to injuries and substance use and report and disseminate the data and information in accordance with the Population Health Assessment and Surveillance Protocol, 2018 (or as current).
- The board of health shall develop and implement a program of public health interventions using a comprehensive health promotion approach that addresses risk and protective factors to reduce the burden of preventable injuries and substance use in the health unit population
  - The program of public health interventions shall be informed by an assessment of the risk and protective factors for, and distribution of, injuries and substance use

The aim of this report is to update our understanding of intentional self-harm in Windsor-Essex County using hospitalization and mortality indicators. The analyses of this report will describe the current and emerging trends while highlighting priority populations disproportionately affected by this outcome of poor mental health. The information provided by this report is intended to continue informing the decision-making processes of new or existing programs in the community.

## Methods: Indicators and Data Sources

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**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 Ontario (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-Y09, Y870, Y871) in Windsor-Essex County (2003-2017) 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, Y870, Y871) in Windsor-Essex County (2003-2012) were extracted from this database and presented in this report (note: there is a greater data lag for mortality data). *Preliminary mortality data from 2013 to 2016 was provided by the Ontario Coroners Office.*

**Canadian Census and Population Estimates:** Statistics Canada conducts the Census of population for sociodemographic data every five years. This data source contains a variety of information such as age and sex distribution, education, families/ household and marital status, income, labour, ethnocultural diversity and more. Statistics Canada calculate population estimates using Census and other data sources to account for the number of people missed or counted more than once during the Census. IntelliHEALTH distributes Population Estimates data by year, geography (local health integration network, public health unit, municipality) and age/sex. Rates were calculated using population estimates as the denominator and standardized using the 2011 Canadian population.

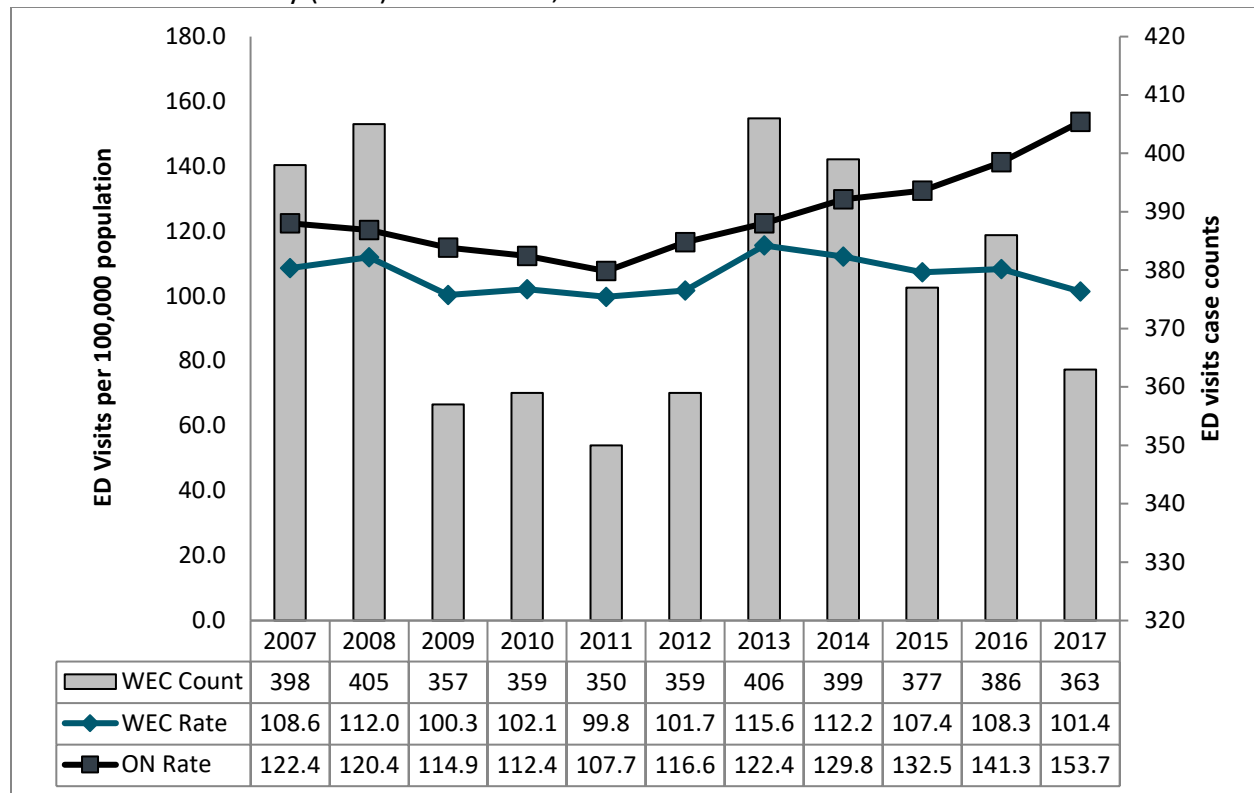
## Intentional Self-Harm

### 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 between 2007 and 2017 are reported in **Figure 1** for Windsor-Essex County (WEC) and Ontario. From 2007 to 2011, the rate of self-harm ED visits declined by 8.1% in WEC and 12.0% in Ontario. However, from 2012 to 2017 there was a rebound in the rate of self-harm ED visits with a 31.8% increase in Ontario.

