TORONTO

STAFF REPORT
ACTION REQUIRED

Suicide Prevention in Toronto

Date:	October 30, 2014
To:	Board of Health
From:	Medical Officer of Health
Wards:	All
Reference Number:	

SUMMARY

Suicide resulted in 243 deaths in Toronto in 2009, which is more than four times the number of people who died from homicide, and three times the number who died from motor vehicle crashes.[1] Suicide is the tip of the iceberg in a continuum of suicide-related behaviours, including self-harm, suicidal ideation and suicide attempts, which contribute to the burden of suicide. Suicide not only results in loss of life but also impacts survivors, family, friends and observers. Yet, despite agreement that suicide is a problem in society, it has received comparably low levels of attention as a public health issue. Suicide remains one of the most important and least talked about population health issues.

This report reviews available evidence on suicide in Toronto, including a review of published evidence, analysis of administrative and Coroner's data on deaths by suicide in Toronto, a jurisdictional review of suicide prevention strategies from across Canada and worldwide, a scan of federal and Ontario suicide prevention policies, and identified gaps and opportunities for suicide prevention initiatives in Toronto. A panel of external advisors, including researchers, clinicians and community experts, provided strategic and directional advice and helped to identify areas for action, key recommendations and gaps in knowledge.

Based on this review this report provides recommendations for suicide prevention in Toronto. There is strong evidence that restricting access to the most common means of suicide death, such as subway tracks and certain medications, is effective in preventing suicides.[2] Other effective suicide prevention interventions include media reporting guidelines, public awareness and education, gatekeeper training, and community and school-based prevention programs. Many efforts need to be part of the solution; no one intervention will be effective on its own to reduce the overall burden of suicide in Toronto.

HELP IS AVAILABLE

If you or someone you know may be experiencing signs of suicide risk, seek help as soon as possible. There is always help available. You are not alone.

Crisis Lines (24/7)

Toronto Distress Centre: 416-408-HELP (4357)

Gerstein Centre: 416-929-5200

If you are in crisis and require emergency assistance, please go to the nearest hospital or call 911.

RECOMMENDATIONS

The Medical Officer of Health recommends that:

1. City Council direct and provide funding to the Toronto Transit Commission to implement the following actions, to improve passenger safety including suicide prevention:

    a. All future extensions or new lines include Platform Edge Doors in the design of stations; and

    b. Retrofit existing stations with Platform Edge Doors to realize significant benefits from the completion of the automatic train control upgrade to the signal system.

2. City Council direct the Chief of Toronto Police Services, Chief/General Manager of Fire Services, and Chief of Toronto Paramedic Services, in consultation with the Medical Officer of Health, to implement and enhance services and supports to prevent suicide among first responders, including but not limited to building awareness and reducing stigma of mental illness and help-seeking for Post-Traumatic Stress Disorder.

3. City Council direct the City Manager, in collaboration with the Medical Officer of Health, to develop a multi-component Suicide Prevention Plan for Municipal Services.

4. The Medical Officer of Health, in collaboration with a major Toronto media outlet, hold a forum for journalists on best practices in media reporting on suicide.

5. The Medical Officer of Health develop and implement a public awareness campaign that focuses on reducing stigma related to risk factors of suicide and increasing knowledge about resources available for support and intervention. The campaign

should include collaboration with health care experts, community agencies and other stakeholders.

6. The five Toronto Local Health Integration Networks (LHINs) responsible for Toronto, in collaboration with health care regulatory and professional associations, fund and mandate evidence-based and culturally competent gatekeeper training for health providers who work with at-risk and high risk individuals for suicide in Toronto.

7. The Chief Coroner for Ontario implement the following actions:

    a. Provide more timely and accessible information regarding suicide deaths in Toronto, including systematic collection of a broader range of socio-demographic indicators (e.g. income, race, ethnicity, language, sexual orientation, occupation) to identify populations at risk for suicide; and

    b. Explore a multidisciplinary approach to suicide death investigations in Toronto, in collaboration with public health professionals, to identify further opportunities for suicide prevention.

8. Health Canada and the National Association of Pharmacy Regulatory Authorities restrict the availability of over-the-counter drugs commonly used in overdose, such as requiring blister packaging and placing specific drugs behind the pharmacy counter.

