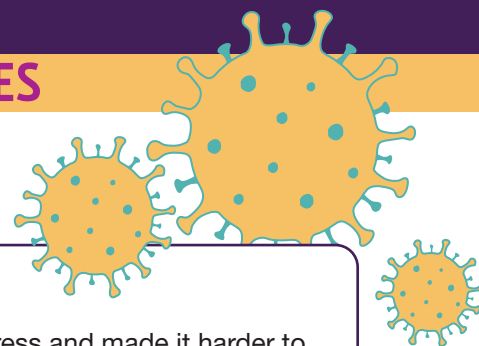


# Self-harm & Suicide

## EXAMINING THE SOCIETAL CONSEQUENCES OF THE COVID-19 PANDEMIC



### Key Findings:

- COVID-19 response measures have increased social isolation and stress and made it harder to get mental health care. These factors may exacerbate existing mental illness and contribute to heightened risk of self-harm and suicide.
- Self-harm occurs most frequently among young females and non-binary individuals, while the suicide rate is highest among middle-aged males. Populations who have been subject to marginalization, such as transgender and non-binary individuals, people with low income, and people with mental illness are disproportionately affected by both. As a result of cultural genocide, intergenerational trauma, and structural racism, Indigenous peoples are also disproportionately affected by both self-harm and suicide. These patterns apply both before and during the pandemic.
- Self-harm hospitalization and suicide rates in BC both decreased slightly during the initial months of the pandemic, then increased to levels similar to those seen prior to the pandemic. These findings should be interpreted with caution, however, given data limitations and delays in reporting.

## Situation

The public health response to COVID-19 has included safety measures such as physical distancing, self-isolation, and temporarily closing businesses and suspending in-class education. These measures have reduced social connection and led to unemployment and loss of income for many people. As a result, many people are experiencing increased stress and poorer mental health, which increases the potential for mental illness (e.g., depression and anxiety) and the risk of self-harm and suicide. Barriers to accessing mental health care include stigma and the reduced capacity of mental health services to respond to the needs of the population (e.g., staffing shortages, physical distancing, and other measures during COVID-19). However, an increase in the availability of virtual mental health services may be helping to meet demand.<sup>1,2</sup>

## Background

Self-harm (also known as *non-suicidal self injury*) describes a self-inflicted injury or injuries typically caused *without* the intent to end one's life.<sup>3</sup> Self-harm is often a repeated pattern of behaviour rather than a one-time event, and may be used to cope with or communicate feelings of anxiety, anger, or emotional pain;<sup>4</sup> to exert control; or to punish oneself.<sup>5</sup> Low self-esteem, abuse, neglect, childhood trauma, and mental illness are all risk factors for self-harm.<sup>5</sup> Self-harm, in turn, can be a risk factor for suicide, though it is not necessarily linked to suicidal intent.<sup>5</sup> The most common forms of self-harm are cutting one's skin, burning one's skin, and self-hitting, often causing bruises and sometimes breaking bones.<sup>5</sup> Most self-harm behaviours begin between the ages of 12 and 15.<sup>5</sup> In 2013 and 2014 in Canada, 2,500 youth age 10–17 were hospitalized for self-harm.<sup>5</sup> Self-harm and associated hospitalization is higher among females, especially younger females.<sup>6</sup> Across



Canada, females account for 72 per cent of self-harm hospitalizations among those age 10–19.<sup>7</sup> Transgender and gender dysphoric children<sup>a,8</sup> and youth<sup>9</sup> are also more likely to self-harm. The 2018 BC Adolescent Health Survey indicated that 17 per cent of BC students age 12–19 had self-harmed in the previous year, up from 15 per cent in 2013.<sup>10</sup> Those most likely to self-harm included students age 13 to 15, non-binary youth (47 per cent), and females (23 per cent), compared to 11 per cent of males.<sup>10</sup>

Suicide is death caused by self-inflicted injury with the intent to end one's life.<sup>11</sup> Suicide is the ninth leading cause of death in Canada, resulting in about 4,000 deaths each year.<sup>b,12</sup> Women are three to four times more likely than men to *attempt* suicide,<sup>13</sup> but suicide rates in Canada are three times higher among males: almost 30 per cent of suicide deaths are middle-aged and older males age 45–64.<sup>14</sup> Recent data indicate that 11.8 per cent of Canadians report having had suicidal thoughts, 4.0 per cent report having made suicide plans, and 3.1 per cent report at least one prior suicide attempt in their lifetime.<sup>c,12</sup> Mental illness and feelings of hopelessness make people more likely to consider or attempt suicide.<sup>15,16</sup> Ninety per cent of Canadians who die by suicide lived with mental illness.<sup>7</sup> There were more than 575 suicide deaths in BC in 2018,<sup>17</sup> and suicide is the second-leading cause of death among BC youth age 15 to 24.<sup>18</sup>

Large-scale traumatic events, such as pandemics and natural disasters, can negatively affect mental health, both during the event and long after. These types of events may lead to increased incidence of psychiatric disorders,<sup>19</sup> which may in turn increase the risk of self-harm and suicide.<sup>20</sup> Effects on population mental health and wellness cannot be measured in the short term as they may not begin to manifest until years after the traumatic event.<sup>19,21</sup>

COVID-19 response measures have aggravated many of the factors that increase an individual's risk of self-harm, suicidal ideation (thinking about suicide), and attempting or committing suicide. These include living alone and feeling lonely<sup>22</sup>; poor health, disability,<sup>23</sup> and chronic pain<sup>24,25</sup>; mental distress and mental illness<sup>20,26</sup>; having self-harmed or attempted suicide in the past<sup>24,25</sup>; financial stress<sup>23,27</sup>; risk of domestic/intimate partner violence<sup>28,29,30</sup>; and substance use.<sup>20,31</sup> Many of these factors are interrelated. For example, an active social network is associated with lower rates of self-harm and suicide.<sup>32</sup> COVID-19 response measures may reduce an individual's actual or perceived access to support, making feelings of loneliness and isolation worse.<sup>33</sup> Mental illness (e.g., depression, anxiety, post-traumatic stress) may develop or worsen due to social isolation and fear, resulting in increased symptoms of mental distress,<sup>34</sup> which may be linked to increased use of alcohol and other substances.<sup>31</sup> Increased time at home, greater financial stress, and increased substance use may increase the risk of domestic/intimate partner violence. Domestic/intimate partner violence, in turn, can negatively affect mental health and worsen depression, which is both a short- and long-term risk factor for self-harm and suicide.<sup>28,29,30</sup> People quarantined due to COVID-19 exposure or infection may also experience stigma (intolerance and avoidance), fear, and frustration.<sup>35</sup> Meanwhile, reduced mental health, emergency, and social services, especially in rural/remote regions, has made accessing support more difficult.<sup>26</sup> Mental health,<sup>36</sup> violence,<sup>37</sup> and suicide<sup>38</sup> crisis lines in BC and Canada have reported significantly higher call volumes since the pandemic began, and many lack the capacity to respond to the increased demand.<sup>36</sup>

a "Gender dysphoria" refers to extreme discomfort and mental distress caused by the feeling that one's assigned sex does not match their gender.

b Numbers are known to be underreported due to associated stigma and additional factors, as discussed in the following section of this report.

c These data are based on the Canadian Institute of Health Information's Discharge Abstract Database, Statistics Canada's Vital Statistics Database, and the 2016 Canadian Community Health Survey.

## Findings

More than half of BC respondents to a Statistics Canada Crowdsourcing survey on the impact of COVID-19 reported worse mental health compared to before the COVID-19 pandemic. People age 15 to 44 were most affected, and Indigenous people were more affected than non-Indigenous people.<sup>39</sup> In another Canadian survey, 2 per cent of respondents reported having tried to harm themselves in response to COVID-19.<sup>40</sup> As the pandemic progressed, the proportion of respondents reporting deliberate self-harm and/or suicidal thoughts or feelings increased, particularly among populations experiencing marginalization or social exclusion (e.g., people with a pre-existing mental illness, Indigenous peoples, people with a disability, and people who identify as LGBTQ+).<sup>23,41</sup>

This section includes eight charts (Figures 1–8) presenting data on self-harm hospitalizations and suicides in BC, both before and during the COVID-19 pandemic, which was declared in March 2020. These data should be interpreted with caution due to many factors limiting data, such as difficulty classifying some injuries and

deaths, underreporting of self-harm and suicide resulting from stigma,<sup>12</sup> and other factors.<sup>6</sup> It is not always clear whether a death or injury is accidental or intentional, so some suicides may incorrectly be recorded as accidental deaths. Individuals who self-harm or survive a suicide attempt may not disclose to health care providers that the resulting injury was self-inflicted, so these incidents may also be recorded as accidental. When someone receives medical attention for a suicide attempt, the incident may erroneously be recorded as self-harm rather than attempted suicide. Cases of self-harm and attempted suicide may not always receive medical attention, so these incidents may never be reflected in self-harm and suicide data at all. This may be particularly true during the pandemic, when many people have had difficulty accessing, or have been actively avoiding, health care institutions.<sup>42</sup> Finally, suicide rates in BC are based on BC Coroners Service data, which are considered preliminary and may change subject to further investigation into individual deaths.<sup>43</sup>

