



# COVID-19 and Suicide: Potential Implications and Opportunities to Influence Trends in Canada Policy Brief



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# Introduction

### **Purpose**

The purpose of this brief is to share the evidence about the potential impact of the novel coronavirus (COVID-19) pandemic on suicide rates, including suicidal ideation, attempts, and deaths. It outlines the related risk and protective factors and provides an overview of how the current changing environment may influence trends and other psychological impacts related to suicide. This brief is based on a scan of peer-reviewed and grey literature undertaken by the Prevention and Promotion Initiatives team at the Mental Health Commission of Canada (MHCC), between April 1 and August 5, 2020. Its threefold purpose is to inform policy makers and those in the health sector of the potential impact of COVID-19 on mental health and suicide rates in Canada, provide insight into which potential risk and protective factors to monitor, and highlight the existing opportunities to influence these trends.

#### Method

This scan was initially intended to inform the MHCC's external messaging during the pandemic. However, as the briefing note evolved, broadening in scope and content, it was deemed to be of greater interest and importance to policy makers and those working in the health sector. The scan initially concentrated on understanding the potential impact of the pandemic on mental health and suicide rates, using literature from past pandemics and epidemics, economic recessions, and natural disasters. As data on the early impact of COVID-19 began to emerge, however, the report was expanded to include some key findings and issues stemming from national and international literature, figures from Canadian distress centres, and Canadian national survey data. This brief presents the findings of a non-exhaustive scan of peer-reviewed and grey literature, as well as information provided by experts and key stakeholders in the field of suicide prevention, in Canada and internationally. Those who provided information include members of the National Collaborative for Suicide Prevention, the Centre for Suicide Prevention, the Canadian Association for Suicide Prevention, the Substance Abuse and Mental Health Services Administration (SAMHSA), Crisis Services Canada, the World Health Organization (WHO), Kids Help Phone, and others.

# Overview of the findings – Key messages

- 1. Suicide is complex and typically the result of multiple factors. We need to continue to be cautious with oversimplified causative statements.
- 2. While history demonstrates the *potential* for the COVID-19 pandemic to impact suicide rates, an increase in suicide is *not* inevitable. Strong social protection (including universal supports), close attention to risks, and the implementation of best practices in suicide prevention show promise.
- 3. It will take time for concrete scientific evidence about the impact of COVID-19 on suicide to accumulate; however, early insights are emerging in the form of opinion pieces, position papers from thought leaders, and early surveillance and research. The MHCC is connected with several leading researchers who have initiated research and surveillance efforts. Early key findings include the following:

- Research shows clear links between suicide and economic recession, a well-documented
  consequence of pandemics. A recession can aggravate individuals' existing stressors (e.g., job
  loss, housing and/or food insecurity), compound pre-existing mental illness, and amplify distress,
  substance use, and suicide. However, research also suggests that increased governmental social
  spending may help mitigate the impact of an economic recession on suicide.
- Early findings from national surveys show that people in Canada are experiencing more anxiety as a result of the COVID-19 pandemic, and that a higher number are reporting suicidal thoughts and/or behaviours.
- Observations indicate that certain subgroups (i.e., Indigenous people, racialized groups, individuals who identify as 2SLGBTQ+, people with a disability, and/or people with mental health problems) are two to four times as likely to have had suicidal thoughts or tried to harm themselves since the outbreak of COVID-19. These subgroups, therefore, may be more vulnerable to the negative mental health impacts of the pandemic. Given that these populations are not a cohesive group, it will be critical to identify the underlying factors contributing to the negative mental health impact of COVID-19 and to develop and implement targeted and tailored efforts to support individuals within each subgroup.
- Demand for virtual crisis support in Canada is high. Help-seeking behaviour is evident, as many Canadian crisis services are experiencing a significantly higher volume and intensity of need, and virtual support services are ramping up to meet this increase.
- Opportunities exist to amplify existing public health and suicide prevention efforts to reduce the risk of negative secondary outcomes over the long term.