In 2013, the rate of self-harm ED visits was at a 6-year high in Windsor-Essex County. Ontario's intentional self-harm emergency room visits continued to increase in 2017 while the rate in WEC returned to levels similar to 2012. The rate of ED visits for intentional-self harm was statistically lower than the provincial rate in 2007, 2009, 2012, 2014, 2015, 2016 and 2017 (no statistical difference for all other years).

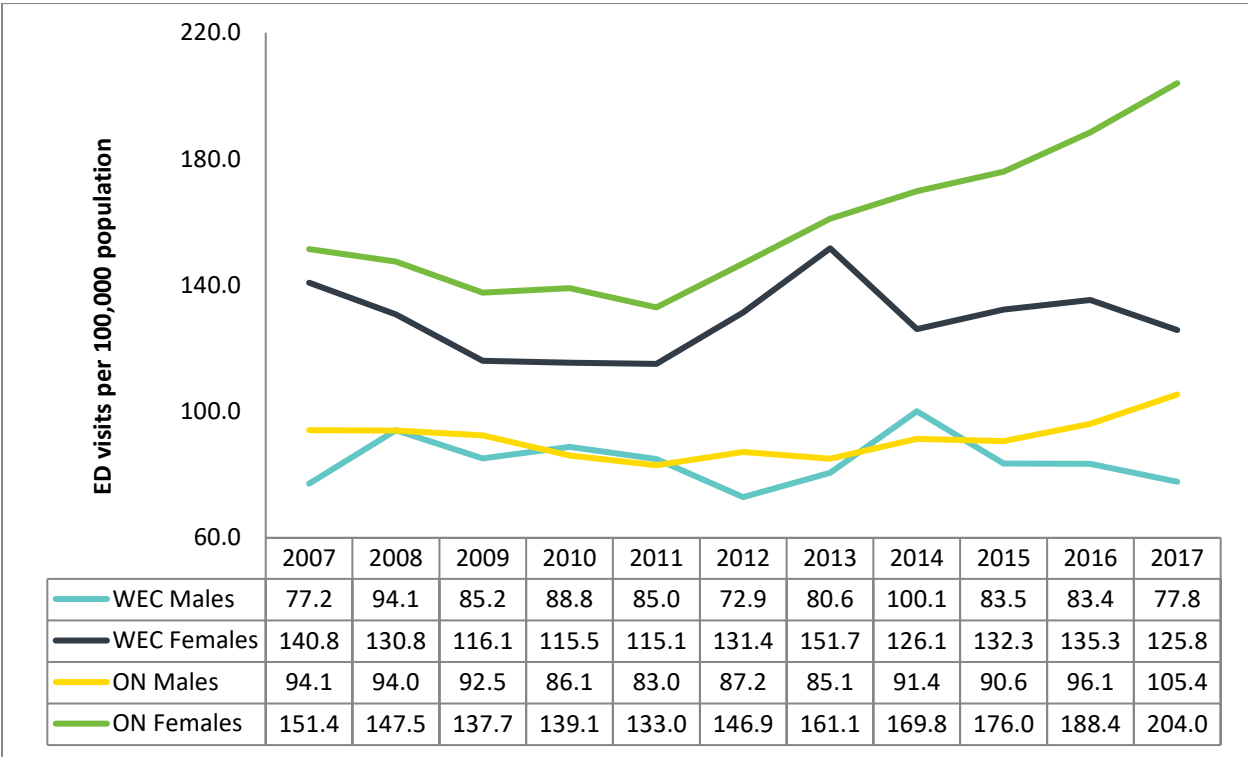
**Figure 1.** The total number (count) and the age-standardized rate of emergency department (ED) visits for intentional self-harm injuries for the population (10 years old and over) of Windsor-Essex County (WEC) and Ontario, 2007-2017.



**Source:** Ontario Agency for Health Protection (Public Health Ontario). Snapshots: Windsor-Essex County Health Unit: Emergency department visits for injuries due intentional self-harm - age standardized rate (both sexes combined) 2007-2016 [Internet]. Toronto, ON: Queen's Printer for Ontario; c2018 [updated 2018 Mar 29; cited 2018 Aug 13]; Ambulatory Emergency External Cause [2017], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [20 August 2018].

There were differences in ED visits for self-harm according to sex and age groups. When examining the average number of ED visits for intentional self-harm injuries in Windsor-Essex County between 2007 and 2017, 60.2% of visits were women and 39.8% were men. Self-harm ED visit rates in Windsor-Essex County were on average 53.1% higher among women than men annually **Figure 2**. Intentional self-harm ED visit rates in women across Ontario have increased by 38.9% between 2012 and 2017. Rates among women who reside in WEC have fluctuated between 2007 and 2017.