FIGURE 1

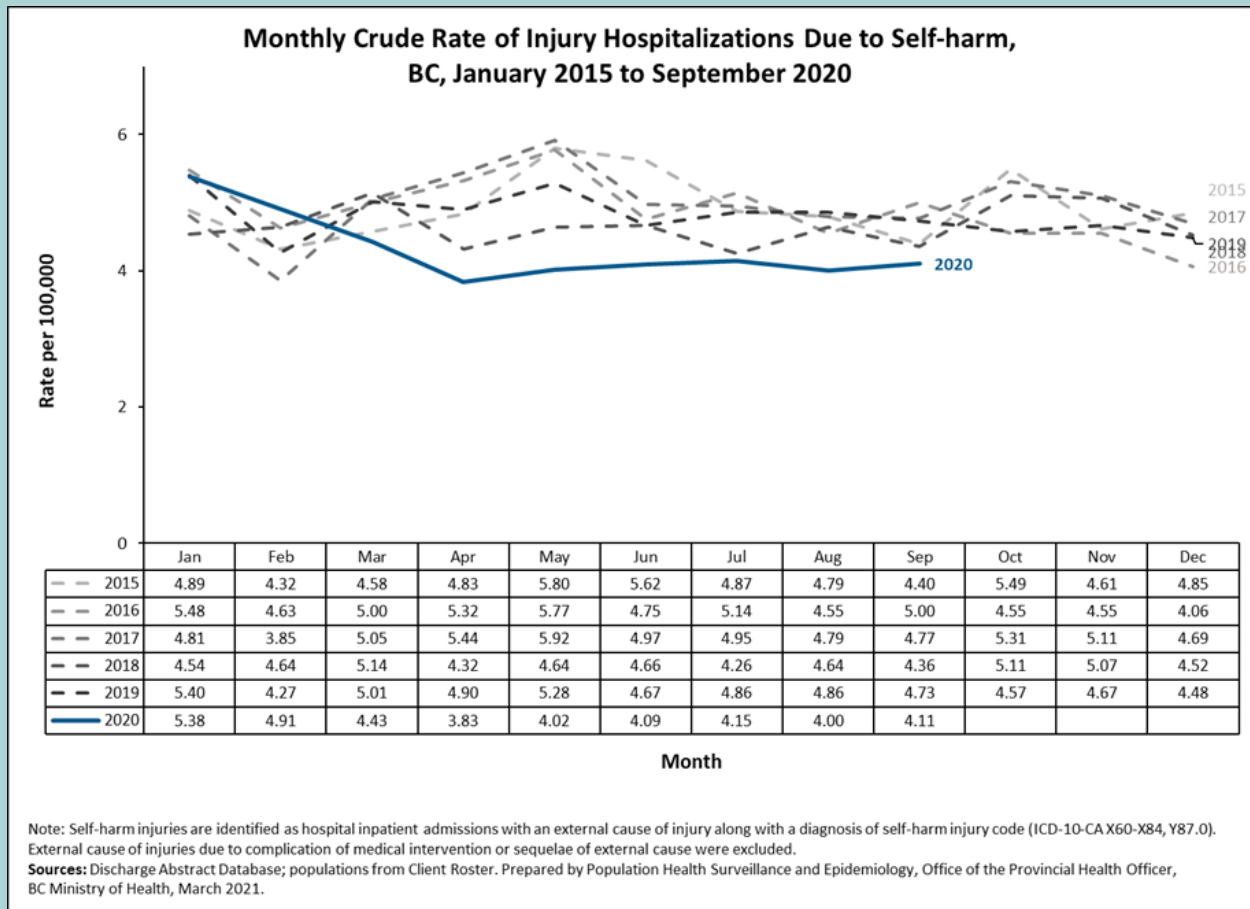


Figure 1 shows injury hospitalizations due to self-harm in BC from January 2015 to September 2020. It indicates there has been an overall decline in self-harm injury hospitalizations in BC from April to September 2020 compared to this period in previous years. This is particularly noteworthy for May, because in some previous years, May shows a seasonal peak. Due to the overall increase in population stress and mental health concerns, this trend may reflect a decline in people accessing hospital services for self-injury, and/or a decrease in patients disclosing the cause of injury in hospital.

FIGURE 2

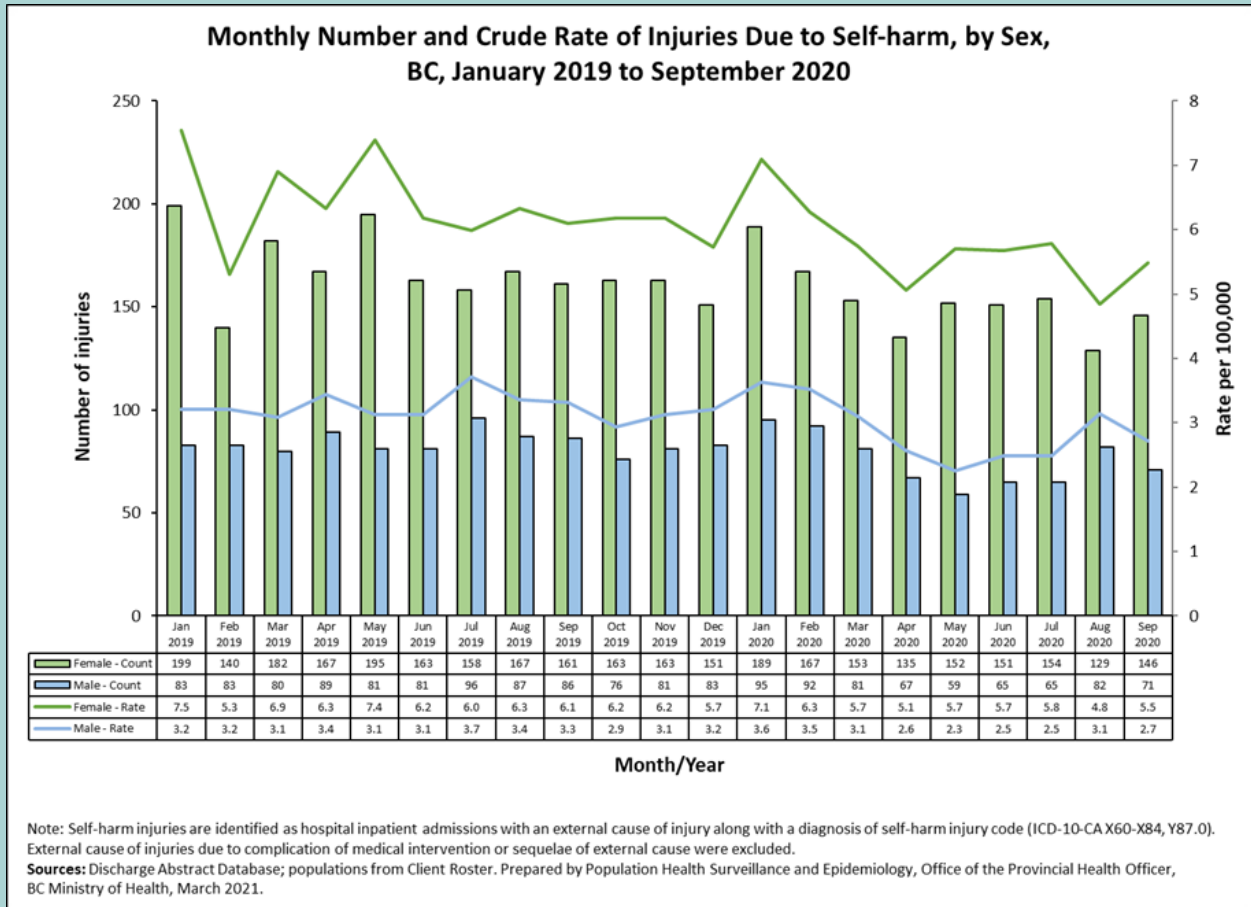


Figure 2 shows injury hospitalizations due to self-harm in BC, by sex, from January 2019 to September 2020. It indicates that self-harm injury hospitalizations in BC are consistently higher among females than males. This is in contrast to Figure 6, which shows an opposite pattern for suicide deaths in BC.

