McMaster University | HEALTH FORUM

RISE Rapid-Improvement Support and Exchange

COVID-19 Rapid Evidence Profile #21 (19 October 2020)

Questions

What is the impact of the pandemic on substance use (particularly, alcohol and opioid use) in the population, and what policy decisions have been adopted that affect the availability and use of substances, as well as services for people who use substances?

What we found

We used the following framework to organize our findings:

- impact on substance use (e.g., increase in use and/or change in use patterns);
- impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care);
- policy decisions that affect the availability of substances;
- policy decisions that affect the use of substances; and
- policy decisions that affect the availability and accessibility of associated mental health and addictions services.

We identified 10 evidence documents that provide highly relevant evidence in relation to one or more of the above categories:

- three full systematic reviews;
- five rapid reviews; and
- two guidelines developed using some type of evidence synthesis and/or expert opinion.

We outline in narrative form below our key findings related to the question from highly relevant evidence documents, and based on experiences from other countries and from Canadian provinces and territories. We provide hyperlinks to the highly relevant evidence documents in Table 1, as well as more detailed findings from these documents. We also identified 52 primary studies from which we identified additional insights that we outline below as part of the narrative summary of key findings.

Box 1: Our approach

We identified evidence addressing the question by searching the guide to COVID-19 evidence sources (www.mcmasterforum.org/find-evidence/guide-to-covid-19-evidence-sources) between 14-16 October 2020. We identified jurisdictional experiences by searching jurisdiction-specific sources of evidence using the same guide. Jurisdictions were chosen based on innovative policies for alcohol or opioid use as well as those that have similar enough health systems that insights might be transferable to the Ontario context.

We searched for guidelines that were developed using a robust process (e.g., GRADE), full systematic reviews (or review-derived products such as overviews of systematic reviews), rapid reviews, protocols for systematic reviews, and titles/questions for systematic reviews or rapid reviews that have been identified as either being conducted or prioritized to be conducted. Single studies were only included if no relevant systematic reviews were identified.

We appraised the methodological quality of full systematic reviews and rapid reviews using AMSTAR. Note that quality appraisal scores for rapid reviews are often lower because of the methodological shortcuts that need to be taken to accommodate compressed timeframes. AMSTAR rates overall quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. It is important to note that the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to systematic reviews pertaining to delivery, financial or governance arrangements within health systems or to broader social systems.

This rapid evidence response was prepared in three days or less to inform next steps in evidence synthesis, guideline development and/or decision-making related to the question that was posed.

For those who want to know more, we provide additional details in Table 2 (the type and number of all documents that were identified), Table 3 (for experiences from other countries), and Table 4 (for experiences from Canadian provinces and territories). In addition, we provide a detailed summary of our methods in Appendix 1, the full list of included evidence documents (including those deemed of medium and low relevance, but excluding the 52 primary studies) in Appendix 2, the list of primary studies organized by relevance to the organizing framework in Appendix 3 (given the volume of primary studies identified and the three-day timeline in which this rapid evidence profile was conducted, they were not assessed for relevance), abstracts for highly relevant documents in Appendix 4, and hyperlinks for documents excluded at the final stage of reviewing in Appendix 5.

Key findings from highly relevant evidence sources

The findings from three highly relevant but variable-quality systematic reviews, and five highly relevant but variable-quality rapid reviews are summarized in Table 1. In general, a small but growing evidence base points to increases in the frequency of substance use during the COVID-19 pandemic, as well as challenges related to sudden substance withdrawals (due to decisions related to lockdowns and closures) and opioid overdoses**.** However, these impacts are mixed, with one review finding a marked reduction in alcohol-related injuries in the early stages of the pandemic. Another review indicated that the disruption in supply of illicit drugs is limiting availability and increasing costs. In terms of the impacts of COVID-19 on services and interventions to address substance use, one review noted challenges related to accessing detoxification services and another noted a general reduction in access to harm-reduction and treatment services. Two other reviews identified innovations in service design and delivery, including the effectiveness and enhanced use of ehealth and other tele- and digital-health interventions, and these enhancements were identified as being important to maintain and scale up after the pandemic. We also identified two guidelines that were developed using some type of evidence synthesis and/or expert opinion and targeted service providers and commissioners of services, and these guidelines make recommendations about the safe and effective provision of services during the pandemic, including personal protective equipment requirements, shifts in service delivery to tele- and virtual delivery, and specific considerations for substance-use services for people experiencing homelessness or being supported in housing.