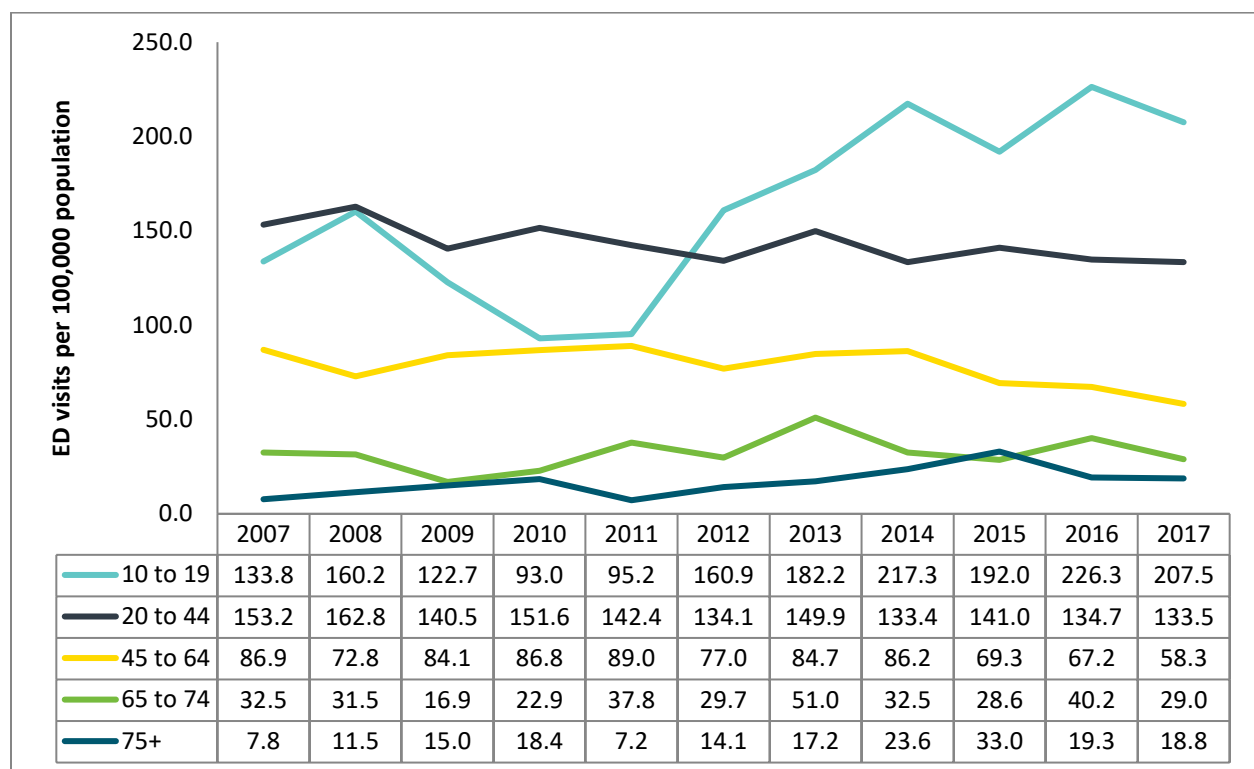
**Figure 2.** Age-standardized sex-specific rate of emergency department (ED) visits for intentional self-harm injuries for the population (10 years old and over) of Windsor-Essex County (WEC) and Ontario, 2003-2016.



**Source:** Ontario Agency for Health Protection (Public Health Ontario). Snapshots: Windsor-Essex County Health Unit: Emergency department visits for injuries due intentional self-harm - age standardized rate (males and females) 2003-2016 [Internet]. Toronto, ON: Queen’s Printer for Ontario; c2018 [updated 2018 Mar 29; cited 2018 Aug 13]; Ambulatory Emergency External Cause [2017], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [20 August 2018].

There are also differences by age groups; the age-specific rates of ED visits for intentional-self harm injuries are reported in **Figure 3** for the Windsor-Essex County population (2007-2017). During this time period, this rate has steadily decreased by 12.9% for adults (20-44 years old). The rate also decreased by 28.8% for youth (10-19 years old) from 2007 to 2011, but in 2012 there was a 69.0% increase from the previous year. Between 2012 to 2017, there was an increase of 29.0% in the rate of ED visits for intentional self-harm among the youth population of Windsor-Essex County (that is, the rate was 1.3-times greater in 2017 compared to 2012). From 2012 to 2017 rates among middle-age adults (45-64 years old) has decreased by 24.3%. The rate of ED visits for intentional self-harm among seniors ( $\geq 75$  years old) decreased in 2017 following an increase in 2015 from 33.0 to 18.8 visits per 100,000 population.

