

Responding to a Mental Health and Addiction Tsunami

Backgrounder

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OMAThoughts

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Executive summary

The COVID-19 pandemic and resulting economic recession and social restrictions have negatively affected many people's mental health. Past epidemics have been shown to induce general stress across a population: a broad body of research links the resulting social isolation and loneliness to poor mental and physical health. Unsurprisingly, there is evidence that people with mental health issues and substance use disorders have experienced a worsening of their symptoms during the COVID-19 pandemic, largely due to challenges in accessing mental health-related resources and supports during this unprecedented time of uncertainty and fear. This is occurring in the context of a pre-existing opioid and overdose epidemic also made worse by the restrictions imposed in response to the pandemic. Public health measures like business closures and bans on gatherings, while necessary to help subdue transmission, are contributing to isolation and job loss, putting many people at risk of poor mental health outcomes.

Recognizing the toll that the COVID-19 pandemic has taken on people's mental health, federal and provincial governments have responded with mental health- and addiction-related resources and supports and measures to protect citizens' physical and financial well-being. However, as the pandemic continues, it is critical that governments, political leaders and health organizations continue to put mental health at the forefront of policy discussions and decision-making. A recent survey conducted by the Centre for Addiction and Mental Health (CAMH) revealed that seven out of 10 Ontarians believe there will be a "serious mental health crisis" after the pandemic. This belief seems justified, given that previous health and economic crises have been linked to severe, long-lasting negative mental health impacts at both the individual and population level.

Unfortunately, Canada was already facing a critical mental health crisis prior to the onset of the COVID-19 pandemic. The pandemic has exacerbated these issues and highlighted the importance of adequate and timely mental health and addiction resources, supports, access and care, particularly for vulnerable populations, such as caregivers (including health-care professionals), individuals with pre-existing mental health challenges, children and youth, and individuals who have been infected by the COVID-19 virus. Leaving these issues unaddressed will have detrimental social and economic costs and further strain a health-care system that is already overburdened. The ultimate consequence is the preventable loss of life through suicide or overdose, which has a devastating impact on family members, friends and peers.

As a result, any effective strategy intended to address the mental health challenges posed by the pandemic must take a systemic approach to mental health and addiction care and offer long-term, broad, multi-faceted solutions. Initiatives to increase health-system capacity and improve access to resources and supports must be taken immediately to enable early identification and intervention, prevent long-term complications and disability, enhance quality

of life and reduce suffering. In this technical backgrounder, the Ontario Medical Association (OMA) highlights the COVID-19 pandemic’s mental health impacts on various populations to inform recommendations meant to address the “parallel pandemic” of mental health and addiction challenges.

The COVID-19 pandemic and general mental health

The COVID-19 pandemic has disrupted everyone’s lives in unprecedented ways. Every day, Ontarians face new challenges stemming from fear of illness, the need to care for sick loved ones, disrupted routines, isolation, possible or actual job loss, remote learning at school and tremendous uncertainty about the future. Millions have been confined to their homes, with many now working exclusively from home and others having lost their jobs. Parents face the daunting task of home-schooling their children—sometimes while performing their own work—during lengthy school closures. Residents of long-term care facilities have been at high risk of infection and death and have been denied visits from loved ones. Health-care workers—many of whom were already experiencing high levels of burnout prior to the pandemic—have faced unrelenting pressure and stress from shortages of personal protective equipment (PPE), high workloads and safety concerns. Tens of thousands of people have experienced symptoms of COVID-19 and been forced to await test results while worrying about their health and that of their friends and family. Moreover, large sections of the economy have been shut down in response to the COVID-19 pandemic, resulting in climbing levels of unemployment and job losses that will almost certainly have negative mental health impacts on those affected. Recent projections have estimated that COVID-19-related unemployment could result in anywhere from 418 to 2,114 excess deaths due to suicide in Canada in 2020 and 2021.

All Canadians have experienced numerous health warnings, the uncertainty of constantly changing public health requirements, and the general disruption of their family, social and work lives. A recent survey found that more than 50 per cent of Canadians reported declining mental health during the pandemic, with most respondents experiencing high levels of anxiety and stress. Similarly, in a survey conducted by the Conference Board and Mental Health Commission of Canada, 84 per cent of respondents reported a decline in their mental health during the pandemic, with the biggest stressors being family health and well-being, loneliness and isolation, and concerns about the future implications of the pandemic. Substance use has also increased substantially throughout the course of the pandemic. A Nanos poll for the Canadian Centre on Substance Use and Addiction found that about 20 per cent of Canadians have increased their use of alcohol since the pandemic began. Moreover, emerging evidence from various surveys has demonstrated an increase in officially diagnosed mental health disorders, including mood, eating, anxiety and substance-abuse disorders. It has also been suggested that individuals who had already been diagnosed with a mental health disorder have a higher risk of suffering adverse consequences from their underlying illness during the pandemic.