FIGURE 3

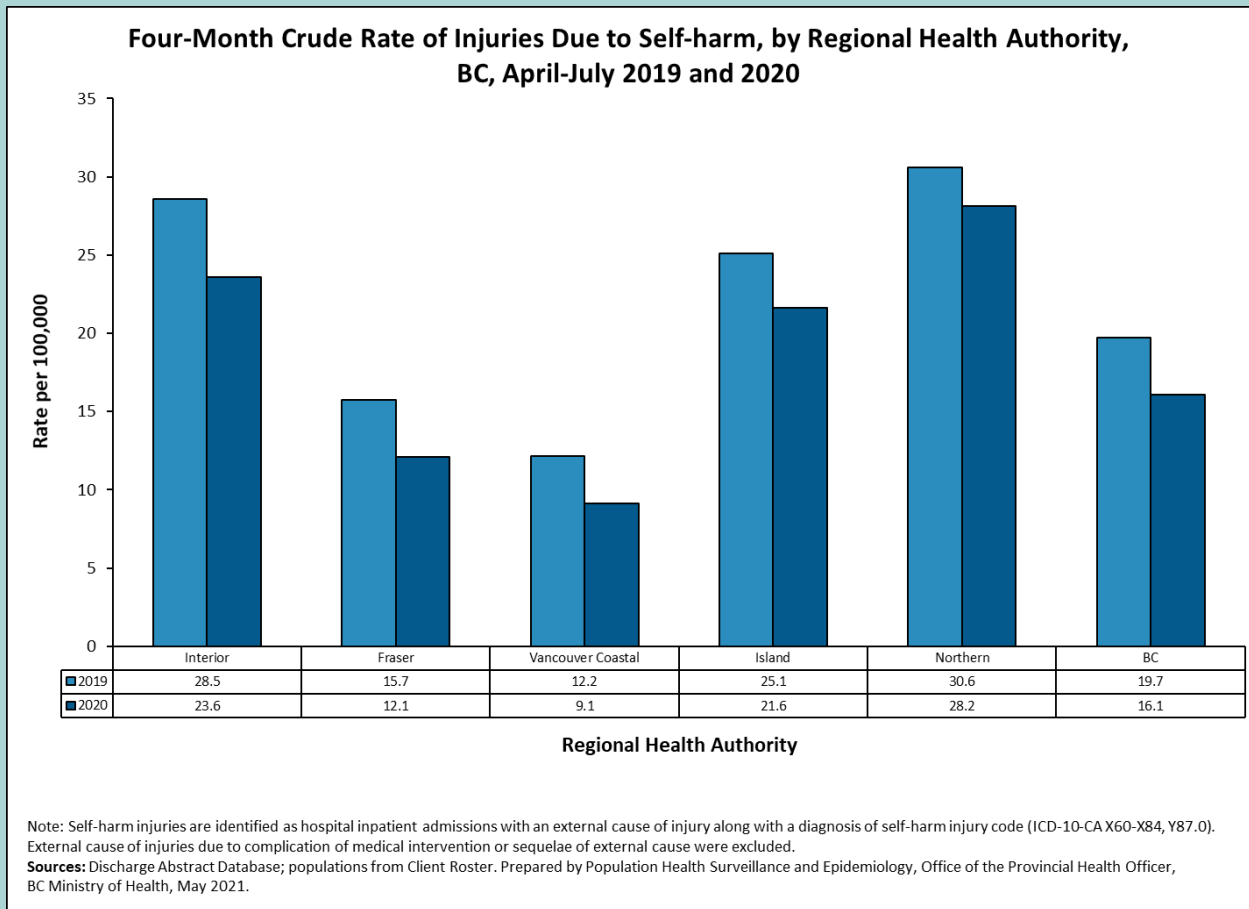


Figure 3 shows injury hospitalizations due to self-harm in BC by health authority for April–July 2019 and April–July 2020. Rates for April–July of each year are highest in Northern Health and Interior Health, followed by Island Health. Rates are lowest in Vancouver Coastal Health. In April–July 2020, the first four-month period since the pandemic was declared, rates of self-harm injury hospitalization showed a decrease in all health authorities over the same period in 2019.

FIGURE 4

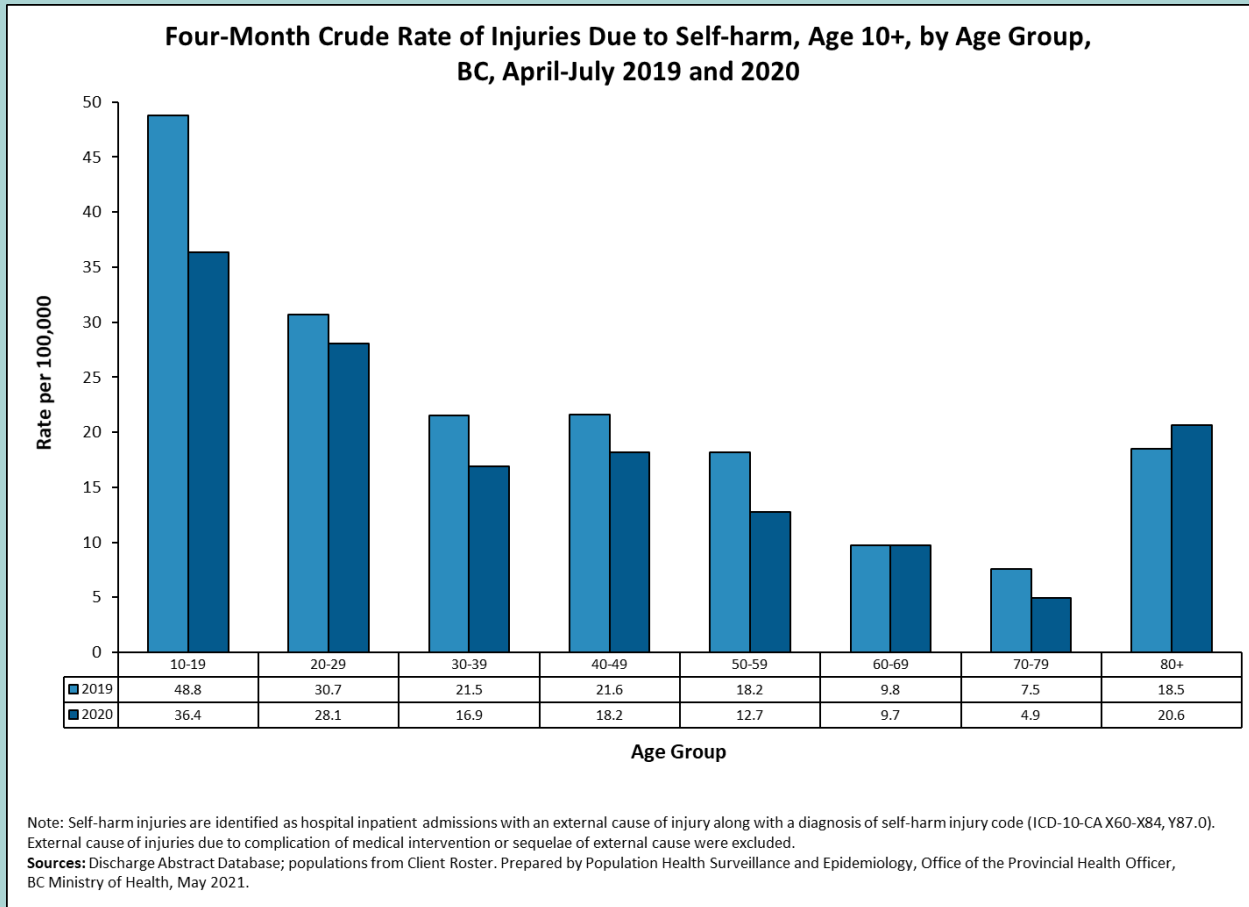


Figure 4 shows injury hospitalizations due to self-harm in BC, by age group, for April–July 2019 and April–July 2020. These data illustrate that self-harm injury hospitalizations in BC are highest among younger age groups (age 10–19 and 20–29). In April–July 2020, the first four-month period since the pandemic was declared, self-harm injury hospitalizations decreased among almost all age groups compared to the same period in 2019 (the exceptions were those age 80+, among whom there was an increase, and age 60–69, whose rate of self-harm injury hospitalizations remained virtually the same).