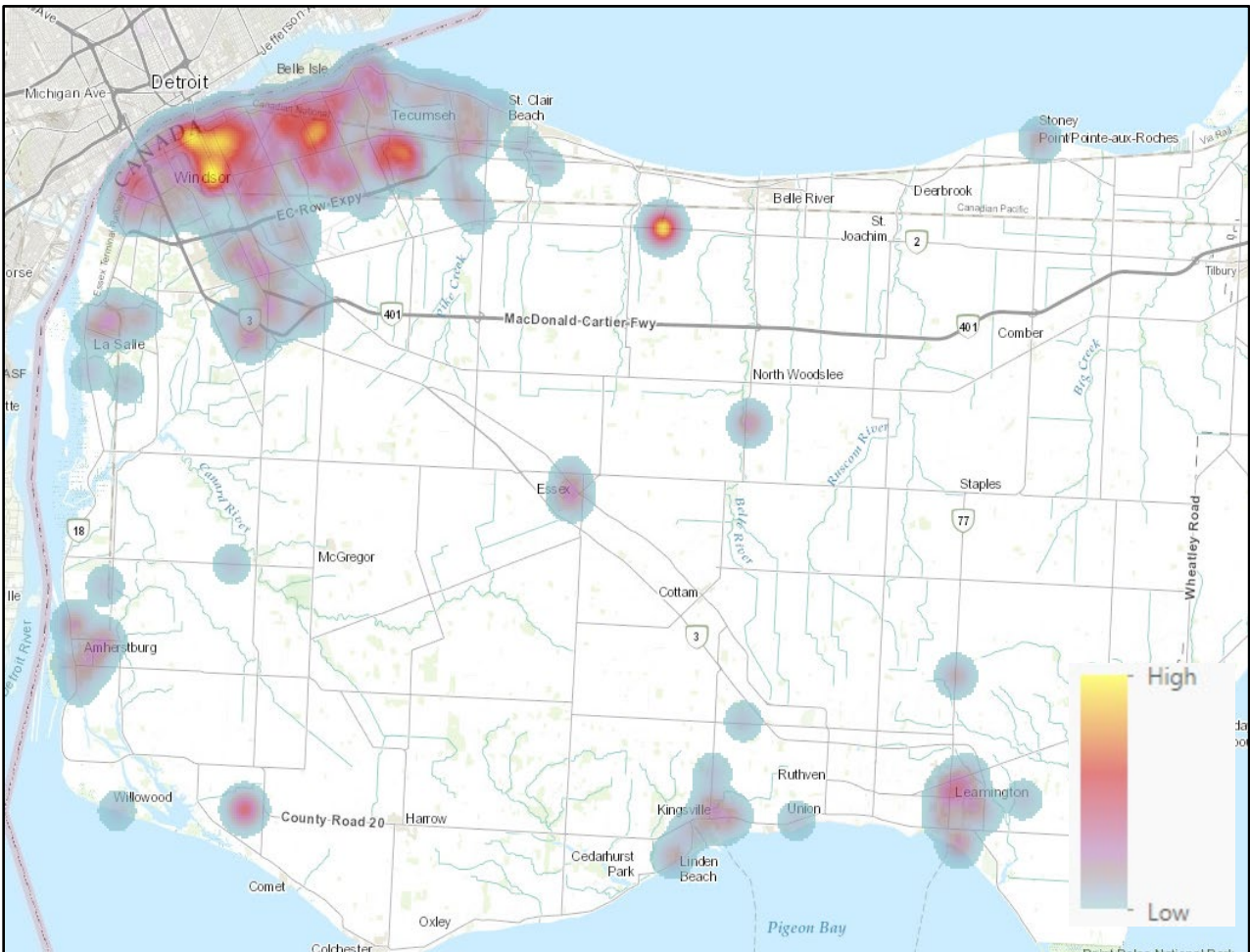
**Figure 3.** The age-specific rates of emergency department (ED) visits for intentional self-harm injuries in Windsor-Essex County, 2007-2017.



**Source:** Ontario Agency for Health Protection (Public Health Ontario). Snapshots: Windsor-Essex County Health Unit: Emergency department visits for injuries due intentional self— age-specific rates 2003-2016 [Internet]. Toronto, ON: Queen’s Printer for Ontario; c2018 [updated 2018 Mar 29; cited 2018 Aug 13]; Ambulatory Emergency External Cause [2017], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [20 August 2018].