Given the high volume of primary studies identified (n=52) and the three-day timeline that the rapid evidence profile was conducted within, we did not extract key findings from the primary studies (beyond the insights outlined above). However, in reviewing the studies, we noted that they include findings related to 16 countries (Australia, Belgium, Canada, China, Germany, Hong Kong, India, Iran, Italy, the Netherlands, Norway, Poland, Ukraine, United Kingdom, the U.S., and Vietnam), and derived high-level insights from them. Of the 52 primary studies:

- 31 studies indicate that while substance use is increasing during the COVID-19 pandemic and is associated with increased psychological distress due to the pandemic, not all segments of the population are experiencing such increases (e.g., some studies found that being younger and/or female were associated with less substance use during the early phase of the pandemic);
- 10 studies found a range of impacts from the pandemic on people who use substances as well as a number of impacts on treatment and supports;
- two studies identified shifts in access to legal and illicit substances during the pandemic, with decreases in availability and increases in price;

- five studies found that the pandemic has led to changes in the delivery of treatment through increased use of telemedicine, virtual-care approaches and other innovations in service delivery (such as take-home dosing for methadone maintenance treatment); and
- four studies found that policy decisions (e.g., about whether alcohol is considered an essential commodity during lockdown or changes to buprenorphine dispensing) have affected substance use and treatment, and that access to withdrawal management and other treatments is also a concern.

Key findings from the jurisdictional scan

We examined experiences with the impact of COVID-19 on substance use and related policy decisions in seven countries (Australia, New Zealand, Portugal, South Africa, England, Scotland, and the U.S. both generally and specifically in New Hampshire, Ohio and West Virginia), as well as in all provinces and territories in Canada.

Findings from other countries

Australia and the U.S. reported an increase in substance use (alcohol and cannabis) among their general populations and within marginalized populations. In a self-report survey conducted from April to June 2020, Australians reported a decrease in the availability and use of other illicit drugs (e.g., ecstasy, cocaine and methamphetamine), while the use of prescribed opioids remained stable. Governments increased funding and/or enacted policies to support the accessibility and availability of mental health and addictions services during COVID-19, which include:

- authorizing telehealth services to be used for initial consultations, evaluations, counselling and/or receiving prescriptions (Australia, England, Scotland, and the U.S.);
- funding additional beds and a new home and community withdrawal-management service (New Zealand);
- supporting online services for needle exchanges and naloxone assessments (England and Scotland); and
- providing additional guidance and recommendations related to marginalized populations and housing (England and New Zealand).

In Australia, there are regional differences related to policies on alcohol consumption and availability. For example, restaurants in New South Wales can sell alcohol as part of take-out or home-delivery services, whereas the Northern Territory introduced additional restrictions for purchasing alcohol at stores. South Africa initially stopped alcohol sales completely, but has since relaxed its alcohol policies, allowing for sales during restricted hours on particular days.

Findings from Canadian provinces and territories

There has been an increase in substance use (alcohol and illicit drugs) and substance use-related harms and deaths across Canada since the beginning of the pandemic. Additionally, Alberta has observed a decline in adherence to opioid-dependency treatments and visits to supervised consumption sites. Related to alcohol policies, all provinces classified liquor stores as essential services during the pandemic.

Changes, expansions, and/or additional services to address substance use during COVID-19 include:

- temporarily permitting the extension of prescriptions, transfer of prescriptions between pharmacists, and delivery of prescribed controlled substances to patients' homes (*Health Canada's Controlled Drugs and Substances Act*);
- expanding scope-of-practice for pharmacists, such as deprescribing, providing counselling or medication reviews (Newfoundland and Labrador), starting medical prescriptions through e-consults, providing multiple extensions for prescriptions up to 30 days, and handling of controlled substances (Yukon);
- authorizing verbal and fax prescriptions for controlled substances (British Columbia, Saskatchewan, Manitoba and Yukon);
- expanding existing services and programs such as opioid treatment programs (Alberta and Newfoundland and Labrador), peer support (Newfoundland and Labrador), care pathways for individuals facing homelessness (Quebec, Yukon and Northwest Territories), recovery communities (Alberta), and other harm-reduction efforts (Saskatchewan, Ontario, Nunavut);
- supporting harm-reduction approaches such as expanding drug testing for harmful materials (Yukon), establishing safe consumption sites (Yukon), creating safe-supply programs (Ontario), and creating online training videos for naloxone use (Nova Scotia); and
- creating online resources and guidance to support health providers with patients with substance-use disorder and/or addictions (British Columbia and Alberta).

In addition, many governments have increased financial resources dedicated to mental health and substance use throughout the pandemic (federal government and governments of Alberta, Quebec and Yukon), as well as enhancing the availability of digital and telephone services (British Columbia, Saskatchewan, New Brunswick, Nova Scotia, and Prince Edward Island).