FIGURE 5

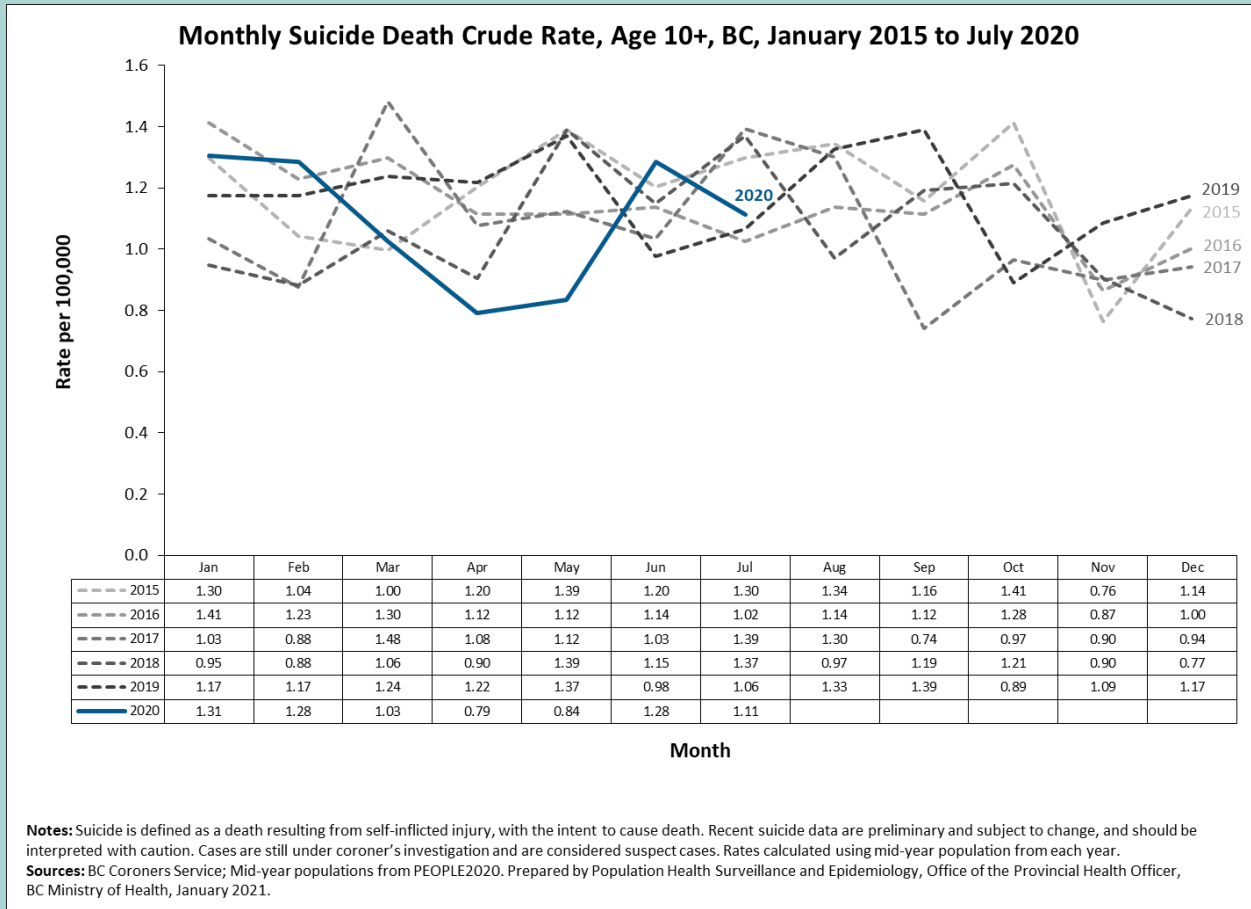


Figure 5 shows the monthly rate of suicide deaths in BC from January 2015 to July 2020. From March through May 2020 (the period with the strictest social/physical distancing measures), suicide deaths decreased in BC. This is consistent with findings from other jurisdictions experiencing disasters, where suicide deaths stayed the same or decreased in the period following the disaster. This may reflect a “coming together” effect,<sup>44</sup> where some people gain a renewed sense of purpose from societal efforts to respond to a large-scale traumatic event.<sup>45,46,47</sup> As Figure 5 also shows, suicide deaths increased substantially in June 2020, up to a level similar to the pre-pandemic period (for death counts for Figure 5, see Appendix A). In May 2021, the Government of BC issued a news release confirming that there had not been an overall increase in suicide deaths in BC during the COVID-19 pandemic.<sup>48</sup>



FIGURE 6

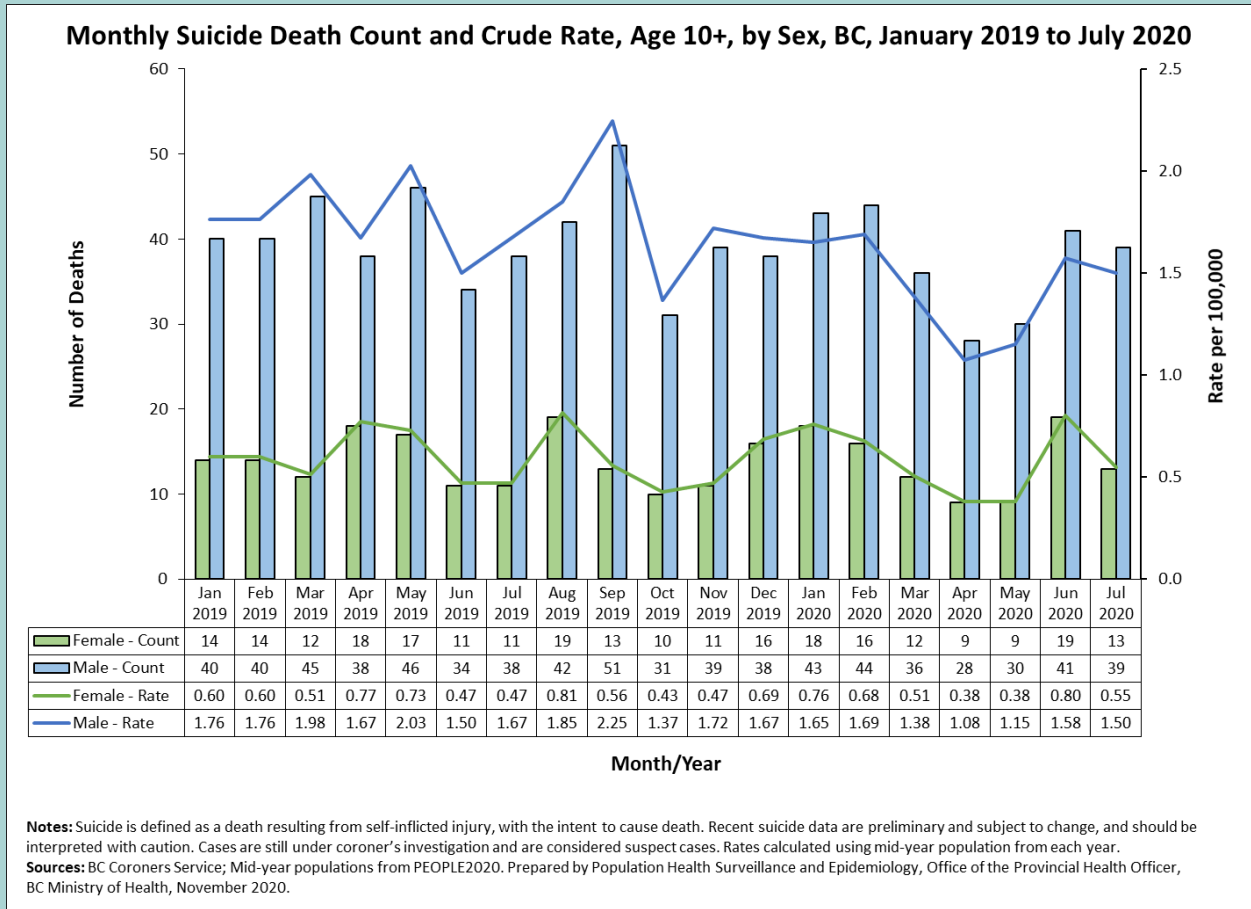


Figure 6 shows the monthly number and rate of suicide deaths in BC, by sex, from January 2019 to July 2020. The male rate was from two to four times higher than the rate for females, which is consistent with longer-term analyses by sex.<sup>6</sup>