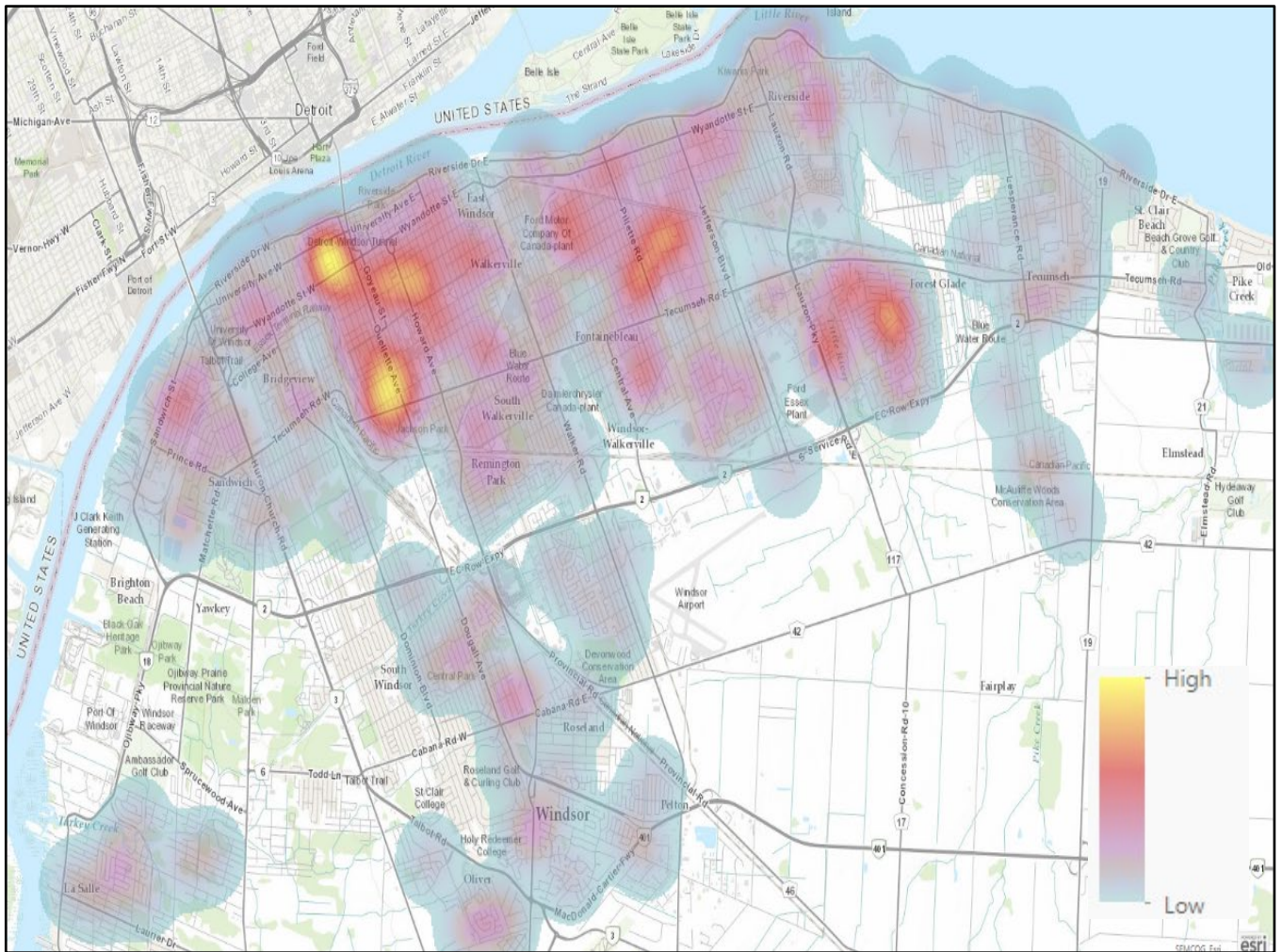
The postal codes of the residence of patients who visited the ED for intentional self-harm injuries were mapped for Windsor-Essex County (Figure 4) and the City of Windsor (Figure 5). When looking at the county-wide distribution of patients' residence, there are defined clusters within each urban centre, including Amherstburg, Emeryville, Essex, Kingsville, Leamington, and Windsor. The majority of patients of self-harm injuries reside in Windsor, particular in downtown (intersections of Ouellette Ave and Wyandotte Street along with Tecumseh Road). Also, neighbourhoods East of Lauzon Parkway along the E.C. row Expressway and areas between Jefferson Boulevard and Pillette Road displayed higher density of self-harm injuries. The communities impacted by intentional self-harm injuries are appearing to expand past the downtown core and to eastern areas in the City of Windsor compared to 2015.

**Figure 4.** Distribution of patients (≥10 years old) by postal code of residence who visited the emergency department for an intentional self-harm injury Windsor-Essex County, 2017



**Source:** Ambulatory Emergency External Cause [2017], Ontario Ministry of Health and LongTerm Care, IntelliHEALTH ONTARIO, Date Extracted: [14 Sept 2018]

**Figure 5.** Distribution of patients ( $\geq 10$  years old) by postal code of residence who visited the emergency department for an intentional self-harm injury in City of Windsor, 2017



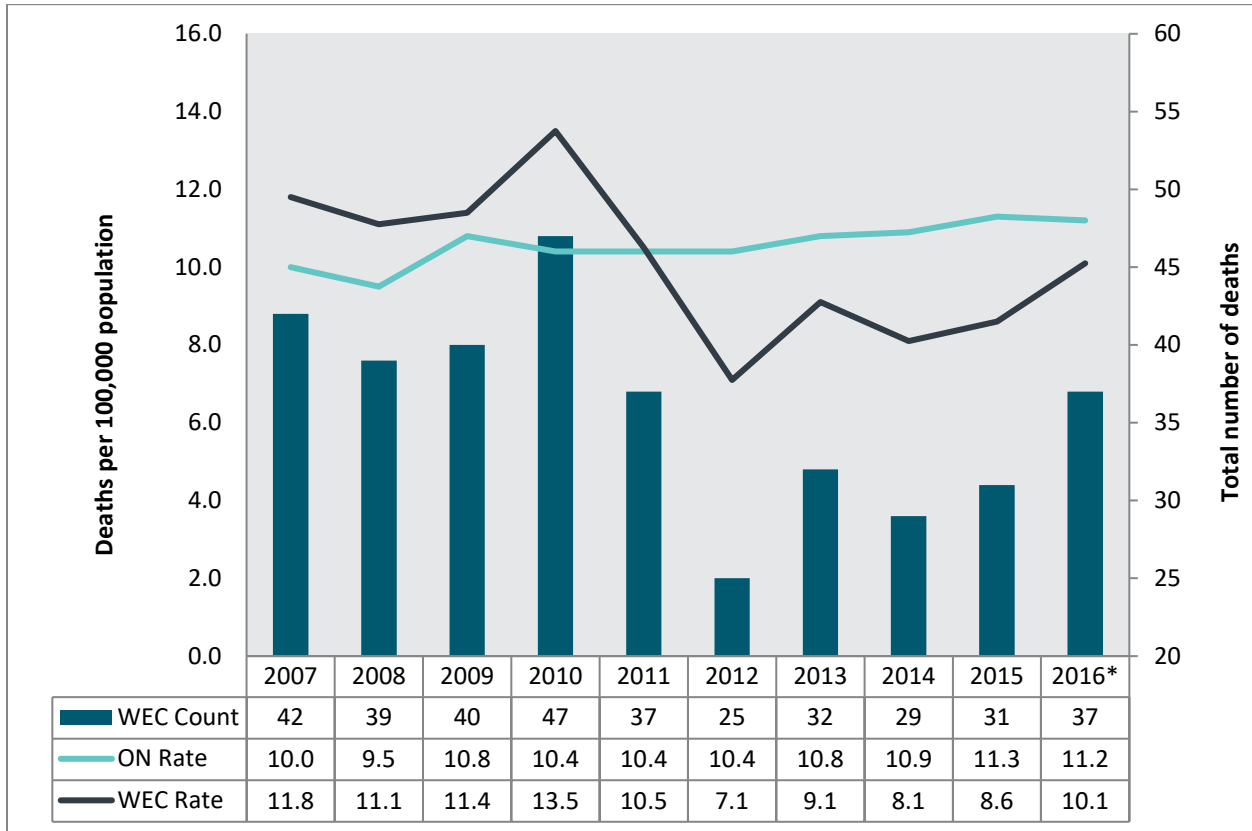
**Source:** Ambulatory Emergency External Cause [2017], Ontario Ministry of Health and LongTerm Care, IntelliHEALTH ONTARIO, Date Extracted: [14 Sept 2018]