# Highlights from the Scan

## **Background**

On March 11, 2020, WHO declared the COVID-19 outbreak a global health crisis — a pandemic. Prompted by concerning disease models, this announcement was followed by historic and unprecedented public health actions designed to reduce transmission, including social distancing (now referred to as physical distancing). While required to curb the spread of COVID-19, physical distancing also has the *potential* for negative secondary outcomes, such as an increased risk of suicide. Many believe that maintaining and enhancing the mental health of the public throughout a pandemic is just as important as reducing the spread of the virus.

## Lessons learned: Past research and early COVID-19 findings

#### **Pandemics and epidemics**

Although limited research exists on the impact of pandemics on suicide, we can gain insight from past pandemics and epidemics (e.g., SARS, Zika, H1N1, Ebola, the 1918 influenza) and early COVID-19 findings while recognizing that the current situation is rapidly evolving and is unprecedented in many ways.

In one study exploring the impact of the 1918 flu, a significant positive association was found between the pandemic and suicide. It was suggested that decreased social integration and fear of contracting the virus likely played the strongest roles.<sup>3</sup> In contrast, a study examining the late 19th-century influenza outbreak in the United Kingdom (U.K.) suggested that one of the possible mechanisms underlying the higher number of suicide deaths was the experience of existential anxiety or the dread associated with media reports.<sup>4</sup>

Another study, which focused on the impact of the 2003 SARS outbreak in Hong Kong, found a significant increase in suicide among adults aged 65 and older. At the time, the city's suicide rate was at a historical high. After initially suggesting a likely association with feelings of loneliness and disconnectedness, the authors' more detailed look found that, in addition to concerns about being infected with SARS, many who died by suicide experienced feelings of social disengagement, stress, anxiety, and being a burden (e.g., on the family or the health-care system). They also found that concerns about the outbreak triggered or worsened some existing psychiatric conditions (such as anxiety, depression, or post-traumatic stress) and were associated with an increased risk of suicidal ideation and attempts, a finding that has been echoed by others. 6-8

Several other studies have explored the impact of SARS on mental health outcomes and suicide-related behaviours. Notably, higher levels of anxiety, depression, post-traumatic stress symptoms, suicidal ideations, and completed suicides were observed in both the acute phase and the longer-term post-epidemic. Those who were most vulnerable to the negative mental health effects of the pandemic included older females, single persons, those who perceived they were at a high risk of getting infected with and/or transmitting SARS to others, health-care workers, patients who had SARS, people who were quarantined, and individuals who had lost family members to the virus. 9- 16 Researchers have proposed several psychosocial mechanisms or pathways that may have led to higher suicide-related outcomes in the period after the SARS pandemic. 17-19

Lai and colleagues (2020) conducted a cross-sectional study on health-care workers in China to assess the mental health impact on individuals treating patients exposed to COVID-19.<sup>20</sup> Over 30% of the participants reported symptoms of depression (50.4%), anxiety (44.6%), insomnia (34.0%), and distress (71.5%). Nurses, women, front-line health-care workers, and those working in Wuhan reported the worst mental health outcomes, compared to other health-care workers. These findings were largely echoed in a recent meta-analysis and systematic review by Pappa and colleagues (2020) examining the prevalence of depression, anxiety, and insomnia among health-care workers during COVID-19.<sup>21</sup> The authors found that the pooled prevalence of anxiety, depression, and insomnia across studies was estimated at 23.2%, 22.8%, and 38.9%, respectively.