FIGURE 7

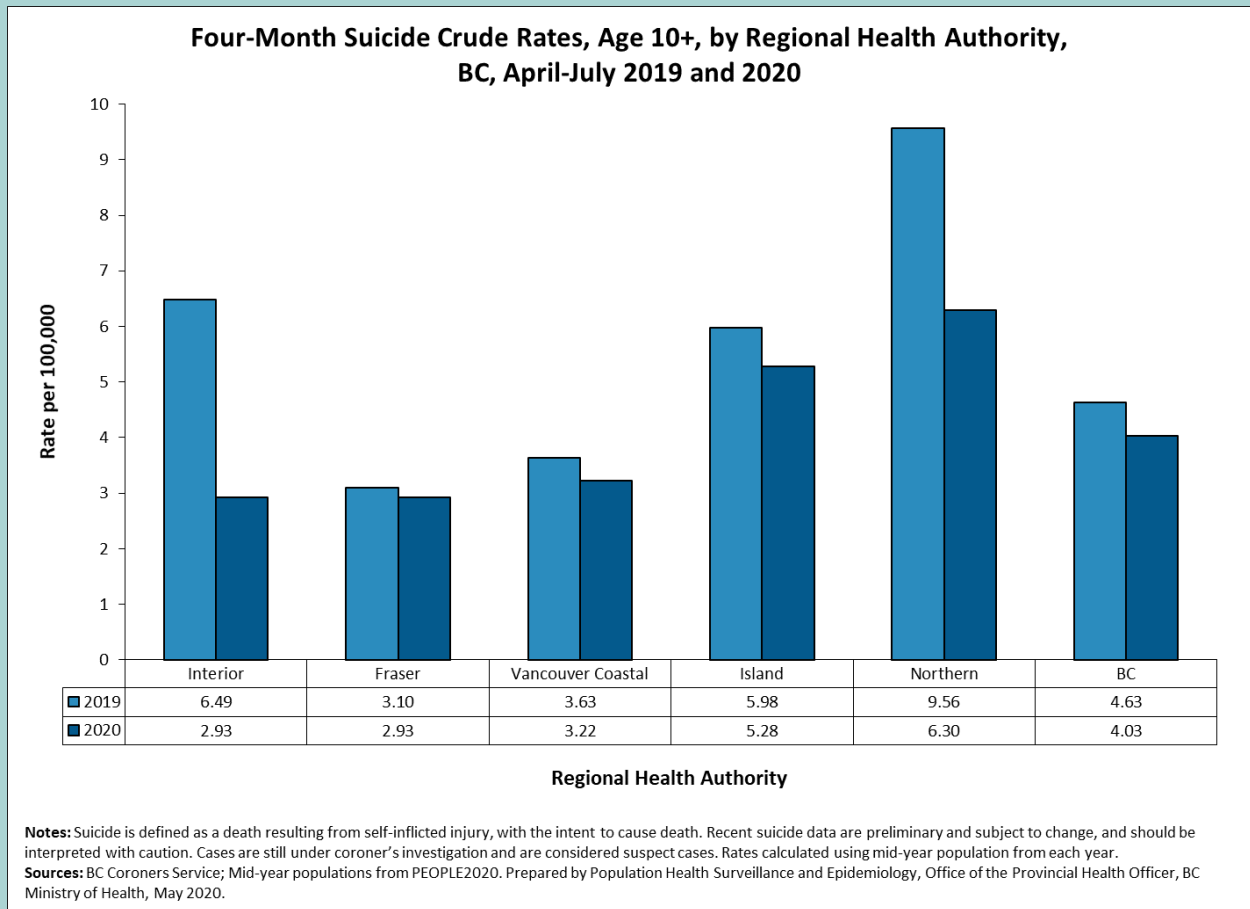


Figure 7 shows the four-month suicide rate in BC, by health authority, for April–July 2019 and April–July 2020. Overall, suicide rates were lower in Fraser Health and Vancouver Coastal Health. However, given their higher populations, these health authorities had the highest *numbers* of suicide deaths—almost half (48.2%) of all suicide deaths in BC during this period.<sup>49</sup> The regional distribution of suicide deaths is consistent with patterns observed since 2008.<sup>17</sup> Also consistent with patterns observed in BC’s overall population, the rate of suicide decreased in each health authority in April–July 2020, the first four-month period after the start of the COVID-19 pandemic, compared to the same period in 2019.

FIGURE 8

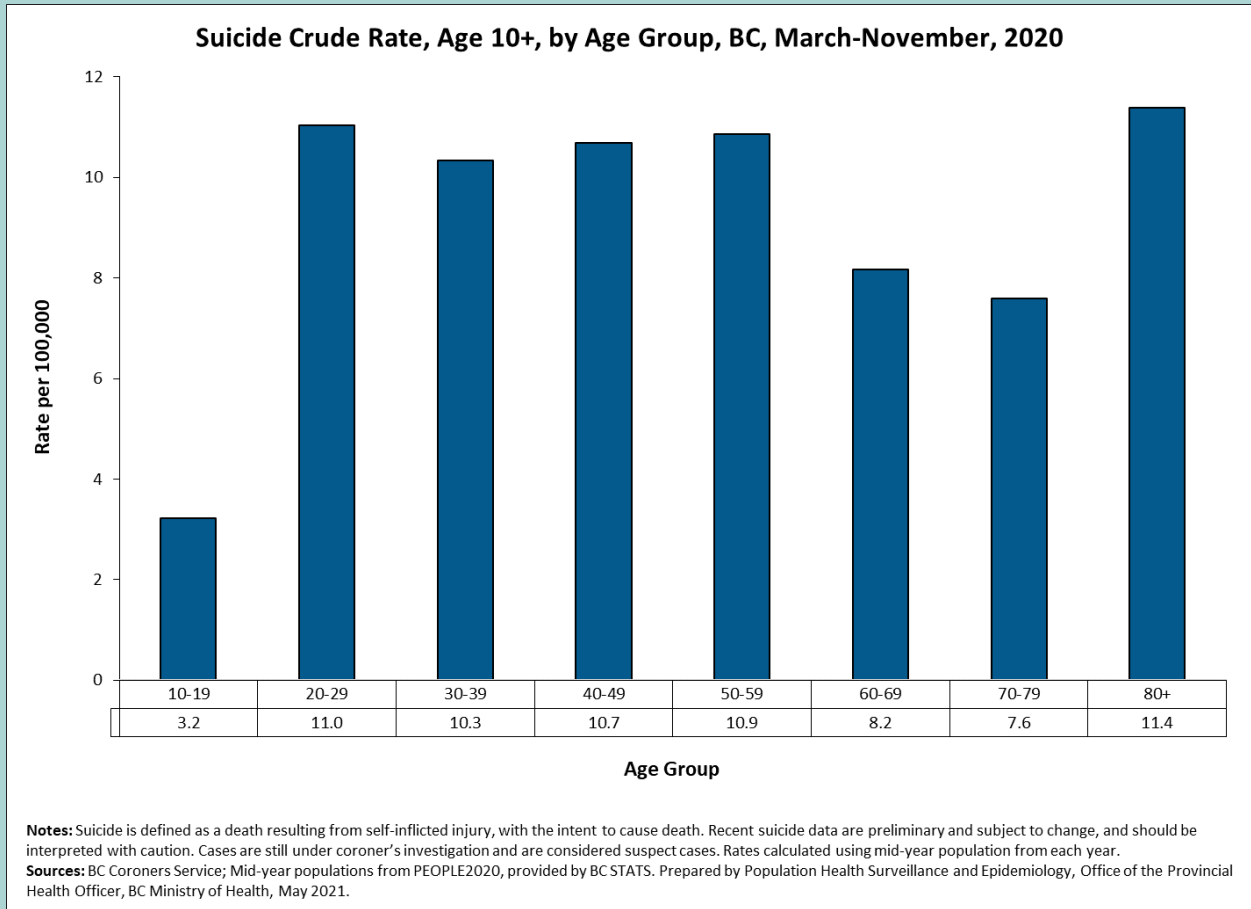


Figure 8 shows the nine-month suicide rate in BC for March to November 2020, by age group. Suicide rates among youth (age 10–19) were lower than for all other age groups. The March to November 2020 suicide rate for those age 80+ (11.4 per 100,000 population) was the highest among all age groups for this period. This may reflect increased illness and social isolation and reduced physical and social support due to physical distancing measures. Similarly elevated rates among all working-age groups (age 20–59) may reflect stressors such as lost income, loss of employment, missed educational opportunities, increased demands for child and elder care, and difficulty accessing mental health care during the pandemic.

## Equity Considerations

As described in this report, COVID-19 response measures may worsen existing inequities and exacerbate mental illness, thus increasing the risk of self-harm and/or suicide among already high-risk and/or marginalized populations. These include the following:

- People with a pre-existing mental health condition or illness<sup>50</sup> and/or substance use disorder.<sup>51</sup>
- Indigenous peoples (especially youth).<sup>52</sup>
- People (especially youth) who identify as transgender, gender non-conforming, non-binary, LGBTQ+, and/or Two-Spirit.<sup>8,9,10,53</sup>
- Youth. A larger percentage of young adults had suicidal thoughts than other age groups (19 per cent of those age 18–24 and 21 per cent of those age 25–34).<sup>41</sup>
- Parents of young children who lack access to childcare. During COVID-19, 13 per cent of parents surveyed reported suicidal thoughts due to stress associated with increased childcare burden.<sup>41</sup> This may affect females disproportionately.
- People (especially older adults<sup>54,55</sup>) living with poor health, disability,<sup>23</sup> and chronic pain.<sup>24,25</sup>
- Front-line workers (including nurses<sup>56</sup>) and people who have had COVID-19.<sup>26,57</sup>
- People at risk of domestic/intimate partner violence, who are disproportionately female.<sup>29,30</sup>
- People with lower socio-economic status (e.g., lower income, lower levels of education, unemployed or at risk of unemployment or homelessness, living in poverty).<sup>23,27,58,59</sup> Loss of employment has increased for all working-age groups in BC since the start of the pandemic, but is most severe among youth (15–24 years) and females.<sup>60</sup> Research suggests that increased unemployment could increase suicide risk by 20 to 30 per cent worldwide.<sup>61,62</sup>
- Residents of rural/remote communities who may have reduced access to mental health, social, and emergency services.<sup>26</sup>

Data presented here also show that males (especially youth and middle-aged/older men) are more likely to commit suicide, while females (especially young women and girls) and non-binary/transgender youth and adults are at higher risk of hospitalization due to attempted suicide and/or self-harm.