## **Mortalities due to Intentional Self-Harm Injuries**

The total number and rate of intentional self-harm mortalities is reported in **Figure 6** for Windsor-Essex County and Ontario (2007-2016). The rate of intentional self-harm deaths has remained relatively unchanged in Ontario during this period. In 2010, WEC experienced a 4-year high in self-harm mortality with 47 cases. Although there was a decrease in self-harm mortality from 2011 to 2012 in WEC, the number of cases increased from 2013 to 2016. Preliminary data from the Coroner's Office show that in 2016 there were 37 deaths caused by intentional self-harm in Windsor-Essex County. Residents who died due to intentional self-harm between 2007 and 2016 were predominantly men; the mortality rate was on average 3.3-times greater in men compared to women (**Figure 7**). In 2017, 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 8**); in fact, the rate was 4.1-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 from 2007 to 2016 is reported in **Figure 5** and is displayed in **Figure 8**. The rate was greatest in the N9K, N9A and N8Y forward sortation areas, covering downtown Windsor and the border between Windsor and Tecumseh.

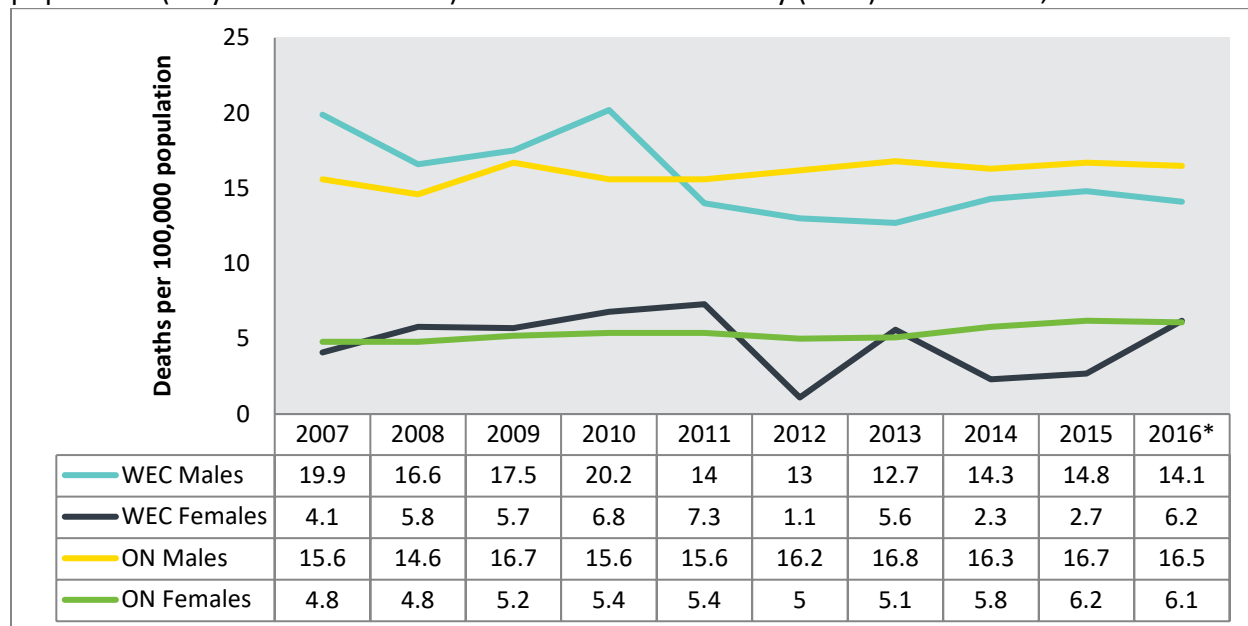
**Figure 6.** The total number (count) and the age-standardized rate of intentional self-harm mortalities for the population (10 years old and over) of Windsor-Essex County (WEC) and Ontario, 2007-2016.



**Source:** Office of the Chief Coroner & Ontario Forensic Pathology Service. Suicide deaths 2007 to 2016 [received 2018 Aug 24].