One study exploring parallels between Ebola and Zika pointed to the undeniable psychological impact on individuals directly affected by such a virus, noting that patients and their families often experienced stress, anxiety, depression, trauma, panic, and suicidal ideation, all of which highlight the critical need for continuing care after the resolution of the actual illness. <sup>22</sup> In another study examining depressive symptoms among adult survivors of the West African Ebola outbreak, associations were observed between Ebola infection history and post-traumatic stress, depression, and attempted suicide. <sup>23</sup>

Finally, a rapid review published earlier this year examined the psychological effects of a mass quarantine during several outbreaks, including SARS, Ebola, H1N1, Middle East respiratory syndrome (MERS), and equine influenza. In addition to reported cases of suicide, the authors found that people who had been quarantined reported a higher prevalence of post-traumatic stress, depressive, and trauma-related mental health disorder symptoms, in addition to acute stress disorder and anxiety. Further, following an outbreak health-care workers who had been quarantined reported symptoms of alcohol dependency and stigmatization from their local community. <sup>24</sup>

#### **Natural disasters**

We can also learn from research exploring suicidal behaviour following natural disasters. A systematic review of several studies found that suicide rates have both increased *and* decreased following natural disasters. For example, they dropped for both sexes after an earthquake in the United States (U.S.) and for males after a series of earthquakes in Japan. But rates increased after an earthquake in Taiwan, notably among those living in the affected area and for males 45 to 64 years of age. <sup>25</sup> The authors speculated that the increase in this demographic was related to the loss of life and property damage caused by the earthquake and to changes in unemployment rates. Researchers also found that suicidal behaviours typically decreased in the initial post-disaster period (referred to as the "honeymoon" stage). <sup>26</sup> A delayed increase in suicidal behaviours (occurring some time after the initial post-disaster period) was reported in some studies, highlighting the importance of continued monitoring following a disaster. <sup>27</sup>

#### **Economic recessions**

There is agreement within the literature that an economic recession (a consequence of many pandemics), and the subsequent rise in unemployment, is associated with higher suicide rates. <sup>28-33</sup> Research examining past recessions (including 2008) notes that this finding was particularly significant when the downturn happened rapidly and unexpectedly and occurred in countries with relatively low levels of unemployment prior to the crisis. <sup>34,35</sup> Studies also found that the risk of suicide was greater among men, perhaps due to a hesitation to seek help, a greater degree of perceived shame, and/or a greater impact from the recession if they were the family's main earner. <sup>36-38</sup> Given that women make up the lion's share of workers in the service industry (an industry that has been significantly affected by the COVID-19 pandemic), they may be impacted more by the current economic situation than in earlier recessions.

The literature points to several other economic and behavioural risk factors for suicide that are often associated with a recession, many of which are consequences of unemployment. These include indebtedness (e.g., mounting debt or past-due loans), housing insecurity (e.g., foreclosure on mortgages), historic stock market losses (with resulting retirement fund losses), and alcohol problems. <sup>39-42</sup> Studies have found that alcohol problems tend to rise during recessions, and in turn, the proportion of alcohol-involved suicides can increase. <sup>43</sup> Preliminary findings from a Statistics Canada survey this spring found that 20% of Canadians aged 15 to 49 had increased their alcohol consumption during the pandemic. <sup>44</sup> In times of economic downturn, researchers point to the importance of alcohol control policies, the prevention of problematic alcohol consumption, and treatment. <sup>45</sup>

Using national data from Statistics Canada on suicide mortality (2000-18) and unemployment (2000-19), McIntyre and Lee (2020) used time-trend regression models to evaluate and predict the number of excess suicides in Canada due to unemployment resulting from COVID-19.<sup>46</sup> From the 2000-18 data, the

authors found that a 1% increase in unemployment was associated with a 1% increase in suicide rates. Based on this finding, they projected that increases in unemployment of 1.6% in 2020 and 1.2% in 2021 would result in 418 additional suicides in 2020-21, while increases in unemployment of 10.7% in 2020 and 8.9% in 2021 would result in 2,114 additional suicides over the same period.