Table 1: Key findings from highly relevant documents related to impact of COVID-19 on substance use and policy changes affecting substance use and related mental health and addictions services

Question and sub-questions	Key findings from evidence documents
Impact of COVID-19 on substance use • Impact on substance use (e.g., increase in use and/or change in use patterns) • Impact of COVID-19 on the services and interventions to address substance use (e.g., closure or opening of services; development of new services)	**Findings related to the impacts on substance use** • The harmful effects on the mental health and increases in substance use of the population are numerous and can last over time (Source; AMSTAR rating 3/11) • There is very limited research evidence and data on the effect of the COVID-19 pandemic on substance use, overdoses, and substance-related deaths (Source; AMSTAR rating 8/10) o People who use substances have reduced access to harm-reduction and treatment services o A disruption to the supply of illicit drugs in Canada is affecting the availability and cost o There are no clear trends in overdoses or substance-related deaths during the COVID-19 pandemic • The frequency of alcohol use might have increased during the pandemic to cope with increases in anxiety and depression, however, some countries have banned alcohol during the pandemic which may lead to increased risk of complicated withdrawals or distilling of alcohol at home (Source; AMSTAR rating 2/9) • Another review found limited evidence for the effect of the COVID-19 pandemic on alcohol use and related harms (Source; AMSTAR rating 8/10) o Trends in changes in alcohol intake among the global population during the pandemic are unclear o Studies in Canada reported that more people have increased their alcohol intake during the pandemic than those who have decreased intake, particularly in younger people aged 18–34 o A survey in Canada found that 99% of participants had not experienced injuries due to alcohol during the pandemic • Few studies found evidence regarding alcohol-related harm-reduction strategies, and a survey in Canada found only a small proportion of people who drink alcohol sought resources to reduce their alcohol intake (2%) (Source; AMSTAR rating 8/10) • Studies demonstrated that opioid overdoses are rising during the COVID-19 pandemic (Source; AMSTAR rating 2/9) • During the pandemic, an increase in the care needs of people with addiction problems or in a situation of homelessness is to be expected, as well as an increase in addiction problems and the number of people in a situation of homelessness in the general population (Source; AMSTAR rating 3/11) **Findings related to services and interventions to address substance use** • Many hospitals and other facilities were forced to close alcohol-detox beds leading to reduced support for individuals with alcohol-use disorder (Source; AMSTAR rating 2/9) • ehealth interventions can be used to overcome barriers to accessing face-to-face services for common issues addressed through psychotherapy, such as depression, anxiety, substance-use disorder, and general well-being (Source; AMSTAR rating 1/10)

Question and sub-questions	Key findings from evidence documents
	• Findings from 65 systematic reviews and meta-analyses indicate that ehealth approaches to psychotherapy are acceptable and effective at improving depression, anxiety, alcohol-related problems, and general mental health compared to those on waitlists, and can also provide benefits when offered as an adjunct to traditional in-person psychotherapy (Source; AMSTAR rating 1/10) o There were mixed findings for guided interventions as compared to unguided interventions • Moderate-quality evidence found that digital interventions (delivered through computers or mobile devices) that provide personalized advice for reducing heavy drinking may lower alcohol consumption for at least up to six months (Source; AMSTAR rating 10/11) • The average reduction of alcohol use through digital intervention was between one and three standard drinks per week as compared to control participants, with the lower end of the average being found through sensitivity analyses that controlled for the risk of attrition and performance bias (Source; AMSTAR rating 10/11) • The combination of high prevalence of hazardous alcohol consumption and the low cost and wide reach of digital interventions means that such interventions have the potential for a large impact at the population level on alcohol-related diseases (Source; AMSTAR rating 10/11) • Interventions have been tried that can help to overcome changes in services to support opiate users including shifting to telemedicine, avoiding requirement of urine for drug screens, co-prescription of naloxone with take-home methadone, in-home initiative of buprenorphine, greater use of community pharmacists for prescribing opiate substitution therapy (Source; AMSTAR rating 2/9) • One review found no peer-reviewed literature about benefits or harms of safe-supply programs during the pandemic (Source; AMSTAR rating 3/9) • The same review found evidence related to substitution treatment which found that slow-release oral morphine as compared to methadone resulted in fewer cravings, improvements in mental symptoms and treatment satisfaction, and similar retention rates and safety outcomes in treatment groups (Source; AMSTAR rating 3/9) • Canadian clinical trials have found that for dependent opioid users, injectable pharmaceutical heroin was more effective in retaining participants and reducing illicit drug use than methadone treatment, however hydromorphone is as effective for sub-groups with severe opioid use disorder (Source; AMSTAR rating 3/9) • Several creative and effective initiatives put in place during the pandemic to support people who use substances or in a situation of homelessness should be maintained during the recovery phase (Source; AMSTAR rating 3/11) o The development of a range of remote services and mobile clinics o The opening of emergency beds and accommodation o Increased funding for community organizations o Adapting the management of opioid dependence o The development of effective intersectoral or interdisciplinary collaborations o The establishment of training focused on trauma for workers, community resources and care providers called upon to intervene with these populations