9. Accreditation Canada enhance suicide prevention standards and practice guidelines for healthcare institutions providing mental health services to include the following:

    a. Ensure design and operating policies reduce or eliminate access to lethal means and ensure appropriate staffing levels and training to prevent suicide attempts; and

    b. Ensure that suicide prevention resources and services are provided, particularly in the post-discharge period, for specific populations known to be at very high risk for suicide, including people diagnosed with mental disorders.

10. The Canadian Institutes of Health Research, Knowledge Translation Branch fund research to address gaps in knowledge related to suicide, including, means restriction and other effective preventative interventions for suicide by hanging, the role and impact of the Internet on suicide-related behaviour, and effective interventions.

11. This report be forwarded to the four Toronto School Boards and Toronto's universities and colleges to encourage them to build on existing efforts to prevent and reduce risk for suicide and promote mental health among children, youth and young adults.

12. This report be forwarded to the Chief Public Health Officer of Canada, the Chief Medical Officer of Health of Ontario, Ontario Minister of Children and Youth Services, Mental Health Commission of Canada, Canadian Mental Health Association, Canadian Association for Suicide Prevention, College of Physicians and Surgeons of Ontario, College of Nurses of Ontario, Ontario Medical Association and the Registered Nurses Association of Ontario.

Financial Impact

There is no financial impact beyond what has already been approved in the current year's budget.

EQUITY IMPACT STATEMENT

Suicide prevention is a health equity issue. There are risk determinants and health inequities that expose certain groups to multiple factors that elevate suicide risk. Population groups such as youth, LGBTQ communities, Aboriginal people, and socio-economically disadvantaged populations may be disproportionately impacted by suicide. Suicide prevention recommendations include both universal and targeted approaches to reduce suicide and promote mental health amongst at-risk groups as well as the whole population.

DECISION HISTORY

On April 6, 1999, the Board of Health endorsed recommendations on suicide prevention including addressing means restriction, developing a system of mental health services for Toronto, and preventing mental illness though the provision of specialized mental health nursing services and programs and policies related to the determinants of health. http://www.toronto.ca/legdocs/1999/agendas/committees/hl/hl990406/agenda.htm

On May 7, 2013, City Council adopted *The Toronto Seniors Strategy,* which laid out concrete and implementable actions to serve an aging population. One recommendation (#13) is that the City of Toronto will address the specific needs of vulnerable older adults, which included the short-term action that "City of Toronto Agencies, Boards, Corporations and Divisions will collaborate on a suicide prevention initiative, including older adults as well as other priority populations." Toronto Public Health has primary responsibility for this action, and a report on a suicide prevention initiative is the progress measure. http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.CD20.1

ISSUE BACKGROUND

Ontario Public Health Standards (OPHS) mandate public health units in Ontario to protect and promote the health of the population.[3] The OPHS Injury Prevention Guidance Document includes suicide prevention as an area of public health importance and provides direction on health promotion, policy development, assessment and surveillance.

TPH produced a detailed technical report, *Suicide Prevention in Toronto* (Attachment 1). To guide this work, TPH chaired an advisory group consisting of researchers, clinicians and community experts. The advisory group shared their expertise and provided strategic and directional advice including feedback on the technical report and recommendations.