Although there is a clear link between an economic recession and suicide rates, research suggests that strong social spending (e.g., financial investment in active labour-market programs, increased spending on emergency health care, mental health care, wage subsidies, supplemental income, and work retraining) may help mitigate the risk of suicide and suicide completion. <sup>47-52</sup> If sustained, social policy interventions, such as Canada's COVID-19 emergency response benefit (CERB) and recovery benefit (CRB), could prove to be a mitigating factor for suicide risk in Canada.

## How are people in Canada doing?

Pandemics never affect all populations equally. Not surprisingly, indicators of mental health demonstrate that Canadians are experiencing more anxiety as a direct result of COVID-19. The pandemic has caused a 16% drop in Canada's mental health (a measure of change reflecting anxiety, depression, work productivity, optimism, isolation, financial risk, and psychological health), according to Morneau Shepell's Mental Health Index (based on data collected March 27-30).<sup>53</sup> Early findings from Statistics Canada's Canadian Perspectives Survey Series (CPSS) also suggest decreases in people's self-perceived mental health (i.e., fewer reporting that their mental health is "excellent" or "very good"), particularly among women and young people aged 15 to 24 (data collected March 29-April 3).<sup>54</sup> These early findings are supported by results from a Nanos Research poll (data from 1,049 people, April 25-27, conducted on behalf of the MHCC) and from Statistics Canada's crowdsourcing survey, Impacts of COVID-19 on Canadians: Your Mental Health (data collected from 46,000 residents, April 24-May 11). 55,56 In the Nanos poll, people were four times as likely to report that their mental health was "worse" or "somewhat worse" than before COVID-19.57 Likewise, over half of the respondents (52%) in the crowdsourcing survey reported that their mental health was either "somewhat worse" or "much worse" than prior to the beginning of physical distancing. 58 Among these, 41% reported symptoms consistent with moderate or severe anxiety. As observed in the CPSS, worsening mental health was particularly high (64%) among young people aged 15 to 24. 59

The results of a national survey conducted by the Canadian Mental Health Association and the University of British Columbia were released on June 25. 60,61 Findings from this survey (based on a representative sample of 3,000 people living in Canada between May 14 and 29) echoed those from Statistics Canada but also offered new insights into the early impact of the COVID-19 pandemic on suicide-related behaviours. This survey found that one in 20 Canadians (6%) had recently experienced thoughts or feelings of suicide as a result of the pandemic and emphasized that certain subgroups in Canada had been disproportionately impacted. When compared to the general population, Indigenous people and people with pre-existing mental health problems, disabilities, and low incomes were two to four times as likely to have had suicidal thoughts since the outbreak of COVID-19. Further, people who identified as 2SLGBTQ+ were three times as likely to have tried to harm themselves, and racialized groups, women, and parents with children under 18 were more likely to report worse mental health.

These preliminary findings suggest that certain subgroups (i.e., Indigenous people, racialized groups, members of 2SLGBTQ+ communities, people with a disability, people with mental health problems) have been experiencing worse mental health outcomes and more suicide-related behaviours since the onset of the pandemic. Given that these subgroups are also unique, it will be critical to identify and understand the distinct underlying factors contributing to negative mental health outcomes within them. Tailored and targeted strategies to reach each of these marginalized groups and to reduce the mental health impact of COVID-19 may be required.

A survey by Montreal research firm Potloc and the Canadian Public Health Association was conducted between April 1 and 6. 62,63 Of the 578 health-care workers in Canada who responded, almost half reported needing psychological support, while 67% felt anxious, 49% unsafe, 40% overwhelmed, 29% hopeless, and 28% discouraged and sleep deprived due to their work situation. Although these findings shed light on the early impact of COVID-19 on health-care workers, continued research is required to understand whether it will have a longer-term impact on those working in health care and what the precise effects will be. Additional research will also be required to determine COVID-19's impact on other marginalized and higher-risk groups. In particular, men (particularly those who are older, have lost a spouse, a job, and/or are living alone), Indigenous youth, and seniors (particularly those with limited social support and those who have been in and out of long-term care), as these groups are at a higher risk of suicide during normal times.