Question and sub-questions	Key findings from evidence documents

	• The literature consulted converges on the importance of several actions (Source; AMSTAR rating 3/11)
	  o Effectively communicating information to the population
	  o Adapting psychosocial services according to the needs of the population and the most vulnerable groups
	  o Ensuring access to a set of mental health services adapted to their needs
	• It is important to focus on the autonomy of individuals and on the capacity for initiative, mutual aid and solidarity of living environments (Source; AMSTAR rating 3/11)
	• Guidance was identified that was created to assist substance misuse and homelessness services in providing advice to their staff about COVID-19 (and about infection prevention and control) while continuing to support their clients (Source; last updated 3 June 2020)
	• COVID-19 specific guidance from the U.K. was created to assist commissioners and providers of services of people who use drugs and alcohol to minimize risk while supporting ongoing service delivery (Source; last updated 16 October 2020)

Policy decisions that affect substance use as well as related mental health and addictions services:
• Availability of substances (e.g., changes to opening and closing hours)
• Use of substances (e.g., changes to where and when substances can be used)
• Accessibility of associated mental health and addictions services (e.g., harm reduction policies)
• Operation of mental health and addictions services (e.g., publichealth considerations; changes to staffing)
	• New strategies for people who use substances to respond to COVID-19 (Source, AMSTAR rating 8/10)
	  o Changing legislation to allow longer prescription duration, mail, and remote supplying of medications to treat substance-use disorders
	  o Providing or prescribing alternative substances, such as safe supply of pharmaceutical-grade substances
	  o Providing naloxone for unsupervised dosing of medications to treat substance-use disorders
	  o Providing harm-reduction education related to safe use in isolation
	  o Providing supplies for sanitization in harm-reduction kits
	• Existing strategies that have been enhanced or emphasized during the COVID-19 pandemic (Source, AMSTAR rating 8/10)
	  o Ensuring a safe supply of substances
	  o Providing drug safety checking
	  o Providing sterile supplies
	  o Sanitizing supplies in harm-reduction kits

Table 2: Overview of type and number of documents that were identified

Type of document	Total	Impact of COVID-19 on substance use	Impact of COVID-19 on services and interventions to address substance use	Policy decisions that affect the availability of substances	Policy decisions that affect the use of substances	Policy decisions that affect the availability and accessibility of associated mental health and addictions services	Policy decisions that affect the operation of mental health and addictions services
Guidelines developed using a robust process (e.g., GRADE)	1	1	-	-	-	-	-
Full systematic reviews	7	4	4	1	1	1	1
Rapid reviews	11	7	3	1	0	4	9
Guidelines developed using some type of evidence synthesis and/or expert opinion	3	2	1	1	0	3	2
Protocols for reviews that are underway	3	3	-	-	-	-	-
Titles/questions for reviews that are being planned	1	-	1	-	-	-	-

Table 3: Policies changes affecting substance use and related mental health and addictions services in other countries

Country	Policies
Australia	• There are strong indications that the pandemic may result in increased substance use within the community, which is a significant risk for mental health and suicide with indicators including increases in purchasing of alcohol by Australian consumers • The results from several self-reported surveys have produced mixed findings with regard to the impact of COVID-19 on the consumption of alcohol and other drugs. For example, Australians' Drug Use: Adapting to Pandemic Threats (ADAPT) Study (with 702 participants who used illicit drugs at least once a month in 2019) found: o two in five (41%) reported an increase in alcohol consumption, one-third (33%) reported a decrease and 26% said it was stable o more than half (57%) reported an increase in cannabis use, while 15% reported a decrease o almost half of people who used MDMA (ecstasy) reported a decrease in use (49%), likewise for people who used cocaine (45%) and ketamine (44%) o most people who used pharmaceutical opioids, benzodiazepines and GHB (gamma hydroxybutyrate) reported their use was stable (56%, 55% and 55%, respectively) • The Australians' Drug Use: Adapting to Pandemic Threats (ADAPT) Study (with 702 participants who used illicit drugs at least once a month in 2019) found only 4% had accessed drug treatment and 3% reported they had tried but were unable to access drug treatment in the previous four weeks • Preliminary findings (with 389 participants) based on Ecstasy and Related Drugs Reporting System (EDRS) found 6% reported they had difficulty accessing support from alcohol and other drug services • The temporary alcohol policy changes Australia-wide vary considerably across states and territories; for example while New South Wales relaxed liquor licensing restrictions for takeaway and home-delivery, the Northern Territory introduced additional restrictions on the sale of takeaway alcohol at bottle shops • On 24 April 2020, the Australian Government announced that an additional $6 million would be allocated to online and phone support services for people experiencing drug and alcohol problems during the COVID-19 pandemic • To help support Australians with pandemic-related mental health and addictions issues, the Australian government is funding a $74-million mental health and wellbeing package o Digital resources and telehealth services to help individuals experiencing stress or anxiety related to the impacts of the pandemic (e.g., poor health, unemployment, family pressures) o Online and telephone-based mental health and well-being programs for front-line healthcare providers o Culturally appropriate mental heath and well-being resources for different cultures and life experiences (e.g., Aboriginal and Torres Islander Strait Peoples, older adults receiving aged-care support, expecting and new parents) o Mental health education and communication campaigns related to COVID-19 o Expansion of psychosocial support for community mental health clients for an additional 12 months o Additional investment in Australian Psychological Society's Find a Psychologist website to help Australians identify a mental healthcare provider • The Australian government is providing $48.1 million for the National Mental Health and Wellbeing Pandemic Response Plan o Identifying and meeting the mental health and well-being needs of Australians in the short and long term of the pandemic through different care pathways (e.g., telehealth services, community-based mental health services, programs supporting individuals and families in quarantine)