Unfortunately, conventional mental health approaches and diagnoses do not fully describe the complex mental health impacts of this pandemic because the fear, grief, social isolation and occupational losses from the COVID-19 pandemic have made this crisis unique. Given the constant changes and pressures imposed on numerous populations, it is clear that other unknown and sustained impacts on mental health will arise and need to be considered and addressed accordingly.

It is important to appreciate that the detrimental consequences of the pandemic have not been distributed equally across the population. Instead, the pandemic has exacerbated pre-existing health and social inequalities. For instance, it has been found that homeless or poverty-stricken individuals, members of the LGBTQ community, First Nations individuals and racialized populations face an increased risk of contracting COVID-19 and experience higher rates of morbidity and mortality compared to the general population. Furthermore, prior to the start of the pandemic, Canada was experiencing a severe opioid abuse epidemic, and this has only worsened since the pandemic began. A marked increase in hospitalizations due to withdrawal, overdose and related complications has been reported since March 2020.

The mental health impacts of the COVID-19 pandemic are occurring against a backdrop of underfunding in mental health services. The Mental Health Commission of Canada has estimated that approximately one in five individuals suffers from mental illness, leading to a cost of some \$51 billion per year in health-care expenses, lost productivity and reduced quality of life. Moreover, it has been noted that while mental illness accounts for about 10 per cent of the burden of disease in Ontario, it receives just seven per cent of health-care dollars. This means mental health care in Ontario is underfunded by about \$1.5 billion. At the federal level, compared to its Organisation for Economic Co-operation and Development counterparts, Canada is well behind, with some countries spending 10 to 11 per cent of their health-care budgets on mental health. This deficit is widening the gap in the system's ability to deliver timely interventions and adequate long-term care. To date, the government's response to the COVID-19 mental health crisis has focused on expanding virtual mental health services along with Ontario Health Insurance Plan (OHIP) coverage for mental health care offered by physicians. The Ontario Ministry of Health's COVID-19 resource page lists virtual care supports as a first-line service for people experiencing mental health issues during the pandemic, followed by a collection of public services. Despite doing exceptional work, many of these services are often underfunded and backlogged, resulting in limited access to these services for vulnerable populations.

The OMA's analysis of OHIP billing data shows that, overall, both the number of unique patients and total visits for mental health were down slightly during the first nine to 10 months of the

COVID-19 pandemic (in 2020) versus the same period in 2019. However, when disaggregated, the data showed different patterns during the early and later phases of the period and different findings by condition. Visits for major mental health conditions (such as major depression or bipolar disorder) dropped slightly from March to July 2020 compared to the same period in 2019. However, from August to December of 2020, more visits were billed than in the same segment of 2019. Visits for other mental health conditions (including anxiety and non-major depression) were up slightly during the first part of the COVID-19 pandemic in 2020 and rose considerably later in the year compared to 2019.

In contrast to the pattern seen for mental health conditions, visits for substance use disorders fell sharply year over year. However, the magnitude of the decline was much smaller during the second wave of the pandemic. Overall, the declines shown in the initial months of the pandemic likely reflect deferred care, because physicians and patients adapted to the need for COVID protocols (such as distancing and masks) during in-person care and began to explore options in virtual care. The patterns observed here suggest greater demand for care (versus a non-pandemic year) as the pandemic unfolded. This may reflect several factors, including greater availability of a range of care options (such as telephone or video appointments) and, likely, rising clinical need. Some challenges persist, particularly in terms of reaching patients who have substance use disorders. The long-term impacts of the pandemic on mental health and substance abuse are yet to be understood.

Epidemics have long been known to affect mental health. In fact, the mental challenges generated by viral outbreaks have been described as a “parallel epidemic.” These mental health problems can be broken down into five subtypes based on the subpopulation affected:

- People with pre-existing mental or substance use disorders.
- People who provide essential services and are at increased risk of infection.
- Individuals who have been infected by the virus.
- Other at-risk populations, such as caregivers and women.
- Children and youth.