Distress centres across the country are seeing surges in calls directly related to anxiety around COVID-19 and its related financial and social consequences. From February to March, Kids Help Phone saw an increase in volume through their phone line of 170% and an increase of 114% to their text line. <sup>64</sup> These increases included conversations about isolation (up 48%), anxiety or stress (up 42%), and substance use (up 34%). The Canada Suicide Prevention Service has also seen an increase in volume since the start of the pandemic, with about 50% more interactions compared to the same time last year. They are seeing more intense interactions as well and have had a 62% increase in active rescues (when responders call emergency services due to an imminent risk of harm or a suicide in progress) — two trends that seem to be accelerating. <sup>65</sup> By comparison, in the U.S., SAMHSA's Disaster Distress Helpline experienced an increase of 338% this past March compared to February, an increase of 891% in call volume compared to March 2019. <sup>66</sup> The greater need for crisis services will likely continue throughout the pandemic and in the months that follow.

Recognizing that physical distancing may limit many people with pre-existing mental health issues from seeking help in their usual ways, some crisis service providers have suggested that the increases in volume may include individuals who normally seek help from another source. <sup>67</sup> In addition, given that most Canadian distress centres rely significantly on volunteers, support to existing volunteers and training for new ones will be critical for long-term sustainability as volunteers face their own concerns through this pandemic. <sup>68</sup>

#### Risk factors to monitor

While limited, the research from past pandemics, combined with what we know about the impact of natural disasters and economic recessions, highlights several risk factors that demand close attention:

- **Disconnection, social isolation, and loneliness.** Individuals thinking about suicide may lack connections to other people and often disconnect from others as the risk of suicide increases. <sup>69</sup> The risk is heightened in our current environment (where most people are experiencing reduced social integration), disruption of their normal day-to-day life, and decreased access to their usual social networks, including community and religious support. <sup>70-72</sup> It is particularly heightened for the elderly (in particular, older men who are living alone or who have recently lost their spouse), individuals who are experiencing domestic violence, living alone, and bereaved by COVID-19 deaths with limited social support.
- Real or perceived barriers to health care (including mental health care). Many people may not access the help they need due to a fear of contracting COVID-19 or media portrayals of overwhelmed health-care facilities, which can lead them to avoid emergency rooms, physician's offices, or other health services. In some cases, individuals may have to cancel an appointment or not seek help because they are unable to secure child care, transportation, or bring a loved one for additional support. 73,74 Many individuals, particularly seniors and those with cultural and/or language barriers, may rely on others for transportation, translation, and support during health-care appointments.
- Pre-existing mental illness, substance use problems, and/or suicidal ideation (including marginalized groups). The pandemic could adversely affect other known risk factors for suicide. For example, individuals who were already thinking of suicide and/or were experiencing mental health or substance use problems prior to the pandemic, may undergo worsening symptoms and no longer be receiving the support they rely on. 75 National survey data shows that this risk may be more pronounced among marginalized groups such as Indigenous people, people with disabilities, racialized groups, and people who identify as 2SLGBTQ+. 76,77
- Vulnerable roles and those with high levels of exposure to the illness. The elevated suicide rates that existed among medical professionals prior to COVID-19 are now being amplified by concerns about infection, exposure of family members, sick colleagues, shortages of necessary personal protective equipment (PPE), and overwhelmed facilities. 78,79 Health-care and front-line workers are reporting high levels of anxiety, depression, and insomnia. Media reports have also highlighted the suicide deaths of nurses and physicians in Italy, the U.K., and the U.S., which note contributing stressors related to the expectation to provide care in dangerous situations (including unfamiliar and understaffed workplaces). 80-84
- Exposure to widespread negative media coverage. In this time of rapid change, there is increased global news coverage featuring heightened distress, greater uncertainty and hopelessness, and a growing fatality rate due to COVID-19.85-87 Prolonged exposure to negative media coverage and irresponsible media reporting of suicide are associated with an increase in suicides.88-90

# Opportunities to influence trends in Canada

The literature points to several recommended strategies to mitigate any potential increases in the risk of suicide. Leaders in Canada must advocate for continued universal supports, including adequate government support for mental health and substance use services, investment in research to study the mental health consequences of the pandemic and the public health response, and the infrastructure to expand virtual mental health services.