Country	Policies
	○ Outlining priority areas to help inform jurisdictions on key mental health services and programs (e.g., improve access to care, expand community health services, integrating services, promoting prevention and early help) ○ Defining governance, coordination, and implementation of data-collection processes for key indicators (i.e., direct COVID-19 pandemic impacts, population well-being or distress, social and economic drivers and outcomes, health risk behaviours, prevalence of mental health disorders, health-system capacity, and health-system experience and outcomes) ○ Providing specific considerations for specific risk factors (e.g., physical health, social housing, alcohol and other drug use, gambling), settings (e.g., employment and workplaces, early childhood and education), and population groups (i.e., essential workers, older adults, children, young people, Aboriginal and Torres Strait Islander Peoples, people experiencing domestic and/or sexual violence, culturally and linguistically diverse groups, multi-trauma sub-groups, healthcare providers and mental health workforce, people with disabilities, caregivers, LGBTI, and rural and remote communities) • The Australian Institute of Health and Welfare's National Self-Harm and Suicide Monitoring System is being leveraged for COVID-19, which provides states and territories access to real-time information for monitoring and evaluation of mental health and addiction services
New Zealand	• The Government of New Zealand invested $32 million related to specialist alcohol- and drug-addiction services, including new funding for additional beds and a new community and home withdrawal service, and increased peer support and withdrawal-management services • The Ministry of Health continues to utilize the COVID-19 Psychosocial and Mental Wellbeing Recovery Plan as guidance for actionable next steps. Related to substance use, the government is addressing housing and employment needs for people with severe substance harm issues, in addition to developing peer workforce and self-help tools
Portugal	• According to the *EU Drug Markets Impact of COVID-19* report published in May 2020, the European Monitoring Centre for Drugs and Drug Addiction noted a decrease in heroin importations during the pandemic • According to the *Impact of COVID-19 on patterns of drug use and drug-related harms in Europe* report ○ Regular consumers of cannabis were twice as likely to resort to cannabis usage than non-regular users ○ Cannabis availability decreased during the pandemic
South Africa	• At the beginning of COVID-19 sales and exports of alcohol and tobacco were banned in South Africa, however as of the 17 August, alcohol can be sold for home consumption from Monday to Thursday, with no alcohol sales or service after 10 p.m.
United Kingdom	
England	• Many mental health and addictions services have moved online including talking therapies and peer supports ○ In addition, many helplines and listening services have been specifically designed to help provide mental health supports during the pandemic, including mind.org,uk • Some interruptions have taken place to in-person services for substance use including drug and alcohol detoxification taking place in acute facilities, however access to opioid-substitution treatment is continuing in consultation with local commissioners, community pharmacies and local pharmaceutical committees • Additional overdose mitigation measures for opiate use are being implemented throughout the pandemic ○ Take-home naloxone for everyone receiving opioid-substitution treatment ○ Safe storage boxes ○ Verbal and written harm-reduction advice ○ Regular communication between the patient and service, enabled by the provision of mobile phone or phone credits