As the professional voice of Ontario physicians, the OMA would like to draw attention to the largely silent epidemic that is occurring alongside the COVID-19 pandemic. As such, the objective of this paper is to examine the impact of the COVID-19 pandemic on the mental health of the population and suggest areas for attention. As the government attempts to mitigate the impact of the pandemic, we urge decision-makers to prioritize investments in mental health interventions and research so that individuals who are struggling with mental health and/or addiction challenges can receive the support they desperately require and so that

system-wide strategies addressing the mental health aftermaths of the pandemic can be implemented effectively.

Impact on individuals with pre-existing mental or substance use disorders

It has been suggested that individuals who had mental health and/or addiction challenges before the onset of the COVID-19 pandemic are at particular risk of severe impacts to their mental and physical health as a result of the pandemic. Disruptions in mental health care and supports due to distancing requirements may exacerbate mental health problems in those who rely on such services. For example, people who receive care as outpatients may seek support for everyday needs as well as to manage their conditions. But because of physical distancing orders and restrictions on contacts, they have become increasingly isolated and vulnerable to recurrences or exacerbations of their underlying illnesses.

Issues around prescription medications have also been flagged. For example, we know that some people who rely on prescription medications to manage their conditions are unaware of refill protocols that apply during lockdowns, so may fail to obtain the medications they need to comply with their psychopharmacological regimes, leading their symptoms to worsen. In December 2020, it was reported that Express Scripts Canada found that claims for selective serotonin reuptake inhibitors increased by 17 per cent in 2020 over 2019, rising to 20 per cent around Thanksgiving of 2020. The company said the increase was driven largely by first-time patients, and it expected the trend to continue as the COVID-19 pandemic lingers. This expectation highlights the increase in the number of people struggling with mental health over the course of the pandemic as well as the need to establish systems to support those who are being prescribed antidepressants for the first time.

As well, although the government has expanded virtual care services, policy makers, governments and health organizations must provide consideration to groups for whom online care is insufficient, particularly those with severe substance-abuse disorders who are (now) often unable to access the harm reduction locations and supplies they require for safe use, putting them at risk for overdose. Unfortunately, this is occurring in the context of a growing opioid epidemic and overdose crisis in Canada. This crisis, which the government has struggled to manage for years, has worsened significantly during the pandemic, largely because of a more toxic drug supply and service interruptions at harm reduction sites. Accordingly, opioid-related hospitalizations and deaths have been increasing since March 2020.

It should also be noted that generally, individuals with severe mental health- and addiction-related conditions tend to have many medical comorbidities. They are also more likely to smoke and be immunocompromised, which heightens their risk of respiratory complications. In

addition, those suffering from such conditions are more likely to be homeless or reside in group homes or shelters, which are typically prone to crowding, increasing their risk of COVID-19 virus transmission. Those with severe mental illnesses who are admitted to psychiatric facilities are also at an increased risk of contracting the virus, given the aging infrastructure of most facilities. Traditionally, these buildings were not designed with infection prevention or control in mind. They feature communal bathrooms, lack the capacity to separate infected patients from healthy patients, and do not have access to basic infection control tools or PPE.

Impact on essential service providers

Non–health-care workers

Individuals who provide essential services during the pandemic put themselves at significantly increased risk of exposure to the virus, particularly if they are not provided with the necessary supports required to stay safe and healthy. Of note, a unique characteristic of this pandemic is the broad, variable and often unclear definition of essential services. In addition to direct health-care providers, large parts of the retail and industrial sectors have required employees to remain at work to maintain the supply and distribution of necessities. Many of these essential workers are employed, sometimes precariously, in lower-paying jobs without extended health benefits or paid sick days. Despite the fear of risking their lives and the health of their families, these members of the workforce continue to report to work. Importantly, many are in jobs that require them to be in close proximity to others (e.g., home health aides, technicians, food production workers or transit employees), often with limited access to adequate PPE and other infection-control supplies. The jobs these individuals perform are critical to Canada’s continued social and economic functioning, yet the public rarely recognizes their importance or the hardships experienced by those who have performed them during the pandemic. Not surprisingly, emerging data illustrate that these low-income workers are increasingly struggling with stress, burnout and insomnia. Clearly, they need consideration and support so they can perform their jobs without becoming overwhelmed.

Overall, non–health-care essential workers are imperative during the pandemic, yet many are unprotected by systems that fail to provide them with the supplies and resources they need to do their jobs safely. After the pandemic has ended, we must not return to the status quo. We must ensure that essential workers are properly equipped to perform their jobs safely and effectively and entitled to paid sick leave.