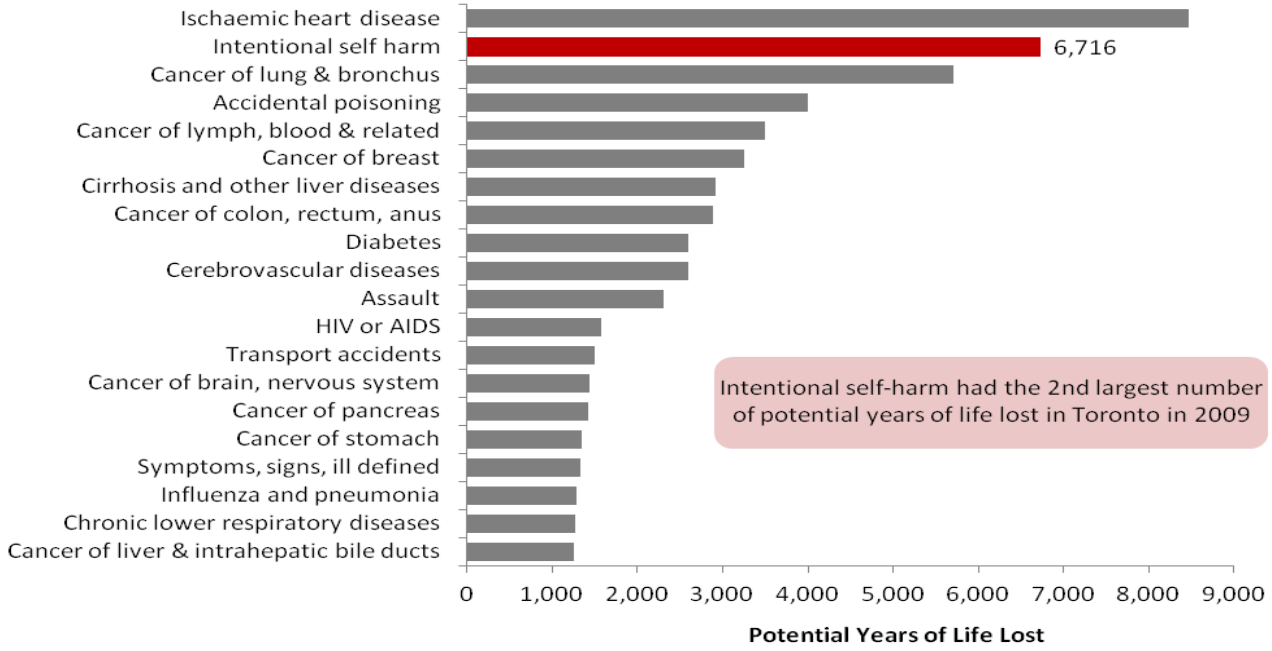
The report addresses a continuum of suicide-related behaviours, including suicidal ideation, suicide attempts and suicide deaths. Physician assisted suicide, while an important issue, is not included in the scope of this report.

COMMENTS

Burden of Illness of Suicide in Toronto

Suicide resulted in 243 deaths in Toronto in 2009.[1] This is more than four times the number of people who died from homicide, and three times the number who died from motor vehicle crashes.[1] Suicide is one of the leading causes of premature death, comprising a much larger number of potential years of life lost (PYLL) than most other leading causes of death because it affects younger as well as older populations. In 2009, suicide comprised 6,716 potential years of life lost, the second largest number of PYLL among causes of death.[4] (Figure 1.)

Figure 1: Top 20 Causes of Premature Mortality, by Potential Years of Life Lost (PYLL)



Notes: PYLL were based on ICD-10 classification of primary cause of death, with modifications recommended by the Association of Public Health Epidemiologists in Ontario (APHEO).
Data Source: Vital Statistics 2000-2009, Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: March 2013.

Mortality rates by suicide have remained stable over time in Toronto and Ontario.[1] However, Toronto has lower rates of hospitalizations and emergency department (ED) visits for suicide-related behaviour than the rest of Ontario, and these rates have been declining in both Toronto and Ontario over time.[5] These differences may reflect changes in service delivery models, stricter admission criteria, socio-cultural attitudes, stigma around self-harm, barriers to health service access, or data reporting.

Suicide can affect population groups in many different ways. There are multiple risk factors for suicide, which are more likely to occur in combination than in isolation.[6] Risk can change with circumstance, and a risk factor identified at a population level may result in a true heightened risk for one person, but not for another. Some populations in Toronto face multiple and concurrent risk factors for suicide, which may place them at disproportionate risk for suicide.

Males experience higher rates of death from suicide,[1] whereas females experience higher rates of non-fatal suicidal behaviour.[5] The burden of suicide death may be higher for males because they tend to use more lethal means than females, and males appear to be less likely to have interaction with the health care system. Help-seeking behaviour and social support, two factors that protect against risk of suicide, may be more prevalent among females.[6]

The risk of suicide is distributed across the lifespan, affecting both young and old. Suicide mortality rates increase throughout middle age and are particularly high for older men.[1] Elderly men are a group at particular risk for death by suicide, however suicide is relatively uncommon compared to deaths from other causes among the 80+ age group.