Country	Policies
	• Guidance is being provided from Public Health England to local commissioners to consider how to support those using drugs throughout the pandemic • In person treatment for substance use have added additional protocols to their admission procedures o Providing pre-admission PCR antigen testing to new clients o Screening of all new client admissions for COVID-19 symptoms, travel history and exposure o Daily health checks to all staff and clients for COVID-19 symptoms o Following the strict guidelines set daily by the Care Quality Commission and Public Health England o Increased level of infection prevention and control, sanitation and hygiene o Temporary restrictions on family group, fellowship meetings and family visits o Remote working for those who are not in direct care roles • Public Health England has also provided operational recommendations for those running emergency accommodations for people who are homeless or marginally housed, which includes considerations for substance use and greater flexibility in accommodation policies
Scotland	• Public Health Scotland has issued harm-reduction advice related to drug use and COVID-19 • As a result of the pandemic, many services have altered how they are delivered or are operating at reduced hours, however these differ by location o Pre-ordering by phone or online for needle-exchange services o Conducting assessments for naloxone virtually o Removing supervision requirements for naloxone use o Providing online consultations for those concerned about alcohol use
U.S.	• A Morbidity and Mortality Weekly Report found an increase in substance use among adults (aged ≥18 years) to cope with stress and emotions related to COVID-19 (especially among specific populations such as young adults, Hispanic persons, black persons, essential workers, unpaid caregivers, and individuals with pre-existing psychiatric conditions) • Substance Abuse and Mental Health Services Administration (SAMHSA) released guidance on outpatient treatment for withdrawal from alcohol and benzodiazepines, access to methadone treatment for individuals in an Opioid Treatment Program, and virtual support resources for rural communities • The Drug Enforcement Agency (DEA) is permitting health professionals: 1) to work with patients across state lines via telehealth; and 2) who have a DATA 2000 waiver to prescribe buprenorphine to new and existing patients with opioid-use disorder through telehealth • The DEA issued exceptions to allow the transport of methadone to patients who are unable to attend in-person clinic hours • Centers for Medicare & Medicaid Services (CMS) expanded telehealth services (including audio-only telephone calls for therapy and counselling provided by opioid treatment programs) and provided additional guidance for providers • The HHS Office for Civil Rights (OCR) will waive any penalties for HIPAA violations related to the use of everyday communication technologies during the COVID-19 pandemic (e.g., FaceTime, Skype)
New Hampshire	• Telehealth services were expanded in New Hampshire, where providers may provide pharmacologic and psychosocial therapies in addition to recovery support services for patients with substance-use disorder • Providers in New Hampshire will not face HIPAA penalties related to using telehealth applications such as the telephone, HIPAA-compliant options, and public-facing applications • Providers with a DATA waiver and/or with DEA registration may prescribe buprenorphine to new and existing patients via telehealth (audio-visual, and audio only) • Opioid Treatment Programs (OTPs) can admit new patients and initiate buprenorphine with adequate evaluation via telehealth (audio only or audio-visual); however, an initial in-person evaluation is needed for patients to be treated with methadone

Country	Policies
Ohio	• Ohio Administrative Code 5122-29-31 was updated to allow interactive videoconferencing for peer recovery, substance-use disorder management, crisis intervention, assertive community treatment, and intensive home-based treatment • Providers in Ohio can use telemedicine to prescribe controlled substances • DEA-registered providers can prescribe controlled substances to patients via telemedicine with restrictions (i.e., legitimate medical purpose, audio-visual telemedicine, and in accordance with Federal and State law) • Providers can bill Medicaid, Medicaid Managed Care Plans, and the MyCare Ohio Plans for telehealth services such as mental health and substance-use disorder evaluations and psychotherapy
West Virginia	• West Virginia's Bureau of Medical Services (BMS) suspended the need for counselling or therapy requirements related to medication-assisted treatment services • BMS allows providers to use telehealth to provide services (unspecified services) but refers to SAMSHA's guidance on substance-use disorders

Table 4: Policy changes affecting substance use and related mental health and addictions services in Canada

Province/territory	Policies
Pan-Canadian	• According to the Canadian Centre on Substance Use and Addictions (CCSA), 20.5% of alcohol consumers have increased their frequency of alcohol intake since the start of the pandemic • COVID-19 has significantly contributed to the opioid crisis, with reports of increasing opioid overdoses across the country • There are a number of mental health and addictions support educational resources offered through the Mental Health Commission of Canada, including webinars, trainings, and tip sheets • Across Canada, all provinces rapidly classified liquor stores as essential services (with the exception of Prince Edwards Island that later classified it as an essential service) • On 19 March 2020, Health Canada announced temporary exemptions under the *Controlled Drugs and Substances Act* (CDSA) o The extension of prescriptions by pharmacists o The transfer of prescriptions from one pharmacist to another o The extension or refilling of prescriptions from prescribers through verbal orders (e.g. phone) o The delivery of prescribed controlled substances to patients' homes • On 9 October 2020, the Government of Canada announced a $10.2 million investment to help support mental health and substance-use needs and research • The Canadian Research Initiative in Substance Misuse (CRISM) has issued six guidance documents to assist those involved with responding to the substance-use needs of individuals across the country during the COVID-19 pandemic • The documents cover topics including shelter settings, telemedicine, harm reduction, recovery environments, acute care settings, and supports for self-isolation
British Columbia	• Illicit drug deaths have substantially increased in British Columbia since the COVID-19 pandemic, with reported death totals of 112 in March, 117 in April (39% increase from April 2019), 171 in May, and 175 in June (this was a single month record total in the province) • On 16 June 2020, the BC Centre on Substance Use announced the launch of the 24/7 Addiction Medicine Clinician Support Line o This helpline is targeted towards healthcare providers and will allow them to receive live support from an Addiction Medicine Specialist for substance-use inquiries o Helpline experts can provide insights and recommendations on diagnoses, medications, and treatment plans o The support line is tailored towards addressing substance-use concerns, including opioids and alcohol addictions • The Government of British Columbia has put forth numerous virtual mental health services, including the Substance Use and Psychiatry Service, which provides Indigenous peoples with access to specialists in the field • In August 2020, the BC Centre on Substance Use introduced "BC ECHO on Substance Use – Alcohol Use Disorder", a free virtual training program that helps prepare health providers with the necessary skillset and knowledge to manage alcohol-use disorders • The provincial government announced that liquor stores will be considered essential services and thus, the vast majority will continue to remain open during the pandemic • The College of Pharmacists of BC revised their *Pharmacy Operations and Drugs Scheduling Act* (PODSA) and *Health Professions Act* (HPA) bylaws to allow for verbal and fax prescriptions for controlled drugs