With these universal preventive actions in place, research demonstrates positive outcomes when protective factors are amplified at an individual level. Recognizing that there is no one-size-fits-all approach to supports during a pandemic, the literature confirms the importance of the following efforts:

- Address economic concerns (including unemployment). Past trends linking recessions with suicide can be interrupted, particularly with increases in strong social protection. <sup>91- 96</sup> One frequently referenced study found that financial investment in active labour market programs that help people find gainful employment or increase their earning capacity reduced the effect of unemployment on suicide. It concluded that governments can better protect their citizens through measures that keep people employed and help those who lose their jobs cope and return to work quickly. <sup>97</sup>
- Expand modes of mental health service delivery. This expansion requires addressing barriers to access for those without a phone, computer, and/or internet access. 98 Recognizing that not everyone feels comfortable with virtual interactions, consider alternative treatment settings such as private spaces outdoors or creative solutions such as distributing phones to enable people to access help. 99 Where face-to-face approaches remain the most suitable option (e.g., for people with serious mental illness, individuals who are living with substance use problems or are in recovery, and people in inpatient care environments), ensure that appropriate PPE is provided. Increase public awareness of available supports, so those who need help know how to access them. Additional public investments may also be required to address financial barriers.
- Support marginalized individuals and screen for suicide risk. It is essential to amplify support for those in marginalized groups (e.g., Indigenous people, people with disabilities, racialized groups, and individuals who identify as 2SLGBTQ+); people with pre-existing mental illness, alcohol, or substance use problems; older populations; and those experiencing homelessness or housing insecurity. It is also essential to screen individuals who are accessing help for signs of crisis or suicidal ideation. 100-103 These efforts may require training for additional community gatekeepers and an expansion of translation services for those facing cultural and language barriers.
- Improve social connectedness. Research points to the importance of promoting remote social networks and maintaining meaningful relationships by phone, video, social media, or other online forms. <sup>104,105</sup> This connectedness may be particularly important for individuals who have limited social support (e.g., seniors), who live alone, and who experience domestic violence. Reducing sustained feelings of loneliness may help protect individuals against suicide and self-harm. <sup>106</sup>
- Leverage hope, resilience, and the "pulling together" effect. With a shared focus on a common external threat, social connectedness and community resilience can be strengthened when individuals undergoing a shared experience support one another. This effect may be further evident in the current climate, given recent advancements in technology and an increased ability to connect remotely on social media platforms. 107

Promote safe and responsible media reporting. Such reporting includes adhering to existing guidelines (such as the Canadian Journalism Forum's <u>Mindset: Reporting on Mental Health</u>) and guidelines specific to COVID-19 (such as the International Association for Suicide Prevention's <u>Reporting on Suicide During the COVID-19 Pandemic</u>). In addition, media reports should include contact information for crisis services and hotlines for those seeking help. 108, 109

## **Summary**

While history demonstrates the *potential* for COVID-19 — and the resulting anticipated economic recession — to impact suicide rates, an increase is *not* inevitable. <sup>110</sup> With close attention to the risks, the implementation of best practices in suicide prevention, and strong social protection, people in Canada can get through the pandemic without an additional loss of life to suicide. Recognizing that the impacts of COVID-19 will be long term, complex, and may take time to fully emerge, it will be essential to take the long view by advocating for the continued expansion of universal supports (such as the <u>Wellness Together Canada</u> portal and distress line), adequate funding to maintain and enhance mental health and substance use services, and amplified monitoring and research to better understand the dynamic impacts of the pandemic, now and in the future.

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