Suicide is the second leading cause of death for young people in Toronto.[1] In 2011, one in ten students in Toronto reported that they seriously considered suicide in the past year.[7] The burden of youth suicide may be related to experiences of rejection and social exclusion, including bullying and victimization. This may be particularly pertinent for groups who face stigma, prejudice, discrimination and violence based on their identity (e.g. LGBTQ and Aboriginal youth). Young adults (18-24 year olds) also require attention as this group may feel too old to use children/youth services such as Kids Help Phone, yet may not identify with adult-oriented services.

Effective interventions targeted to youth may reduce the risk of suicide in adulthood. Mental disorders usually begin in youth, and illness and stressors may confer long term risk and likewise minimizing them may serve as protective factors. It can be important to ensure that protective measures are in place for those who are experiencing a first time diagnosis of a major mental illness such as schizophrenia or bipolar disorder.

Homeless and institutionalized populations face risk for suicide. A small but significant proportion of suicides occurs in institutionalized settings, including hospitals, psychiatric facilities, correctional institutions, and long-term care homes.[8] Suicide risk in these populations may be related to additive effects of mental illness, deprivation, isolation, separation from loved ones, and feelings of hopelessness and despair.

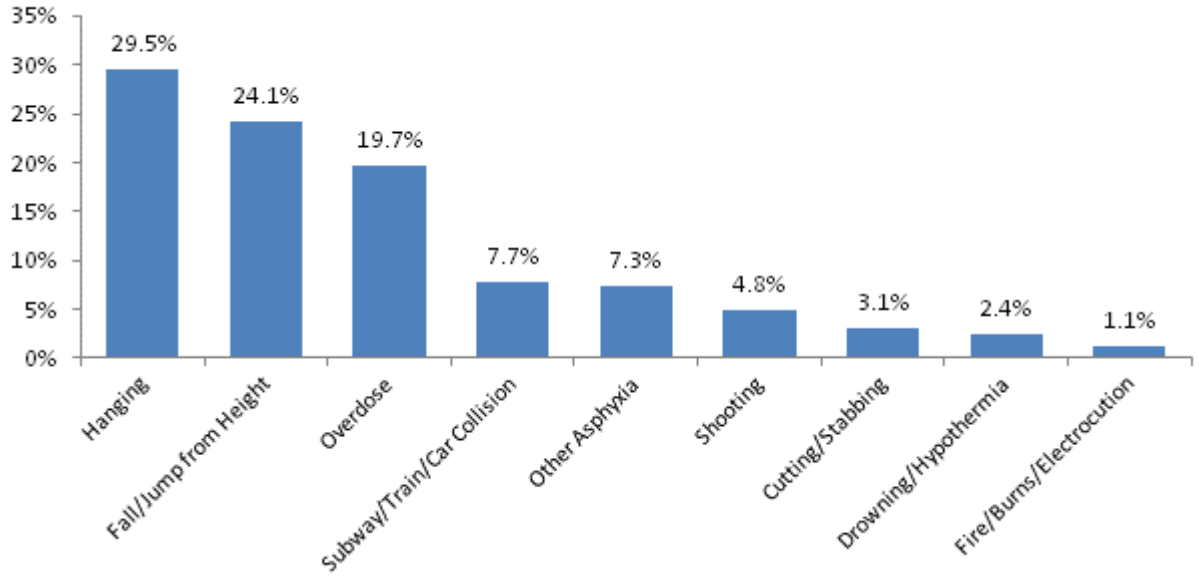
Occupational groups whose members are subject to frequent traumatic events and critical incidents (e.g. police, emergency services) are vulnerable to poor mental health, including anxiety, depression, post-traumatic stress disorder, substance abuse and suicide risk.[9,10,11] Since April 2014, there have been more than 17 first responder suicides in Ontario, including nine police officers.[12,13] The adoption and implementation of mental health standards, processes and programs can build awareness of first responder mental

health issues, reduce stigma around seeking help, and provide services and supports for suicide prevention.