Province/territory	Policies
	• The BC Centre on Substance Use has released an interim guidance document for health professionals, such that they can support individuals with substance-use disorders during the pandemic • The College of Physicians and Surgeons of British Columbia has provided telemedicine expectations and practice standards that should be considered by healthcare providers during audio or video consultations
Alberta	• Findings from the Alberta COVID-19 Opioid Response Surveillance Report for the second quarter of 2020 indicate numerous effects of COVID-19 on substance use o Opioid-related harms drastically increased since the beginning of the pandemic, with a total of 301 overdose deaths reported within the second quarter of the year o Reported increases in drug-related emergency-department and urgent-care visits (e.g.,, 3028 visits in the second quarter as compared to only 2,472 visits in the quarter prior to the pandemic) • Adherence to opioid dependency treatments decreased to 52.6% of patients in April and 55.8% of patients in May, which are substantial decreases from 86.0% in March) • Safeworks Supervised Consumption Services observed decreases in their monthly visits from 6,598 in February to 5,850 in March and 4,440 in April • Alberta Health Services has listed numerous mental health and addiction supports, including tobacco counselling, mental health and addiction helplines, and Health Link • The Government of Alberta announced that liquor and cannabis retail outlets will be permitted to remain open • A $53-million investment was announced by the Government of Alberta to help implement and expand mental health and addiction resources for residents during the pandemic (e.g., Big White Wall and InnoWell) • The Government of Alberta announced a $4-million investment to help expand the existing Virtual Opioid Dependency Program • An additional $25-million investment was announced to help fund the construction of five recovery communities o This will serve as a long-term solution for residents with substance use addictions • Alberta Health Services issued a guidance document for community service providers to help them learn more about ways to modify harm-reduction practices during COVID-19
Saskatchewan	• The Saskatchewan Coroners Service reported a total of 40 confirmed deaths and estimates an additional 190 drug-related deaths in 2020 • Liquor retail stores are permitted to deliver alcohol to private residences during the COVID-19 pandemic • The Government of Saskatchewan has implemented several mental health and addiction support systems, including HealthLine, Wellness Together Canada, and Kids Help Phone • On 18 March 2020, the Government of Saskatchewan implemented a restriction on prescription fills to only one month at a time in order to provide a more stable drug supply for all residents, however, this quantity limit was lifted on 20 May 2020 • The College of Physicians and Surgeons of Saskatchewan has strongly recommended that physicians fax or call-in all prescriptions to pharmacies instead of providing paper copies to patients • On 05 May 2020, Saskatchewan Health Authority released a four-stage resumption plan for the reopening of healthcare services in the province, with several key features o As of 19 May 2020, Phase I has permitted the reopening of certain mental health and addictions services (e.g., regular operating hours for harm-reduction programs)