Health-care workers

It has been found that health-care providers, in particular, are at increased risk of suffering mental health consequences from the COVID-19 pandemic due to their high rate of exposure to infection, stressors and trauma. Global studies of health-care providers delivering care to COVID-19 patients have revealed increased levels of anxiety and stress; one study found that

nearly 50 per cent had symptoms of depression, anxiety and insomnia. During transmission peaks, when the health-care system has been overwhelmed, health-care providers have experienced a number of simultaneous stressors: guidance changed rapidly and was often inconsistent; PPE was inadequate (especially during the first wave); working demands and hours were overextended; critical supplies were limited; and elective surgeries were postponed or cancelled, resulting in a substantial backlog of procedures. Under such conditions, health-care providers were at a heightened risk of contracting the virus while being forced to make critical decisions under high levels of stress. Unsurprisingly, pre-existing mental health conditions were exacerbated during this time: individuals who provided direct care to patients with the COVID-19 virus were three times more likely to develop symptoms of post-traumatic stress disorder than those not exposed to these conditions.

Prior to the start of the pandemic, an alarming number of Canadian physicians met the criteria for burnout. It has been reported that approximately one in three physicians and residents are affected by this issue. Burnout is a system-level problem. Studies have identified administrative burden, constantly changing technology, and the need to keep up with growing patient demands as some of the main causes of burnout, many of which are beyond the control of individual physicians. The continuous rise in COVID-19 cases has been shown to increase the stress of providers, with many reporting concerns related to the ability to maintain PPE supplies for themselves and patients, fear of getting sick, guilt for not being on the frontlines inability to maintain adequate PPE supplies, financial worries, difficulties connecting with patients, challenges related to providing virtual care, fear of poor system preparedness, and anxiety about facing patient death. A study published in the *Canadian Journal of Emergency Medicine* in June 2020 found that 86 per cent of Canadian emergency physicians—key front-line workers during the pandemic—met the criteria for burnout, and nearly six per cent had considered suicide. Alarmingly, based on limited data, it has been estimated that in Canada, approximately 30 to 40 physicians take their own lives each year. Aside from affecting physician health and wellness, burnout has been shown to have an impact on care delivery and to result in shortages of health human resources at a time when a robust workforce is desperately needed. As such, it is evident that policy makers and health system leaders should be significantly concerned about the acute and long-term mental health effects for front-line workers due to COVID-19.

Mitigating the stresses experienced by front-line workers requires preparation, co-ordination and sufficient essential services and supplies. It is imperative to prepare staff for anticipated challenges, increase services like peer support and designated help lines, and ensure widespread recognition and acceptance of the mental health challenges these individuals face. The mental health supports and interventions offered to front-line health-care workers must be variable, flexible and appropriate to the phase of the pandemic these workers are in (that is, the acute phase of the pandemic versus its aftermath). An important consideration regarding

workforce capacity in the post-pandemic period is that many front-line workers will likely require time to recuperate and recover to avoid or alleviate burnout and related mental health issues. Importantly, burnout must continue to be addressed at the system level. The OMA struck a Burnout Task Force in 2019 and will be outlining system-level recommendations to address this critical and timely issue.

Impact on individuals infected by the virus

The psychological and neuropsychiatric impacts of the COVID-19 pandemic on people who have recovered from the virus will vary and depend on several factors, including pre-existing vulnerabilities or medical conditions, resilience, severity of infection, availability of social supports and quality of care. However, given the wide range of experiences, as well as the lack of certainty surrounding the virus, it is likely that a significant number of COVID-19 survivors will experience a detrimental impact on their mental health.