Suicidal thoughts were more commonly reported during the pandemic and escalated as the pandemic progressed. Before the pandemic, 2.5 per cent of Canadians reported having had suicidal thoughts in the previous year.<sup>12</sup> During the pandemic, a repeated survey of 3,000 people found that the proportion of Canadians who reported suicidal thoughts increased from 6 per cent in May 2020 to 10 per cent in September 2020.<sup>63</sup> According to this survey, between May and September 2020, suicidal thoughts increased substantially among the following groups:

- LGBTQ2+ (from 14% to 28%);
- People with a pre-existing mental health condition (from 18% to 27%);
- People with a disability (from 15% to 24%);
- Indigenous peoples (from 16% to 20%); and
- Parents of children under age 18 (from 9% to 13%).<sup>41</sup>

## Indigenous Peoples and Reconciliation

Indigenous peoples' diverse ancestral knowledge systems of health and wellness have enabled them to survive multiple pandemics since contact with European settlers; however, Indigenous peoples did not come into the pandemic on equal footing. Due to the ongoing harms of historic and current colonialism, institutional racism, and systemic violence, self-harm and suicide were already disproportionately high for Indigenous peoples and communities.<sup>52,64</sup> There are reports of COVID-19 contributing to a rise in Indigenous peoples' distress and increase in accessing mental health crisis services for support related to anxiety, loneliness, and significantly, substance use.<sup>65</sup>

Due to this unique context, and in recognition of the inherent rights of Indigenous peoples to tell their own health and wellness stories, a report examining the effects of COVID-19 response measures on self-harm and suicides among Indigenous peoples is being prepared in collaboration with Indigenous partner organizations (see the "Indigenous Health and Wellness" tab on the Examining the Societal Consequences website to access this report).

## Actions Initiated or Planned to Address Unintended Consequence

- **Province of BC:** offers a website with information for accessing support services for self-harm and suicide (<https://www2.gov.bc.ca/gov/content/mental-health-support-in-bc/suicide-and-self-harm>).
- **BC Ministry of Mental Health and Addictions:** \$5 million for virtual mental health supports, with a focus on front-line health care workers, youth and families, and isolated seniors. Programs include virtual counselling services, peer support, and stress management during COVID-19.<sup>2</sup> In December 2020, the Ministry invested \$2.3 million in suicide prevention programs for Indigenous youth and post-secondary students.<sup>66</sup>
- **BC Ministry of Social Development and Poverty Reduction:** emergency financial support for people on income or disability assistance and low-income seniors, and COVID-19 resources for Community Living BC clients and families.<sup>67</sup>
- **BC Ministry of Municipal Affairs and Housing:** temporary rental supplements and amended Tenancy Policy Guidelines to increase protection for renters.<sup>68</sup>
- **Canadian Mental Health Association:** developing a report with the University of British Columbia on the effects of COVID-19 on vulnerable populations.<sup>69</sup>
- **Current Research in BC:** John Ogrodniczuk (UBC) is researching men's experiences, including men's health and suicide, during the COVID-19 pandemic.<sup>70</sup>

## Considerations for Further Action

Although immediate increases in self-harm and suicide due to the pandemic and associated response measures have not been seen, as this report indicates, risk has increased among several populations. It is therefore important to monitor trends in risk factors such as depression and substance use and ensure there are ample mental health and crisis intervention supports available to prevent a delayed surge.

Repercussions of COVID-19 and the response measures may still have an impact on self-harm, suicidal ideation, and suicide deaths in the longer term.<sup>44</sup>

- Continue to monitor suicide rates and risk and protective factors, particularly for at-risk populations (e.g., non-binary, female, and Indigenous youth).
- Implement a coordinated cross-ministry campaign to raise awareness of self-harm and suicide and promote resilience. Include a focus on existing peer and community supports.<sup>71</sup>
- Develop strategies to promote population mental health and wellness<sup>72</sup> and reduce the risk of self-harm and suicide, including but not limited to the following:
  - Refresh and expand the provincial [Suicide PIP Framework for BC](#).
  - Promote best practices from the [Provincial Suicide Prevention Clinical Framework](#).
  - Expand access to mental health and substance use services.<sup>26,73</sup>
  - Update provincial mental health strategies in BC such as *A Pathway to Hope: a roadmap for making mental health and addictions care better for people in British Columbia*<sup>18</sup> to reflect the increased and changed need for services that COVID-19 is creating, including monitoring, expanding prevention and treatment, and addressing challenges to accessing services.
- Reduce wait-times for mental health services.
- Work to reduce stigma and emphasize the importance of seeking help if experiencing suicidal thoughts.
- Enhance social connectedness and cohesion, and other protective factors.
- Facilitate active coping strategies and health promoting behaviours including stress management, substance use reduction, physical activity, and sleep hygiene.
- Develop evidence-based resources for parents and caregivers to support youth and young adults at risk of suicide.
- Support curricula for social and emotional learning and resilience, and enhance access to counselling in school settings.
- Address the impact of school closures on children and youth and their mental health and wellness. This includes addressing their increased stress and anxiety regarding the pandemic, as well as addressing the lost months of social, peer and teacher/mentor supports and services for mental health, self-harm and suicidal ideation/completion.
- Work in meaningful partnership with Indigenous rightsholders and Indigenous organizations to implement culturally safe and appropriate mental health services that arrest racism and address experiences of colonialism, collective trauma and genocide, and current pandemic fears and stress.

## Appendix A: Data methodology notes

### 1. Charts provided by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer.

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### 2. Data table for Figure 5: Monthly suicide death counts, Age 10+, BC, January 2015 to July 2020

Month \ Year	2015	2016	2017	2018	2019	2020
Jan	56	62	46	43	54	61
Feb	45	54	39	40	54	60
Mar	43	57	66	48	57	48
Apr	52	49	48	41	56	37
May	60	49	50	63	63	39
Jun	52	50	46	52	45	60
Jul	56	45	62	62	49	52
Aug	58	50	58	44	61	
Sep	50	49	33	54	64	
Oct	61	56	43	55	41	
Nov	33	38	40	41	50	
Dec	49	44	42	35	54	

**Notes:** Suicide is defined as a death resulting from self-inflicted injury, with the intent to cause death. Recent suicide data are preliminary and subject to change, and should be interpreted with caution. Causes are still under coroner's investigation and are considered suspect cases. Rates calculated using mid-year population from each year.

**Source:** BC Coroners Service, Mid-year populations from PEOPLE2020. Prepared by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, January 2021.

### 3. Methodology

Figures 1 to 4 report on hospitalizations (i.e., number of hospital inpatient admissions) due to injuries determined to be caused by self-harm. Case ascertainment follows the framework of the BC Injury Surveillance Working Group, which is briefly summarized here. This methodology excludes patients admitted for day surgery, records without an external cause of injury ICD-10 code **and** a diagnosis of injury ICD-10 code. Secondary diagnosis (type 3) are excluded from case ascertainment. Complications due to medical and surgical care are excluded from case ascertainment. Sequelae of injury are excluded from case ascertainment. Direct transfers of inpatients between acute care facilities generate multiple records but are only counted as one hospitalization. After considering these inclusion and exclusion criteria, hospital admissions with an external cause of injury along with a diagnosis of self-harm (ICD-10-CA codes X60-X84 and Y87.0) are identified as self-harm injury hospitalizations.

Figures 5 to 8 report on suicide deaths, which are defined as a death resulting from self-inflicted injury, with the intent to cause death, based on the coroner's investigation. The BC Coroners Service states that data and trends for 2020 and 2021 should be interpreted with caution as the data require time to settle. Cases that are currently classified as undetermined may be updated and those classified as suicide may also change as the coroner's investigation concludes.

