Suicide Mortality in Ontario

September 10th is World Suicide Prevention Day

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Analysis and discussion of injury issues in the province

Understanding the Issue

Suicide is a complex issue with many possible determinants.

For the purposes of reporting, suicide is defined as "the act of deliberately killing oneself."[1] As evidenced by the most recent mortality data, suicide is a significant public health issue in Ontario and across the globe. This Ontario Injury Compass highlights risk factors for suicide, as well as leading prevention strategies to address this injury issue.

Note: Suicide and self-harm/self-injury are often grouped together as a single category. This report intentionally addresses suicide as its own issue. Please note the exception of Figure 2, which shows combined suicide and self-harm data. This data was included because it is important to view trends over time, but such data for suicide alone was not available.

Risk Factors

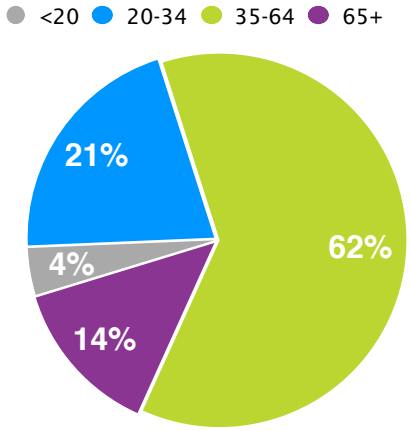
Age

Age is a risk factor for suicide. As Figure 1 shows, in 2006/07 the greatest number of deaths due to suicide in Ontario occurred among adults aged 35-64 (40%). In terms of number of deaths, this group is followed by 20-34-year-olds (21%), adults over 65 years (14%), and youth under 20 years (4%).

Sex

Males are more likely than females to die by suicide. In 2006/07, males accounted for 839 of 1,107 deaths (76%) due to suicide in Ontario, as illustrated in Table 1. This is consistent with national data, which indicates males are 3 to 4 times more likely to die by suicide than females. It should be noted that females are hospitalized for suicide attempts at a rate higher than males.[2]

FIGURE 1. Deaths due to Suicide (Including Poisoning), by age group, DDS, Ontario, 2006/07



Method of suicide also differs by sex. In 2006/07, the top three methods of suicide death for males were hanging, drug and alcohol, and asphyxia. For females, the top three methods were drug and alcohol, hanging, and jumping (Table 1).

Other Risk Factors

Other prominent risk factors for suicide include:

- Presence of a mental illness (particularly mood disorders)
- Previous suicide attempt(s)
- Access to lethal means, such as firearms, medications and structures (buildings, railways and bridges)
- Drug and alcohol abuse
- Hopelessness
- Family history of suicide[3]

Trends

In Ontario, deaths due to suicide have remained stable in recent years.

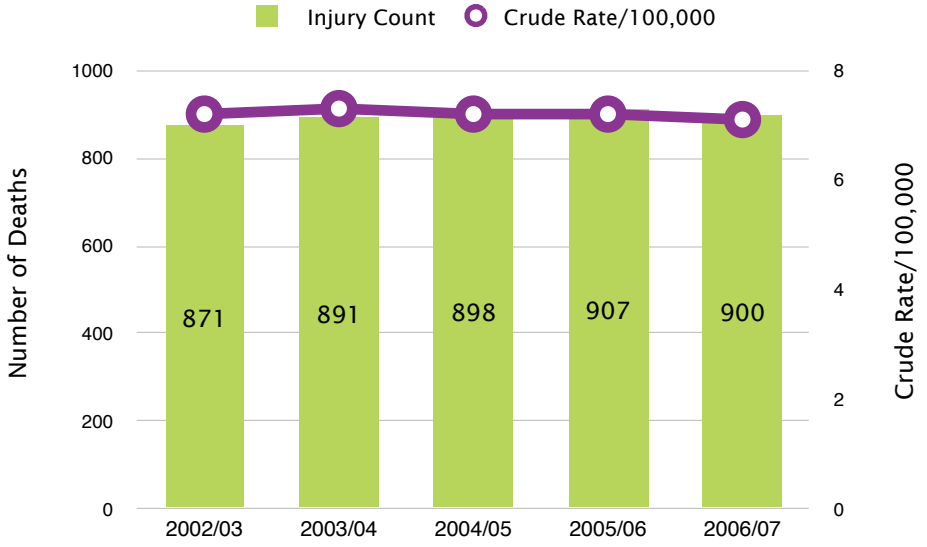
Considering the time period between 2002/03 and 2006/07, the trend for suicide-related deaths in Ontario appears to be stable, as illustrated in Figure 2. This trend emphasizes that continued prevention efforts are needed.