Several unique mental health challenges pertaining to COVID-19 diagnosis and infection have been identified in the literature. For example, a significant percentage of COVID-19 sufferers had, or will have, less severe forms of COVID-19, with many not even knowing whether they had the virus or not. Such uncertainty is likely to lead to high levels of anxiety, with these individuals frequently forced to isolate themselves (and suffer the stress associated with doing so) regardless of whether they were actually infected. Moreover, infected individuals generally do not see their friends or family members in person for weeks; the lack of an active social support system can have detrimental effects on their emotional and psychological health. Additionally, because longitudinal research on the effects of COVID-19 has not been done yet, it is currently not known whether the virus may cause direct central nervous system consequences, as has occurred in previous pandemics. However, the severe pathology and immune dysfunction that occur because of the virus suggest that such long-term neuropsychiatric symptoms are likely. Preliminary evidence suggests that as many as one in three patients recovering from COVID-19 could experience neurological or psychological after-effects—a statistic that reflects the long-lasting impact of the virus on the brain. Importantly, it has been found that certain groups of Canadians are more vulnerable to the medical, economic and social impacts of COVID-19—and, therefore, more likely to suffer mental health impacts. For instance, it has been suggested that racialized individuals are more likely to suffer detrimental health consequences or death because of COVID-19. Although data stratified by race are limited in Canada, the available evidence suggests that communities with racialized populations have the highest rates of COVID-19 infection and hospitalizations related to the virus. Indigenous communities may also have increased vulnerability, particularly in remote areas where the availability and quality of services is insufficient. For example, many First Nations communities do not have access to clean water and suffer from overcrowding, resulting in challenges when it comes to infection prevention and control measures such as

handwashing and social distancing. Other groups who are vulnerable to infection and the impacts of COVID-19 include migrants and refugees, individuals with disabilities, dementia or low incomes, and individuals who live in precarious housing: these populations may lack access to home environments suitable for maintaining physical distancing and hygiene measures and/or the capacity to acquire necessities.

Based on research conducted with survivors of the severe acute respiratory syndrome (SARS) pandemic in the early 2000s, it has been posited that mental health challenges associated with contracting the COVID-19 virus will persist for an extended period. One study found that more than 60 per cent of SARS survivors demonstrated symptoms of depression, anxiety and post-traumatic stress disorder (PTSD) one year after recovering from the virus. Health-care providers who were infected with SARS were more likely to develop a mental illness than their non-health-care counterparts. Given the high reported rates of COVID-19 infection among Canadian health-care professionals and the large scale of the current global pandemic, policy makers must consider the significant mental health challenges this population will face.

Impact on other at-risk populations

Caregivers

Over the course of the pandemic, it has been found that certain segments of the Canadian population are more susceptible to the mental health effects of COVID-19 than others. One key population for consideration is caregivers: the family members, friends and neighbours who support someone with an illness, chronic disease or acute health-care condition. This was illustrated most clearly in the recent province-wide survey conducted by the Ontario Caregiver Organization on the impact of the COVID-19 pandemic on family caregivers. This survey found a significant increase in both the time and responsibilities of caregiving as well as the number of people serving as caregivers during the pandemic. Specifically, the survey reported that one-third of carers are new to caregiving in the past year; more than half have found it more difficult to manage their caregiving responsibilities since the COVID-19 outbreak; and caregivers are spending more hours on their caregiving responsibilities than they did before the pandemic, providing emotional and behavioural support, transportation and help with tasks around the home.

Unsurprisingly, this increased burden has had significant mental health consequences, leaving many of these individuals feeling lonely, isolated and depressed. Many of the caregivers in the study reported struggling to deal with their care recipient's anxiety over COVID-19 and its restrictions as well as an inability to take the breaks or access the social interaction they require, resulting in difficulties managing their own emotions. Of greater concern for caregivers is that more than three-quarters of those supporting someone with a mental health issue or addiction have found it difficult to access mental health support for their care recipient. The

financial impact for caregivers has also increased notably, with many reporting that they are incurring higher costs for caregiving and must spend more of their own money on COVID-19 related expenses. The financial toll of caregiving was growing even before the pandemic and is a trend the provincial government should respond to after the province enters the economic recovery period.

Gendered impacts

It has also been found that the stresses related to the need to balance employment, childcare and household duties during the pandemic have affected women disproportionately and resulted in increased stress and anxiety, particularly for single mothers, women who work full-time and women with multiple part-time jobs. On a related note, the consumption of recreational drugs and alcohol have increased substantially during the pandemic. Under such conditions, acts of violence or aggression between family members may be exacerbated. Accordingly, women, children and other vulnerable household members are at increased risk of witnessing or experiencing domestic violence while simultaneously facing greater difficulties in reaching out for help. For those who were already in abusive relationships, an increased frequency in acts of domestic violence have been reported because more vulnerable people are isolated in their homes with their abuser. Victims often lack the resources required to seek support and are unable to leave their homes to seek out assistance in private due to public health restrictions. The COVID-19 pandemic has put these vulnerable populations, many of whom are female, at heightened risk of detrimental health, economic and social outcomes from the pandemic and has underscored inequities in access to health care, housing, income and social supports in Canada.