Means of Death by Suicide in Toronto

The most common means of death by suicide in Toronto were hanging/strangulation/ suffocation, jumping from a high place, self-poisoning from drugs and alcohol, and jumping or lying before a moving object (subway/train/car).[8] (Figure 2.) Hanging is the most commonly used method of suicide worldwide.[14]

Figure 2: Means of Death for Suicide Deaths in Toronto, 1998-2011, all cases



Notes: 0.4% of data missing or suppressed due to low cell counts; gender breakdown not provided due to low cell counts.
Data source: Suicide Deaths 1998-2011, Office of the Chief Coroner for Ontario.

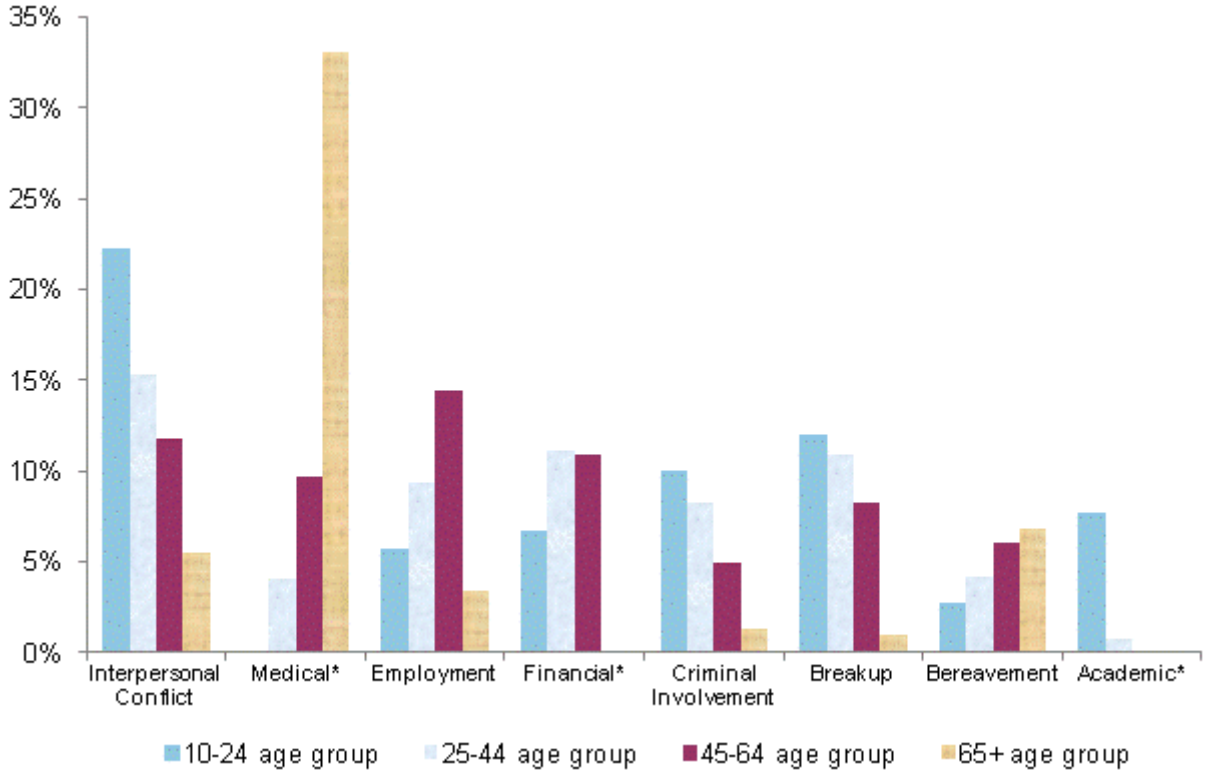
More than half (63%) of suicide deaths in Toronto occurred at the individual's home.[8] The most common living situation at time of death was living with a family, friend or other person (51.0%). Thus, the home is an important setting in which to address suicide prevention, including decreasing availability and accessibility of lethal means (e.g. hanging, drugs and alcohol, firearms) and building awareness of suicide risks and warning signs. The second most common living situation at time of death by suicide in Toronto was living alone (42.9%).[8] A small proportion (1.8%) were recorded as living in a shelter, hostel or rooming house, and 1.4% were assumed homeless at time of death. The number of homeless or under-housed individuals may be under-estimated due to the difficulty in ascertaining housing status from living situation (e.g. hidden homelessness). Approximately one in four persons who died from suicide in Toronto had attempted suicide previously.[8] There were a greater proportion of females (37.5%) with a previous suicide attempt than males (23.2%).