\* Preliminary data, which are subject to change once the statistical year has been completed

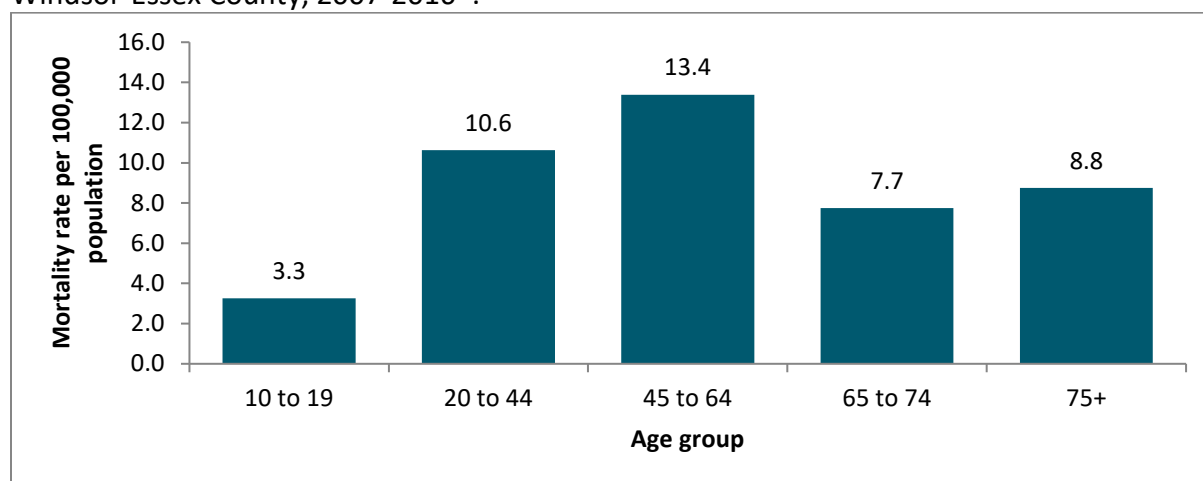
**Figure 7.** Age-standardized sex-specific mortality for intentional self-harm injuries for the population (10 years old and over) of Windsor-Essex County (WEC) and Ontario, 2007-2016.



**Source:** Office of the Chief Coroner & Ontario Forensic Pathology Service. Suicide deaths 2007 to 2016 [received 2018 Aug 24].

\* Preliminary data, which are subject to change once the statistical year has been completed

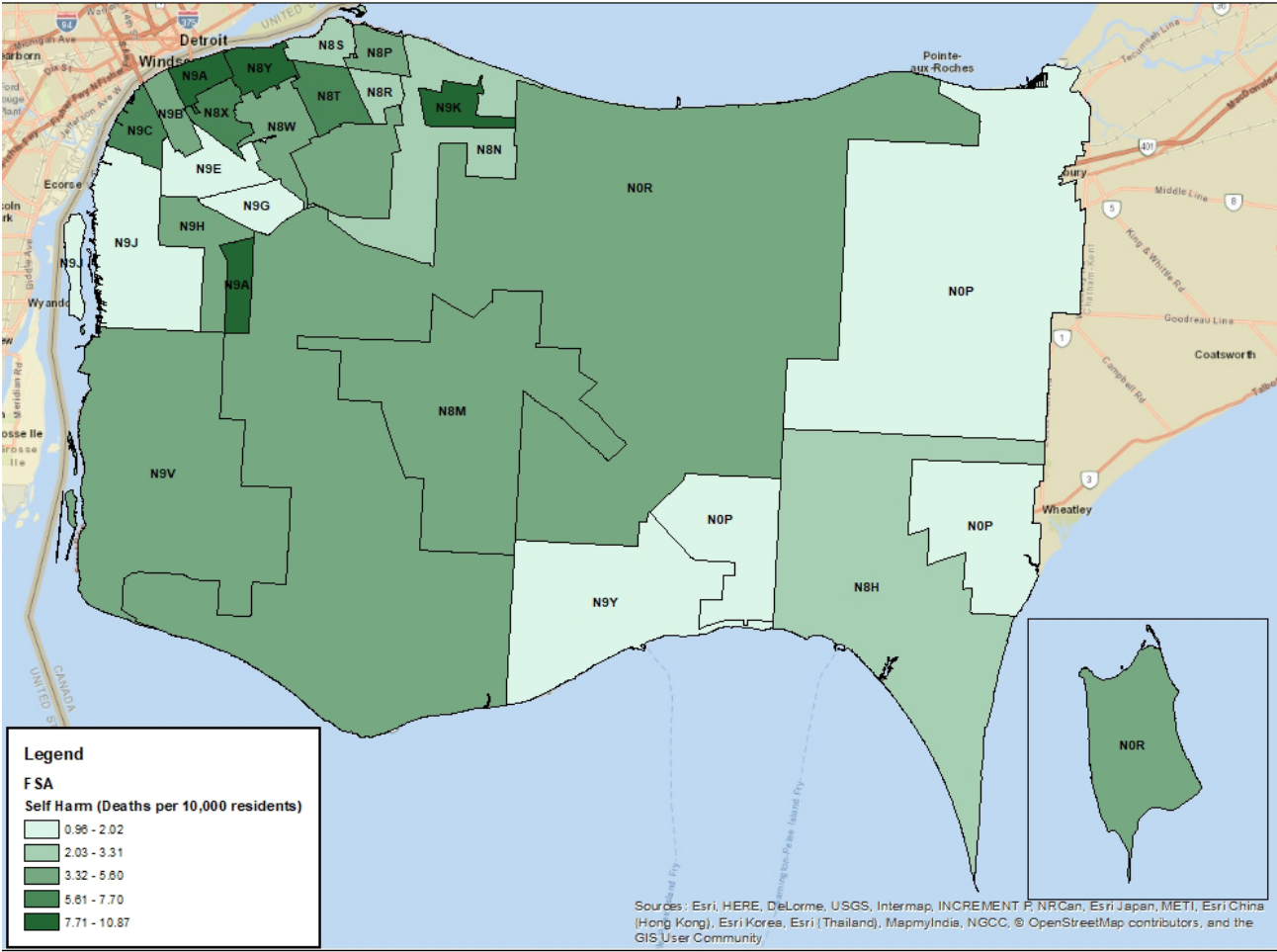
**Figure 8.** The age-specific rate (10-year average) for intentional self-harm mortalities in Windsor-Essex County, 2007-2016\*.