Impact on children and youth

Childhood and adolescence are critical periods for developing the physical, social, emotional and cognitive skills needed to support lifelong healthy behaviours and mental health. The COVID-19 pandemic has disrupted the normal routines and activities that are essential for such development, and it has been posited that the disruption could result in significant mental health challenges for this population. Although there is currently insufficient evidence to predict the type, severity or duration of these challenges, it has been suggested that the psychological impacts will likely be widespread and long-lasting. Prior to the implementation of lockdown measures, studies suggested that 12.6 per cent of children and youth between the ages of four and 17 were likely experiencing clinically significant mental disorders at any given time; they were already facing extended wait times for treatment. Unfortunately, the pandemic has served to exacerbate the symptoms of these disorders, while COVID-19 restrictions have limited or even eliminated desperately needed support.

Despite the lack of literature surrounding the psychological effects of the COVID-19 pandemic on children and youth, research on the mental health impacts of previous pandemics can be utilized. To date, the existing research has identified children and youth as particularly

vulnerable to the mental health effects of infectious outbreaks and the public health measures used to contain them. For instance, a recent review of the psychological impacts of physical distancing and self-isolation during a pandemic demonstrated significantly negative psychological effects on children, including PTSD, anger, anxiety and confusion. The most common stressors identified in the review included lengthy duration of quarantine, fear of infection, boredom, inadequate information, financial loss in the family, and stigmatization. Similarly, a review that examined the psychological impacts of the H1N1 virus on some 400 parents and children across Canada and the United States found that the experience of social isolation and quarantine could be traumatizing to children. Specifically, it was found that symptoms of PTSD were four times higher in children who had been quarantined than in their non-quarantined counterparts, with a significant correlation between the children's PTSD symptoms and those of their parents.

Although limited in nature, Canadian data specifically surrounding the mental health impacts of the COVID-19 pandemic on children and youth paint a similar picture. A recent Statistics Canada survey regarding the effects of the pandemic on the general health of Canadians found that mental health has deteriorated during the COVID-19 pandemic. In a subsequent analysis of this survey of young people aged 15 to 25, it was found that family stress from confinement, concerns about the health of others, and an increase in substance use were the primary drivers of the decline in self-perceived mental health. Similarly, CAMH conducted a survey of more than 600 youth and young adults between the ages of 14 and 27 and found a statistically significant deterioration in their mental health from pre- to post-pandemic. Eighteen per cent of participants reported thinking about suicide in the month prior to completing the survey, and close to 50 per cent of respondents with pre-existing mental health challenges reported disruptions in their access to mental health services or supports during the pandemic. Of great concern are the data from the charitable organization Kids Help Phone, which demonstrate a 350 per cent increase in service requests since the start of the pandemic, with text messages about anxiety, struggles with social isolation, eating/body image issues, and substance-abuse concerns increasing. These issues were particularly prevalent among youth aged 12 to 15. Importantly, it has been found that children/youth with pre-existing mental health challenges, those who are members of marginalized communities (such as Indigenous populations, immigrants and refugees, and homeless or precariously housed children), those who have contracted COVID-19 or have a family member who did, and those who have family/caregivers who are providing essential services during the pandemic are at a heightened risk of experiencing negative mental health consequences from COVID-19.

Prolonged school closures have upended life for children and their families and resulted in significant mental health impacts for this population. In general, the routines and structure of typical school environments are vital, particularly for children with physical and/or cognitive

delays. Schools largely serve as the foundation of children’s learning, development and emotional and social well-being. Importantly, they also serve as access points for children who face barriers to health care and are key points of identification for children who are struggling with mental health challenges. Hence, schools are one of the most important institutions that address children's mental health needs. As well, a number of health-care providers deliver mental health supports to children and youth in school settings. In some areas, such as rural regions, a school may be the only setting where children's mental health services are offered. Schools provide a continuum of critical mental health services to children and youth in Ontario, including prevention, intervention, early identification and targeted or intensive interventions for at-risk students.