## References

- 1 BC Ministry of Mental Health and Addictions. New virtual mental health supports for COVID-19 on the way [news release]. Victoria, BC: BC Ministry of Mental Health and Addictions; 2020 Apr 09 [cited 2021 May 27]. Available from: <https://news.gov.bc.ca/releases/2020MMHA0009-000655>.
- 2 Government of British Columbia. Virtual mental health supports during COVID-19 [Internet]. Victoria, BC: Government of British Columbia; 2020 Jun 30 [cited 2020 Aug 21]. Available from: <https://www2.gov.bc.ca/gov/content/health/managing-your-health/mental-health-substance-use/virtual-supports-covid-19>.
- 3 Canadian Mental Health Association, British Columbia Division. Self-harm [Internet]. Vancouver, BC: Canadian Mental Health Association, British Columbia Division; [cited 2020 Sep 24]. Available from: <https://cmha.bc.ca/documents/self-harm-2/>.
- 4 National Alliance on Mental Illness. Self-harm [Internet]. Arlington, VA: National Alliance on Mental Illness; [cited 2021 Apr 28]. Available from: <https://www.nami.org/About-Mental-Illness/Common-with-Mental-Illness/Self-harm>.
- 5 Canadian Mental Health Association Centre for Suicide Prevention. Self-harm and suicide toolkit [Internet]. Calgary, AB: Canadian Mental Health Association Centre for Suicide Prevention; [cited 2021 Apr 06]. Available from: <https://www.suicideinfo.ca/self-harm-suicide-toolkit/>.
- 6 Skinner R, McFaul S, Draca J, Frechette M, Kaur J, Pearson C, et al. Suicide and self-inflicted injury hospitalizations in Canada (1979 to 2014/15). *Health Promot Chronic Dis Prev Can*. 2016;36(11):243–51.
- 7 Public Health Agency of Canada. Suicide in Canada: infographic [Internet]. Ottawa, ON: Public Health Agency of Canada; 2016 [cited 2020 Dec 08]. Available from: <https://www.canada.ca/en/public-health/services/publications/healthy-living/suicide-canada-infographic.html>.
- 8 Aitken M, VanderLaan DP, Wasserman L, Stojanovski S, Zucker KJ. Self-harm and suicidality in children referred for gender dysphoria. *J Am Acad Child Adolesc Psychiatry*. 2016;55(6):513–20.
- 9 Veale JF, Watson RJ, Peter T, Saewyc EM. Mental health disparities among Canadian transgender youth. *J Adolesc Health*. 2017;60(1):44–9.
- 10 Smith A, Peled M, Reinhart S, Thawer Z, McCreary Centre Society. Doing OK? Checking in on the mental health of BC youth. Vancouver, BC: McCreary Centre Society; 2021.
- 11 Crosby AE, Ortega L, Melanson C. Self-directed violence surveillance: uniform definitions and recommended data elements. Version 1.0. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2011.
- 12 Public Health Agency of Canada. Suicide in Canada: key statistics (infographic) [Internet]. Ottawa, ON: Public Health Agency of Canada; 2020 [cited 2021 Feb 12]. Available from: <https://www.canada.ca/en/public-health/services/publications/healthy-living/suicide-canada-key-statistics-infographic.html>.
- 13 Canadian Mental Health Association, British Columbia Division. Suicide—facts and figures [Internet]. Vancouver, BC: Canadian Mental Health Association, British Columbia Division; [cited 2021 Apr 28]. Available from: <https://cmha.bc.ca/suicide-facts-and-figures/>.
- 14 Canadian Institute for Health Information. Thousands of Canadians a year are hospitalized or die after intentionally harming themselves [Internet]. Ottawa, ON: Canadian Institute for Health Information; [cited 2021 Feb 12]. Available from: <https://www.cihi.ca/en/thousands-of-canadians-a-year-are-hospitalized-or-die-after-intentionally-harming-themselves>.
- 15 Bradvik L. Suicide risk and mental disorders. *Int J Env Resol Public Health*. 2018 Sep;15(9):2028.
- 16 Klonsky ED, May AM. The three-step theory (3ST): a new theory of suicide rooted in the “ideation-to-action” framework. *Int J Cogn Ther*. 2015;8(2):114–29.
- 17 BC Coroners Service. Suicide deaths in BC, 2008–2018. Vancouver, BC: BC Ministry of Public Safety and Solicitor General; 2020 Apr 22 [cited 2021 Apr 29]. Available from: <https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/suicide.pdf>.
- 18 BC Ministry of Mental Health and Addictions. A pathway to hope: a roadmap for making mental health and addictions care better for people in British Columbia. Victoria, BC: BC Ministry of Mental Health and Addictions; 2019 [cited 2021 Apr 29]. Available from: [https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/initiatives-plans-strategies/mental-health-and-addictions-strategy/bcmentalhealthroadmap\\_2019web-5.pdf](https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/initiatives-plans-strategies/mental-health-and-addictions-strategy/bcmentalhealthroadmap_2019web-5.pdf).
- 19 Goldmann E, Galea S. Mental health consequences of disasters. *Annu Rev Public Health*. 2014;35:169–83.
- 20 Bachmann S. Epidemiology of suicide and the psychiatric perspective. *Int J Environ Res Public Health*. 2018;15(7).
- 21 United Nations. Policy brief: COVID-19 and the need for action on mental health. Geneva, Switzerland: United Nations; 2020 May 13 [cited 2020 Dec 03]. Available from: <https://unsdg.un.org/sites/default/files/2020-05/UN-Policy-Brief-COVID-19-and-mental-health.pdf>.
- 22 Ceniti AK, Heinecke N, McInerney SJ. Examining suicide-related presentations to the emergency department. *Gen Hosp Psychiatry*. 2020;63:152–7.
- 23 UBC News. COVID-19 survey highlights growing suicide and mental health risks across various groups [Internet]. Vancouver, BC: University of British Columbia; 2020 Jun 25 [cited 2020 Aug 26]. Available from: <https://news.ubc.ca/2020/06/25/covid-19-survey-highlights-growing-suicide-and-mental-health-risks-across-various-groups/>.
- 24 Ilgen MA, Bohnert ASB, Ganoczy D, Bair MJ, McCarthy JF, Blow FC. Opioid dose and risk of suicide. *Pain*. 2016;157(5):1079–84.
- 25 Sinyor M, Tse R, Pirkis J. Global trends in suicide epidemiology. *Curr Opin Psychiatry*. 2017;30(1):1–6.



- 26** Gunnell D, Appleby L, Arensman E, Hawton K, John A, Kapur N, et al. Suicide risk and prevention during the COVID-19 pandemic. *Lancet Psychiatry*. 2020 Jun 01;7(6):468-71.
- 27** Elbogen EB, Lanier M, Montgomery AE, Strickland S, Wagner HR, Tsai J. Financial strain and suicide attempts in a nationally representative sample of US adults. *Am J Epidemiol*. 2020 Nov;189(11):1266-74.
- 28** BC Women's Health Foundation. 10 facts on gender-based violence [Internet]. Vancouver, BC: BC Women's Health Foundation; 2020 [cited 2020 Sep 24]. Available from: <https://www.bcwomensfoundation.org/10-facts-on-gender-based-violence/>.
- 29** Devries KM, Mak JY, Bacchus LJ, Child JC, Falder G, Petzold M, et al. Intimate partner violence and incident depressive symptoms and suicide attempts: a systematic review of longitudinal studies. *PLoS Med*. 2013;10(5):e1001439.
- 30** van Gelder N, Peterman A, Potts A, O'Donnell M, Thompson K, Shah N, et al. COVID-19: reducing the risk of infection might increase the risk of intimate partner violence. *EClinicalMedicine*. 2020;21:100348.
- 31** Clay JM, Parker MO. Alcohol use and misuse during the COVID-19 pandemic: a potential public health crisis? *Lancet Public Health*. 2020;5(5):e259.
- 32** Erlangsen A, Banks E, Joshy G, Calear AL, Welsh J, Batterham PJ, et al. Measures of mental, physical, and social wellbeing and their association with death by suicide and self-harm in a cohort of 266,324 persons aged 45 years and over. *Soc Psychiatry Psychiatr Epidemiol*. 2020;56:295-303.
- 33** Conejero I, Berrouiguet S, Ducasse D, Leboyer M, Jardon V, Olié E, et al. Épidémie de COVID-19 et prise en charge des conduites suicidaires: challenge et perspectives. *Encephale*. 2020;46(3S):S66-72.
- 34** Yao H, Chen J-H, Xu Y-F. Patients with mental health disorders in the COVID-19 epidemic. *Lancet Psychiatry*. 2020;7(4):e21.
- 35** Robertson E, Hershenfield K, Grace SL, Stewart DE. The psychosocial effects of being quarantined following exposure to SARS: a qualitative study of Toronto health care workers. *Can J Psychiatry*. 2004;49(6):403-7.
- 36** CBC. Crisis lines face volunteer, cash crunch even as COVID-19 drives surge in calls [Internet]. Vancouver, BC: CBC; 2020 [cited 2020 Aug 20]. Available from: <https://www.cbc.ca/news/canada/british-columbia/crisis-lines-cash-volunteer-crunch-covid-19-coronavirus-1.5546202>.
- 37** Pablo C. COVID-19: calls to crisis line of Vancouver's Battered Women's Support Services rise over 100 percent [Internet]. The Georgia Straight. 2020 Mar 27 [cited 2020 Sep 21]. Available from: <https://www.straight.com/covid-19-pandemic/vancouver-battered-womens-support-services-rise-over-100-percent>.
- 38** BC Women's Health Foundation. Women and COVID-19 [Internet]. Vancouver, BC: BC Women's Health Foundation; 2020 [cited 2020 Aug 14]. Available from: <https://www.bcwomensfoundation.org/women-and-covid-19/>.
- 39** Statistics Canada. Impacts of COVID-19 on Canadians: data collections series, mental health, public use microdata file. Prepared by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health; 2020.
- 40** University of British Columbia, Canadian Mental Health Association. COVID-19 effects on the mental health of vulnerable populations. Vancouver, BC: University of British Columbia, Canadian Mental Health Association; 2020 [cited 2021 May 10]. Available from: [https://cmha.ca/wp-content/uploads/2020/06/EN\\_UBC-CMHA-COVID19-Report-FINAL.pdf](https://cmha.ca/wp-content/uploads/2020/06/EN_UBC-CMHA-COVID19-Report-FINAL.pdf).
- 41** University of British Columbia, Canadian Mental Health Association. Summary of findings: mental health impacts of COVID-19: Wave 2. Vancouver, BC: University of British Columbia, Canadian Mental Health Association; 2020.
- 42** City of Vancouver Social Policy and Projects Research and Data Team. Populations disproportionately impacted by COVID 19: current state assessment. Vancouver, BC: City of Vancouver; 2021 Jan [cited 2021 Apr 30]. Available from: <https://vancouver.ca/files/cov/pdi-covid-current-state-report-january-2021.pdf>.
- 43** BC Coroners Service. BC Coroners Service (BCCS) suicide data – knowledge update to August 31, 2020. Vancouver, BC: BC Ministry of Public Safety and Solicitor General; [cited 2020 Oct 06]. Available from: [https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/suicide\\_knowledge\\_update.pdf](https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/suicide_knowledge_update.pdf).
- 44** Luymes G. BC suicide rate declined 26 per cent in first eight months of COVID pandemic. Vancouver Sun. 2021 Apr 17 [cited 2021 Jun 01]. Available from: <https://vancouver.sun.com/health/b-c-suicide-rate-declined-26-per-cent-in-first-eight-months-of-covid-pandemic>.
- 45** Gordon KH, Bresin K, Dombeck J, Routledge C, Wonderlich JA. The impact of the 2009 Red River flood on interpersonal risk factors for suicide. *Crisis*. 2011;32(1):52-5.
- 46** De Leo D, Too LS, Kölves K, Milner A, Ide N. Has the suicide rate risen with the 2011 Queensland floods? *J Loss Trauma*. 2013;18(2):170-8.
- 47** Tanaka T, Okamoto S. Suicide during the COVID-19 pandemic in Japan [Internet]. medRxiv. 2020 [cited 2021 Jan 07]. Available from: <http://dx.doi.org/10.1101/2020.08.30.20184168>.
- 48** BC Coroners Service. No increase in suicide deaths during pandemic [news release]. Victoria, BC: BC Ministry of Public Safety and Solicitor General; 2021 May 18 [cited 2021 May 26]. Available from: <https://news.gov.bc.ca/releases/2021PSSG0043-000929>.
- 49** BC Coroners Service. Mid-year populations from PEOPLE2020. Prepared by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health; 2020 Oct.
- 50** Moreno C, Wykes T, Galderisi S, Nordentoft M, Crossley N, Jones N, et al. How mental health care should change as a consequence of the COVID-19 pandemic. *Lancet Psychiatry*. 2020 Jul 16.
- 51** Canadian Centre on Substance Use and Addiction, the Mental Health Commission of Canada. Mental health and substance use during COVID-19: summary report. Ottawa, ON: Canadian Centre on Substance Use and Addiction, the Mental Health Commission of Canada; [cited 2021 Jun 02]. Available from: [https://www.mentalhealthcommission.ca/sites/default/files/2021-04/mhcc\\_ccsa\\_covid\\_leger\\_poll\\_eng.pdf](https://www.mentalhealthcommission.ca/sites/default/files/2021-04/mhcc_ccsa_covid_leger_poll_eng.pdf).