TABLE 1. Deaths Due to Suicide (Including Poisoning), by sex and suicide method, DDS, Ontario, 2006/07

Suicide Method	Female	Male	Total	Percent
Hanging	78	321	399	36
Drug and Alcohol	104	103	207	19
Asphyxia	12	95	107	10
Jumping	29	74	103	9
Collision - MVC/Pedestrian/Train	11	38	49	4
Cuts and Stabs	10	34	44	4
Drowning	11	24	35	3
Other*	13	150	163	15
Total	268	839	1,107	100

**Includes methods such as shooting, poisoning and blunt force.*

FIGURE 2. Deaths due to Suicide and Self-Inflicted Injury (Excluding Poisoning), all ages, DDS, Ontario, 2002/03 - 2006/07



Leading Prevention Strategies

Identified effective strategies for suicide prevention are described below. However, suicide is a complex issue and its prevention requires a multi-faceted approach. For more detail, please see the OIPRC's *Evidence Informed Practice Recommendations* (pp.45-54): www.oninjuryresources.ca/publications/item/evidence-informed-practice-recommendations. Also see WHO's global report, *Preventing suicide: A global imperative*: www.who.int/mental_health/suicide-prevention/world_report_2014/en/.

Identifying and Supporting Individuals with Previous Suicide Attempts

Individuals who have attempted suicide are at high risk for attempting again. Therefore, regular follow-up is effective as a low-cost intervention requiring relatively few resources.[1] Aspects of follow-up may include connecting the individual with mental health care, removing lethal means, and maintaining regular contact through phone calls, postcards, and/or in-home visits.[3]

Reducing Access to Lethal Means

Reducing or restricting access to lethal means may be effective in preventing suicide. Priorities for restricting access will be community-specific, based on the methods of suicide or attempted suicide that are common locally. Strategies to reduce access include regulations related to firearm ownership and storage, prescription drug policies, and structural interventions on bridges, buildings and railways.[1,3]

Improved Treatment of Mental Illness

Educating and training medical professionals to recognize mental illness, identify risk factors for suicide and to intervene with patients in crisis can reduce suicide attempts and improve treatment of depression.[3]

Improving access to care by addressing health literacy is another strategy for improving treatment. Important aspects to address include clear messaging about what services are available, plain-language communication of health information by care providers, and clear pathways for patients to navigate the health system.[1]

Gatekeeper Training

In addition to medical professionals, there is value in training other community gatekeepers (e.g. teachers, police officers, religious leaders) to recognize mental illness and suicide risk, and to communicate with vulnerable individuals effectively.[3]

World Suicide Prevention Day

September 10th is World Suicide Prevention Day, organized by the International Association for Suicide Prevention. Find resources on their website: www.iasp.info/wspd. Also visit the Ontario Association for Suicide Prevention website: www.ospn.ca.

Methodology

Death data were obtained from the Ontario Trauma Registry's Ontario Death Data Set (DDS) at the Canadian Institute for Health Information (CIHI) for fiscal year (April 1 - March 31) 2006/07. Data and analysis were provided via the *OTR Ontario Death Data Set 2006-2007 report*. The International Statistical Classification of Disease and Related Health Problems, 10th Revision (ICD-10) is an international standard for classifying diseases and external cause of injury. ICD-10 coding was used to isolate deaths related to suicide and self-harm (X60 - X84).

References

1. World Health Organization. (2014). *Preventing suicide: A global imperative*. Geneva: WHO Press.
2. Wilson, M.G. & Gauvin, F.P. (2012). Evidence Brief: Preventing Suicide in Canada. Hamilton: McMaster Health Forum.
3. Ontario Injury Prevention Resource Centre. (2014). *Ontario Injury Data Report: Evidence Informed Practice Recommendations*. Toronto: Parachute.

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