Importantly, the mental health impacts of school closures resulting from the COVID-19 pandemic will differentially affect subgroups of children in negative ways. The new stresses arising from the pandemic compound existing stressors from family and neighbourhood circumstances that were already contributing to disparities among low-income and racialized minority groups. Prior to the onset of the pandemic, schools serving large numbers of children from economically disadvantaged neighbourhoods already had fewer resources to meet children's needs. In the current period of school closures, examples of how resource limitations disproportionately affect vulnerable children include: inequitable access to technology, including laptops, broadband internet, and data plans; students whose parents/caregivers have limited proficiency in the language of instruction; and students whose parents/caregivers are less engaged or available to assist with remote learning. Accordingly, the children who are most vulnerable to the detrimental mental health and academic effects of school closures are those who rely on school-based health and mental health care, those at greatest risk of abuse and neglect at home, and those with low socio-economic status. Overall, the COVID-19 pandemic is shining a spotlight on how important schools are for meeting children's non-academic needs and the importance of appropriate funding for these services, not only in the wake of this pandemic but on an ongoing basis. This recognition creates a window of opportunity for policy changes to implement solutions to better help students in need of non-academic services and supports, especially disadvantaged youth.

The behavioural implications of the pandemic on children and youth have also been flagged as a cause for concern. For instance, because of school closures and restrictions on many outdoor and extracurricular activities, many Canadian children and youth have been spending more time on screens to complete online school activities and socialize with peers. It has been postulated that this increase in screen time could have significant mental and physical health consequences, including unhealthy sedentary lifestyles, exposure to harmful content (violent or sexual) and misinformation about COVID-19, cyberbullying, engagement in online gambling, poor sleep and increased feelings of isolation and low self-esteem.

Although there is currently a lack of Canadian data on this topic, a report recently published in California examining how youth are coping during the pandemic found a significant link between unhealthy technology habits and teens with mental health challenges. Specifically, the study found that teens are experiencing a sense of loss due to school closures and social isolation, which have limited their opportunities to form unique identities and increased their reliance on social media and gaming to meet their social needs. Similarly, a study of almost 2,000 children and youth between the ages of four and 17 found that, during the strictest portion of the first COVID-19 lockdowns, teens spent less time on physical and sports activities and more recreational time on screens, and the effects were most pronounced among adolescents. While not specific to the COVID-19 pandemic, several systematic reviews conducted across various age groups, populations and countries have found that increased screen time may amplify the risk for depression, anxiety, suicide and inattention among children and adolescents.

The increased use of social media among children and teenagers is postulated to be an especially strong contributing factor to mental health concerns during the COVID-19 pandemic, with children accessing social media at increasingly younger ages. A new report from Ann & Robert H. Lurie Children's Hospital of Chicago, which surveyed nearly 3,000 parents, revealed that 63 per cent of teens are using social media more than they did pre-pandemic. While there are many positive aspects to social media, it has been found to possibly have negative effects on self-esteem, confidence, social skills and focusing ability, and to increase the risk for exposure to abusive or inappropriate content and cyberbullying—all of which could have detrimental implications for users' future mental health. This means parents—along with technology companies, social media platforms and policy-makers—have an important role to play in keeping children safe online by establishing or enhancing privacy policies and measures to protect users from abusive content.

Future considerations

It is evident from the lessons learned to date from the COVID-19 pandemic and earlier pandemics and disasters that planning and strategic reforms are needed if we are to stay ahead of the resulting long-term and complex mental health implications. Our review and scan of the literature have yielded several key findings for consideration.

First, while the response to the escalating mental health crisis (including the rapid transition to virtual mental health services) has been positive, **vulnerable individuals and groups have been overlooked**. For instance, many of the health promotion and wellness information and resources that have been made available to date—such as the federal government's "Wellness Together" resource portal, which offers a variety of online and virtual resources, such as self-

assessment tools, self-guided care, peer support and counselling—have been aimed at the general population or those with mild mental health problems, and are not appropriate for the most at-risk populations, such as those with low socio-economic status, those with severe mental illnesses, those living in poverty or rural areas, racialized communities, and those with limited access to adequate broadband connectivity. Thus, there is a clear need for strategic and targeted messaging to ensure these individuals can receive and use these resources. Moreover, while the rapid transition to virtual services has filled key mental health gaps, these services are not appropriate for, or equally accessible to, all Canadians. For example, virtual care may be insufficient for those with severe mental illnesses and/or substance-abuse problems or who do not have adequate access to high-speed internet. Accordingly, maintaining reliable service delivery during and after the pandemic is essential, particularly given the convergence of the COVID-19 pandemic with the opioid crisis.