The majority of people who died by suicide in Toronto had an identified history of mental illness (83.0% of females and 73.3% of males).[8] Given the robust literature

showing that at least 90% of people who died from suicide suffered from a mental illness,[15] it is likely that many cases of mental illness went undetected.

The most frequently noted stressors present during the one-year period prior to death by suicide in Toronto were interpersonal conflict, medical, employment and financial stressors.[8] (Figure 3.) Interpersonal conflict consisted of perpetrator or victim of physical violence or sexual assault, threatening, custody involvement/dispute, separation from family member/family member leaving, or Children's Aid Society care/intervention; medical consisted of a recent medical health stressor; and employment consisted of recent job loss/unemployment or job issue/stress.

Figure 3: Stressors Present in the One-Year Period Before Suicide Death in Toronto, 1998-2011, by Age Group



Notes: *Categories were suppressed for some age groups due to low cell counts. Sex breakdown not provided due to low cell counts.
Data is based on available information from coroner's file and may be underestimated.
Data source: Suicide Deaths 1998-2011, Office of the Chief Coroner for Ontario.

The stressors present in the one-period before suicide death in Toronto varied considerably by age group. In the 10-24 and 25-44 year age groups, interpersonal conflict was the most frequently noted stressor. In the 45-64 year age group, employment was the most frequently noted stressor, and more commonly mentioned for males than females. In the 65+ year age group, medical issues were the most frequent stressor.

While frequency data cannot speak to cause-and-effect, it may shed some light on the circumstances of people's lives before their suicide, and as such, these findings suggest

the importance of gaining a better understanding of how social factors such as recent crises, stressful life events and experiences of social isolation, relate to mental health. More detailed and timely data is needed on stressors and risk factors for suicide, including information that will help identify opportunities to prevent and intervene earlier and more effectively.

Suicide Prevention Interventions

Suicides are preventable. Prevention is best developed at multiple levels to address a complex interplay of individual, interpersonal, community and societal risk factors. Both universal and targeted approaches are necessary to significantly reduce suicide and promote mental health. Evidence supports the effectiveness of a broad range of prevention-level interventions, including means restriction strategies.[2] Many efforts need to be part of the solution; no specific intervention will be effective on its own.

Transit Barriers

An average of 23 suicide-related incidents occurred each year on the Toronto Transit Commission (TTC) system between 1998 and 2014.[16] Suicide attempts and deaths on transit systems have serious impacts not only in terms of morbidity and mortality, but also in the economic cost to system operations and psychological impacts on the driver, passengers and witnesses. Engineering solutions have the potential to reduce or eliminate suicide on transit systems. Platform Edge Doors (PED) have been installed in public transit networks in more than thirty-five major cities around the world, including Hong Kong, Singapore and Paris, and evidence shows effectiveness in preventing suicides without an associated increase at other stations or substitution to other means.[17,18]

In 2010, the TTC Board approved recommendations to install PEDs in the Toronto transit system to improve operating efficiency, prevent combustible debris from collecting at track level, and prevent unauthorized persons from descending or falling to track level, including suicide prevention.[19,20] PEDs were considered in the TTC 2011-2015 Capital Program but remain on the unfunded list.

The case for PEDs on the TTC system becomes increasingly compelling when factoring in opportunities to include PEDs in the original design of stations in future line extensions or new lines, and retrofit as a means to gain significant benefits from the completion of the automatic train control upgrade to the signal system.

Bridge Barriers

Some means restriction interventions have already been implemented in Toronto, including the installation of the Luminous Veil on Prince Edward Bridge (Bloor Street Viaduct). The Luminous Veil achieved its goal at that specific site: no suicides occurred at the Prince Edward Bridge after the installation of a barrier,[21] however, yearly jumping from bridges and buildings increased elsewhere in Toronto.[22] Future work on means restriction in Toronto should examine the feasibility and cost of installing barriers on comparable bridges (i.e. those with pedestrian access and sufficient height) in conjunction with other suicide prevention strategies including restricting access to

jumping from buildings (e.g. rooftops and windows in apartment buildings and office towers).