- 52** Hunter E, Harvey D. Indigenous suicide in Australia, New Zealand, Canada, and the United States. *Emerg Med (Fremantle)*. 2002;14(1):14–23.
- 53** Saewyc EM, Li G, Gower AL, Watson RJ, Erickson D, Corliss HL, et al. The link between LGBTQ-supportive communities, progressive political climate, and suicidality among sexual minority adolescents in Canada. *Prev Med*. 2020;139:106191.
- 54** Neufeld E, Hirdes JP, Perlman CM, Rabinowitz T. Risk and protective factors associated with intentional self-harm among older community-residing home care clients in Ontario, Canada: self-harm among older adults in home care. *Int J Geriatr Psychiatry*. 2015;30(10):1032–40.
- 55** Fässberg MM, Cheung G, Canetto SS, Erlangsen A, Lapierre S, Lindner R, et al. A systematic review of physical illness, functional disability, and suicidal behaviour among older adults. *Aging Ment Health*. 2016;20(2):166–94.
- 56** Havaei F, MacPhee M, Ma A, Gear A, Sorensen C. A provincial study of nurses' COVID-19 experiences and psychological health and safety in British Columbia, Canada: executive summary. Vancouver, BC: University of British Columbia and BC Nurses' Union; 2020 [cited 2021 Jun 01]. Available from: [https://www.bcnu.org/Safe-Workplace/HealthSafety/Documents/Survey\\_Document\\_SH\\_Region.pdf](https://www.bcnu.org/Safe-Workplace/HealthSafety/Documents/Survey_Document_SH_Region.pdf).
- 57** Sher L. Post-COVID syndrome and suicide risk. *QJM*. 2021 Apr 27;114(2):95-8.
- 58** Stuckler D, Basu S, Suhrcke M, Coutts A, McKee M. The public health effect of economic crises and alternative policy responses in Europe: an empirical analysis. *Lancet*. 2009;374(9686):315–23.
- 59** Zandy M, Zhang LR, Kao D, Rajabali F, Turcotte K, Zheng A, et al. Area-based socioeconomic disparities in mortality due to unintentional injury and youth suicide in British Columbia, 2009–2013. *Health Promot Chronic Dis Prev Can*. 2019;39(2):35–44.
- 60** Statistics Canada. Table 14-10-0017-02. Labour force characteristics by province, monthly, unadjusted for seasonality. Ottawa, ON: Statistics Canada; 2020.
- 61** Nordt C, Warnke I, Seifritz E, Kawohl W. Modelling suicide and unemployment: a longitudinal analysis covering 63 countries, 2000–11. *Lancet Psychiatry*. 2015 Mar;2(3):239-45.
- 62** McIntyre RS, Lee Y. Projected increases in suicide in Canada as a consequence of COVID-19. *Psychiatry Research*. 2020 Aug; 290:113104.
- 63** University of British Columbia Faculty of Medicine. New national survey finds Canadians' mental health eroding as pandemic continues [Internet]. Vancouver, BC: University of British Columbia; 2020 Dec 03 [cited 2021 May 27]. Available from: <https://www.med.ubc.ca/news/new-national-survey-finds-canadians-mental-health-eroding-as-pandemic-continues/>.
- 64** Smith A, Poon C, Martin-Ferris S, Beggs MK, McCreary Centre Society. Ta Saantii Deu/Neso: a profile of Métis youth health in BC. Vancouver, BC: McCreary Centre Society; 2019 [cited 2020 Apr 28]. Available from: [https://www.mcs.bc.ca/pdf/ta\\_saantii\\_deu\\_neso.pdf](https://www.mcs.bc.ca/pdf/ta_saantii_deu_neso.pdf).
- 65** Auger O. Indigenous Crisis Line KUU-US Sees Rise in COVID-19 Related Calls. *IndigiNews*. 2020. [Internet, cited: 2020 Sep 28] Available from: <https://indiginews.com/vancouver-island/indigenous-crisis-line-kuu-us-sees-rise-in-covid-19-related-calls?fbclid=IwAR3YXoT7mW2tZMGuH3VHx27hn6HjR0k4AOdUyYIQ48IUj2HVkWDtORUB7ik>.
- 66** BC Ministry of Mental Health and Addictions. Expanded suicide prevention programs support Indigenous youth, post-secondary students [news release]. Victoria, BC: BC Ministry of Mental Health and Addictions; 2020 Dec 03 [cited 2021 Apr 29]. Available from: <https://news.gov.bc.ca/releases/2020MMHA0063-001999>.
- 67** Government of British Columbia. COVID-19 support for people with disabilities [Internet]. Victoria, BC: Government of British Columbia; 2020 Aug 17 [cited 2020 Aug 21]. Available from: <https://www2.gov.bc.ca/gov/content/family-social-supports/income-assistance/on-assistance/covid/support-people-disabilities>.
- 68** Government of British Columbia. COVID-19 and tenancies [Internet]. Victoria, BC: Government of British Columbia; 2020 Aug 14 [cited 2020 Aug 21]. Available from: <https://www2.gov.bc.ca/gov/content/housing-tenancy/residential-tenancies/covid-19>.
- 69** University of British Columbia. Assessing the mental health impacts of COVID-19: a national survey study [Internet]. Vancouver, BC: University of British Columbia; 2020 [cited 2021 May 03]. Available from: <https://covid19.research.ubc.ca/research/assessing-mental-health-impacts-covid-19-national-survey-study>.
- 70** University of British Columbia. Men's experiences of the COVID pandemic [Internet]. Vancouver, BC: University of British Columbia; 2020 [cited 2021 May 03]. Available from: <https://covid19.research.ubc.ca/research/mens-experiences-covid-pandemic>.
- 71** Mann JJ, Apter A, Bertolote J, Beautrais A, Currier D, Haas A, et al. Suicide prevention strategies: a systematic review. *JAMA*. 2005;294(16):2064–74.
- 72** Canadian Public Health Association. A public health approach to population mental wellness. Ottawa, ON: Canadian Public Health Association; 2021 Mar 02 [cited 2021 Jun 01]. Available from: <https://www.cpha.ca/public-health-approach-population-mental-wellness>.
- 73** Torok M, Han J, Baker S, Werner-Seidler A, Wong I, Larsen ME, et al. Suicide prevention using self-guided digital interventions: a systematic review and meta-analysis of randomised controlled trials. *Lancet Digit Health*. 2020;2(1):e25–36.

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