Based on research conducted during previous pandemics, it is likely that **the mental health impacts of COVID-19 will be delayed, persistent and have long-term effects on the population.** However, an important consideration is that, given the unique nature of the pandemic, these consequences may follow a different pattern than those that have been reported after briefer or less widespread pandemics, and the incidence and severity of these outcomes may depend on numerous variables. Moreover, concerns have been raised surrounding pediatric and adult patients who, despite suffering from mental health challenges, are not reaching out for support, due either to fear of contracting the virus at a health-care facility or to lack of awareness about access. This long-term lack of adequate support and treatment will likely exacerbate symptoms in the patients not being seen, and consideration will need to be given to appropriate interventions. In addition, when people are not interacting with their doctors and other health-care professionals, there are missed opportunities for screening and detection that will likely result in a worsening of symptoms as one's condition progresses and may also lead to an increased mental health-care burden for providers once the pandemic has subsided. Accordingly, interventions must include, among other things, efforts to maintain trust in the health-care system (such as messaging that the system remains open), widespread mental health promotion, efforts to provide social assistance to vulnerable populations, and targeted and early interventions to meet the complex needs of individuals with severe mental illnesses and those who did not access help during the pandemic. Demand for mental health and addiction services is likely to increase as rates of infection decrease.

The most significant implications of the COVID-19 pandemic on substance use, mental health and service systems are likely to be felt after the crisis has ended. **Thus, the time to improve and reform the mental health-care system is now.** Initiatives launched at the start of the pandemic, including engagement with sufferers and providers, should continue so that the post-pandemic mental health and addiction system incorporates new innovations (like virtual

care) without disregarding those underway prior to the pandemic. The literature to date has evidenced that pandemics and disasters exacerbate stressors and vulnerabilities, including family violence, social isolation, job loss and related social issues (such as food and housing insecurity and poverty) that historically have been associated with increased mental illness and/or addiction. Moreover, it is to be expected that the stressors resulting from social distancing and isolation will add pressures to an already overburdened mental health-care system, and that the response will require a variety of measures. Thus, in the next phase of the pandemic response, reactive solutions must be combined with long-term, sustainable, evidence-based interventions to fill novel and existing gaps through partnerships across the mental health and addiction system.

Overall, the impacts of mental illness and addiction are staggering and permeate all areas of society. The degree of human suffering and morbidity is nearly unparalleled in modern history, with many people identifying their battle with mental illness/addiction as one of the greatest challenges of their lives. The ultimate consequence is the preventable loss of life through suicide or overdose, which has devastating impacts on family members, friends and peers. It is also a poor reflection of society's response to those who are most vulnerable and in crisis.

Mental illness and addiction can also have significant negative impacts on workplace productivity. Many who are affected require frequent time away to manage their illness, while others are unable to attend to work altogether. This presents significant economic implications. In addition, mental illness and addiction place a significant strain on health system and social resources. Those in crisis often present to the emergency department and may require lengthy hospitalization. The rate of mental illness and addiction among those who experience homelessness is also significant and presents substantial challenges to quality of life along with a host of health challenges.

The time to act now—in the midst of the global pandemic—because early identification and intervention are the keys to preventing complications and disabilities. If those who are struggling with their mental health have timely access to resources and support, the problem may be resolved altogether or at least managed in a way that allows for a high-functioning quality of life. In addition, for those who are already experiencing mental illness or addiction, a comprehensive treatment plan with wraparound supports is critical in managing illness and providing a path to recovery.

We know today that the pandemic is having a negative impact on mental health and addiction. These impacts will likely become more pronounced in the weeks and months ahead. We must build capacity in our health and social systems so we can effectively address the parallel pandemic that is unfolding. Health-care systems around the world were left scrambling by the sudden emergence of the COVID-19 virus. The emergence of mental illness and/or addiction and the complications associated with them can be more subtle and gradual. This means we have an opportunity to respond now to improve quality of life, promote economic prosperity, expand health and social system capacity—and, ultimately, save lives.

Conclusion

It is evident that the COVID-19 pandemic is having a significant and detrimental impact on the mental health of many Canadians. These effects will likely be sizable and enduring, with certain populations at greater risk of developing more serious challenges, both during and after the pandemic. This will increase the strain on a mental health-care system that is already significantly overburdened and in which the need for support has exceeded supply for decades. However, there could be light at the end of the tunnel if we pursue a long-term, multifaceted, system-wide approach to tackling this issue. Such a response will be most effective if it incorporates a variety of resources, supports novel and innovative models of care and care delivery, invests substantially in the social determinants of health and early intervention, and involves a wide variety of stakeholders, including employers and workplaces, the education system, policy-makers, governments and various members of the health-care system.

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