Restriction of Drugs and Alcohol

Self-poisoning by alcohol and drugs has many potential points of intervention, including restricting availability of large quantities of lethal substances. Suicide by overdose in Toronto involves the use of different classes of substances, including prescription and over-the-counter medications.[23] Opioids were the most common drug found in lethal quantities in suicide deaths in Toronto.[23] Safer prescribing and dispensing practices, such as restricting access to large quantities of prescription opioids, may help to prevent access to means for suicide by self-poisoning.[24]

Restricting access to over-the-counter drugs found in many intentional and unintentional overdoses, such as acetaminophen, is another means restriction intervention.[25] Evidence shows that the implementation of restrictions on acetaminophen (which can include limiting the number of pills consumers can buy at one time, where they can be bought, how many pills can be put in one package) have been associated with a reduction in suicides by that substance.[26]

Facility Design and Operation

Means restriction in institutions, such as hospitals, prisons and police custody, involves creating a safer environment through both the physical environment and operating policies. For example, attempts have been made to reduce suicide in controlled environments by restricting access to means for hanging such as ligatures and ligature points.[14] Research on reducing suicide in health care institutions reinforces the need for safety precautions, addressing unit design and environment and protective observation, in addition to assessment and treatment.[27] Other settings that can bear elements of risk, such as workplaces, employment centres, outplacement services, courts and long-term care homes, tend not to be designed for preventive interventions but should include more integration of suicide prevention interventions where possible.

Public Awareness and Education

Public awareness and education is critical to increase knowledge around the problem of suicide.[2] Public awareness campaigns can be effective strategies to build knowledge among the general public, increase people's ability to identify suicide risk factors and warning signs, increase knowledge of how to intervene, and change attitudes towards stigma and barriers to access to care. Part of the goal may be to increase awareness of available services and that seeking help is appropriate

Responsible reporting by the media is an effective practice to reduce suicide, particularly important in preventing social contagion among youth.[2] Media reporting can also play a role in increasing mental health awareness and help-seeking behaviour; however, the quality of coverage is important. New technologies and increasing access to Internet sites promoting suicide are relatively new areas for the suicide prevention field. More needs to be known about the role of the Internet and social media in suicide and suicide prevention.

Community and School-Based Programs

Evidence supports the effectiveness of school and community-based programs.[2] A promising community-based suicide prevention practice is providing support initiatives that promote positive family life and positive parenting, as well as interventions that enhance parent/adolescent relationships. Interventions in this area may be particularly important given that today's youth are tomorrow's adults.

Educational settings in Toronto, including school boards and many of Toronto's colleges and universities, have mental health strategies which include suicide prevention and postvention initiatives. A whole-school approach to developing a supportive school environment builds on what is known about protective factors associated with suicide and works to develop resilience and challenge social stigmas among the entire school population. This includes education and skills building to increase problem-solving, coping skills and conflict resolution and reduce bullying, violence and social exclusion. In addition, evidence supports school-based interventions targeted to individuals and groups who have been identified as high risk.[2]

Suicide prevention initiatives should also be situated in settings such as workplaces and employment centres, given associations with stressors such as unemployment, job loss, financial stress and debt. More education and resources should be made available for groups, such as individuals receiving Ontario Works and federal Employment Insurance, and implemented in settings and along with services already accessed.

Gatekeeper Training

Training and education for people who come in contact with high-risk individuals is an effective suicide prevention intervention.[2] This may be particularly effective when targeted at individuals identified as having primary contact with those at high risk of suicide, including family, friends and caregivers, as well as social service and health care providers. Evidence-based and culturally competent training can increase understanding of suicide and factors that make people more at risk, recognition of warning signs, and knowledge of how to intervene including resources available in the community.