**Source:** Office of the Chief Coroner & Ontario Forensic Pathology Service. Suicide deaths 2007 to 2016 [received 2018 Aug 24].

\* Data for 2016 is preliminary, which are subject to change once the statistical year has been completed

**Figure 9.** Geographical distribution of the rate (per 10,000 population) of intentional self-harm mortalities in Windsor-Essex County, 2008-2012



**Source:** Deaths [2008-2012], Ontario MOHLTC, IntelliHEALTH, Extracted: [Sep 14, 2018].

## Causes of Intentional Self-Harm Injuries

The top ten leading causes of intentional self-harm for both ED visits (2017) and mortalities (2007-2012) are reported in **Table 1** for Windsor-Essex County. These causes are categorized according to the World Health Organization's 10<sup>th</sup> 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 169 ED visits, accounting for 36.9% of intentional self-harm ED visit diagnoses in Windsor-Essex County in 2017. The cause of these ED visits were similar across age and sex.
- In 2017, 319 (70.7%) cases of self-harm of ED visits were caused by intentional self-poisoning with 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 16.8% of ED visits for intentional self-harm in 2017.
- The leading cause of intentional self-harm mortality, by a wide margin, was self-harm by hanging, strangulation, or suffocation, which accounted for 46.5% of self-harm mortalities between 2007 and 2012 in Windsor-Essex County.
- The next leading causes of mortality (2007-2012) were self-poisoning with gas or vapour (7.8% of self-harm mortalities) followed by self-harm by rifle, shotgun, or large firearm (6.5% of self-harm mortalities).
- Intentional self-poisoning with medications caused nearly 20% of self-harm mortalities between 2007 and 2012 in Windsor-Essex County.

**Table 1.** The top ten causes of emergency department visits (total from 2017) and mortalities (total from 2007-2012) 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, anti-parkinsonism and psychotropic drugs, not elsewhere classified (X61)	169	Intentional self-harm by hanging, strangulation and suffocation (X70)	107
2	Intentional self-harm by sharp object (X78)	76	Intentional self-poisoning by and exposure to other gases and vapours (X67)	18
3	Intentional self-poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics (X60)	74	Intentional self-harm by rifle, shotgun and larger firearm discharge (X73)	15
4	Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances (X64)	45	Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, anti-parkinsonism and psychotropic drugs, not elsewhere classified (X61)	14
5	Intentional self-poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified (X62)	31	Intentional self-poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified (X62)	13
6	Intentional self-poisoning by and exposure to other and unspecified chemicals and noxious substances (X69)	14	Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances (X64)	12
7	Intentional self-harm by other specified means: caustic substances, crashing of aircraft, electrocution (X83)	17	Intentional self-harm by drowning and submersion (X71)	11
8	Intentional self-poisoning by and exposure to alcohol (X65)	12	Intentional self-harm by sharp object (X78)	9
9	Intentional self-harm by hanging, strangulation and suffocation (X70)	10	Intentional self-harm by jumping from a high place (X80)	7
10	Intentional self-poisoning by and exposure to other drugs acting on the autonomic nervous system (X63)	5	Intentional self-harm by other and unspecified firearm discharge (X74)	6

**Source:** Ambulatory Emergency External Cause [2017], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [20 August 2018]. Death [2007-2012], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [Sep 14, 2018].

## Summary and Conclusions

Estimates for intentional self-harm indicators in Windsor-Essex County were either lower or similar to provincial estimates for the same indicator. The rate of emergency department visits continues to be highest among females compared to males. Between 2012 and 2017, the rate of emergency department visits for all age groups remained consistent except for the 29.0% increase in this rate among youth (10 to 19 years old) in Windsor-Essex County. The primary cause (70.7%) of ED visits in 2017 for intentional self-harm injuries are intentional self-poisoning with some form of medication. The most common type of self-poisoning resulted in 169 ED visits (36.9%) was a result of poisoning with antiepileptic, sedative-hypnotic, anti-parkinsonism, or psychotropic drug.

Self-harm mortality rate was lower in WEC compared to Ontario. Males experienced a higher rate compared to females. Self-harm mortality is most frequent among individuals between the ages of 20 and 64. The leading cause of intentional self-harm mortality was self-harm by hanging, strangulation, or suffocation accounting for 46.5% of self-harm mortalities between 2007 and 2012 in Windsor-Essex County.



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