Gatekeeper training for healthcare providers is a best practice for suicide prevention.[2] Evidence suggests that physician education is an important component of suicide prevention, including increased knowledge of antecedent causes of suicide, risk factors and warning signs, safer prescribing practices, effective interventions, and community and institutional resources for support. In addition, physician attention to a patient's social circumstance, expectations, quality of life and illness history, as well as treatment of depression, reduces risk of suicide in the elderly.[28]

There are opportunities for suicide prevention training and education in Toronto to be delivered in widespread and systematic ways, such as being mandated and funded by organizations responsive for health service system planning, integration and delivery, and in collaboration with health care professional bodies who can work with their members.

Research and Data on Suicide

There is a need for ongoing standardized collection of data with improved content, commitment to consistent measuring and reporting over time including clear and measurable outcomes, and for data to be available and accessible to researchers and policy makers in a timely manner. Collaborative work with the Office of the Chief Coroner for Ontario could contribute to opportunities for policy change. Specifically, more attention and resources are needed to better understand the relationship between socio-demographic variables (e.g. income, race, ethnicity, language, sexual orientation, occupation) and suicide, to address the gaps in knowledge regarding groups disproportionately impacted by suicide and how to modify some of the antecedent causes of suicide. In addition, there is potential for multidisciplinary suicide death investigations, which can include participation by epidemiologists and mental health professionals, to collect and analyze local risk factor data that will identify opportunities to prevent suicides and/or intervene earlier and more effectively.

A prioritized approach to suicide research would ensure that research funding and efforts focus on areas with the greatest likelihood of reducing deaths by suicide. There are limitations in the availability and comprehensiveness of Toronto-level data, which speaks to the need for funded research to address gaps in knowledge related to suicide epidemiology, suicide risk due to cumulative effects of discrimination, racism, sexism and homophobia, learning how to improve services, programs and policies from individuals who have engaged in suicide-related behavior, and the role and impact of the Internet on suicide risk and opportunities for e-interventions.

Municipal Suicide Prevention Plan

Existing initiatives and strategies at the City of Toronto provide opportunities to advance local suicide prevention efforts. A Suicide Prevention Plan for Municipal Services would build on what is known about suicide prevention and create a comprehensive and integrated plan for City of Toronto action toward reducing the burden of suicide in Toronto.

A Suicide Prevention Plan for Municipal Services would include suicide prevention in the implementation of appropriate services and programs, such as in employment and income support services to address the risk of suicide among unemployed and low-income individuals. In addition, suicide prevention could be included in City strategies, such as the Strong Neighbourhoods Strategy, Newcomer Strategy, and Youth Equity Strategy, given the association between suicide risk and the groups served by these strategies, including youth, seniors, newcomers, Aboriginals, LGBTQ and socio-economically disadvantaged residents.

Suicide prevention could also be included in services and programs for homeless individuals and shelter residents who are vulnerable to multiple risk factors for suicide, including the addition of suicide prevention training and protocols in the Toronto Shelter Standards and guidelines, and ensuring that suicide prevention, including means restriction, is considered in the redevelopment of Seaton House and the George Street revitalization.

Another potential opportunity for the City of Toronto to undertake effective suicide prevention would be the development and implementation of means restriction policies through design or engineering modifications to buildings, bridges and other infrastructure. Working with City divisions such as City Planning and Transportation Services, the feasibility and cost of suicide prevention bridge barriers or building code changes could be explored as ways to restrict access to common means of suicide in Toronto.

Comprehensive and Coordinated Suicide Prevention Strategies

Suicide prevention would benefit from collaboration and coordination between multiple sectors, including community stakeholders, government, and the healthcare sector. Action on suicide prevention should be informed by the broader community of suicide experts in and around Toronto, including individuals who have engaged in suicide-related behaviour. Current initiatives such as the Federal Framework for Suicide Prevention, soon to be released by the Public Health Agency of Canada, and the Youth Suicide Prevention Plan, by Ontario's Ministry of Children and Youth Services, are examples of potential opportunities to advance local suicide prevention efforts through collaboration and connectivity across orders of government.

Suicide is a serious and preventable public health issue. It impacts individuals across all population groups. Suicide also impacts survivors, family, friends and observers. Suicide deaths in Toronto have remained stable over the past ten years. This report identifies effective interventions and makes recommendations to multiple and diverse sectors regarding the role they can play in preventing suicide.

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SIGNATURE

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ATTACHMENTS

Attachment 1: Suicide Prevention in Toronto: Technical Report – November 2014

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