Province/territory	Policies
	○ Phase III will enable the resumption of Opioid Agonist Therapy and social detox and inpatient treatments for substance-use addictions • A $435-million investment was announced to implement and expand mental health and addictions supports and services; $1.7 million will fund 28 new detox beds across the province, a $630,000 investment will support harm-reduction efforts, and $680,000 will go towards increasing staffing and medication availability • The Saskatchewan College of Pharmacy Professionals has released their revised Opioid Agonist Therapy standards as of 14 October 2020
Manitoba	• When compared to the same period in 2019, Manitoba Liquor and Lotteries reported a 25% increase in alcohol sales between 12 March 2020 and 28 March 2020 • Within only the first six months of the year, Winnipeg Fire Paramedic Service has reportedly administered naloxone (an opioid antagonist) twice as many times as was administered all of last year • As of 18 March 2020, Addictions Foundation of Manitoba has indefinitely suspended programs that are unable to satisfy physical distancing protocols, though they will continue in-house treatments with additional safety measures in place ○ Out-patient services will be modified to be delivered through synchronous or asynchronous forms • Shared Health Manitoba has encouraged the use of virtual care services to address any mental health and addictions challenges during the COVID-19 pandemic (e.g., video or audio consultations, Mobile Crisis Service phone line, and Youth Addiction Centralized Intake) • On 21 June 2020, Shared Health Manitoba permitted the resumption of in-person mental health and addictions services (though, only up to 25% of the care may be delivered in-person) • In collaboration with the College of Physicians and Surgeons of Manitoba, College of Pharmacists of Manitoba, and College of Registered Nurses of Manitoba, a statement was released authorizing pharmacists to accept the verbal issuing of narcotics and controlled drugs for personal-care-home residents by physicians and registered nurse practitioners during the pandemic • While originally effective until 30 September 2020, this exemption has now been extended until 30 September 2021
Ontario	• The Ontario COVID-19 Mental Health Network is offering free telephone therapy sessions for addiction • $9.5 million in funding has been given through the Substance Use and Addictions Program to open four safer supply projects ○ Funding granted to "Safer Opioid Supply Program," InterCommunity Health Centre in London, "Safer Supply Ottawa," Pathways to Recover in Ottawa, "Safer Opioid Supply Program," Parkdale Queen West Community Health Centre in Toronto and Downtown East Collaborative Safer Opioid Supply," South Riverdale Community Health Centre in Toronto ○ Pharmaceutical-grade medication will be provided as well as treatment at these locations • Short-term Urgent Public Health Need Sites have been established in Ottawa, Toronto and Kingston offering supervised consumption, harm-reduction services, education and 24/7 on-call services
Quebec	• According to a survey conducted during the first wave of the COVID-19 pandemic (from 30 March to 30 April 2020), almost a quarter of Quebecers who drink alcohol increased their consumption during the pandemic • Since the beginning of the pandemic, Quebec's alcohol and cannabis stores have been deemed essential services and remained open

Province/territory	Policies
	• On 17 August 2020, the government announced that $17.6 million has been granted to community mental health organizations to support the enhancement of their services • On 6 May 2020, the government released an action plan proposing a series of concrete measures to ensure an optimal response to the current psychosocial needs of the population and to those that may arise beyond the management of the current health crisis of COVID-19 • On 6 April 2020, the government released a revised care pathway for addiction and homelessness services during the pandemic (with a particular focus on infection prevention and control). The government recommends that each facility set up a telephone line enabling community organizations serving people experiencing homelessness or suffering from a substance-use disorder to quickly contact the facility for any questions relating to the orientation of people or the re-organization of services during the pandemic • On 30 March 2020, the government released general guidance for managers of essential mental health and addiction services in the context of COVID-19, in order to maintain the continuum of services, while ensuring infection prevention and control
New Brunswick	• Canadian Mental Health Association (New Brunswick branch) has provided live webinars, resources and videos on its website for public use • The CHIMO Helpline is available 24/7 for immediate crisis intervention • Hope for Wellness Helpline is offering mental health and crisis-intervention services to Indigenous people
Nova Scotia	• The Take Home Naloxone Program created online training videos to demonstrate how to use Naloxone kits o The province continues to support the distribution of free Naloxone kits • People are able to self-refer to addiction and mental health clinics through the Nova Scotia Health Authority (NSHA) or IWK Health Centre • The NHSA's Mental Health and Addictions Program moved all group-based sessions to individualized telephone or video calls o A toll-free number has been created offering access to Mental Health and Addictions clinics, Withdrawal Management Services and Opioid Replacement and Treatment Programs o The Mental Health Provincial Crisis Line remains available • The Therapy Assistance Online program was created through the Mental Health and Addiction program as an online resource to help with stress management, problem solving and promote positive thinking patterns
Prince Edward Island	• Health PEI has implemented free call-in clinics offering counselling sessions for substance-use disorder support
Newfoundland and Labrador	• Under COVID-19, pharmacists have temporary jurisdiction to deprescribe medication, and provide medical counselling and a medication review online or through telephone • Eastern Health has launched a temporary Opioid Toll-Free Line for the province of Newfoundland and Labrador which provides support to individuals receiving Opioid Dependent Treatment, or to those looking for support for opiate use, alongside their loved ones and medical professionals • On 16 September 2020, the Premier of Newfoundland and Labrador announced $6-million commitment to advance healthcare capacity for mental health and substance use, including expanding the reach of Opioid Dependency Treatment (ODT) services, as well as expanding peer support and Remote Patient Monitoring (RPM) for individuals in substance-use programs
Yukon	• As of 31 July 2020, 13 individuals in the Yukon have died of overdoses, which is double the death toll since 2016

Province/territory	Policies

	• As of 13 May 2020, pharmacists have been granted a temporarily expanded scope of practice to enable access to medication
	  o Start medical prescriptions through an e-consult
	  o Extend prescriptions up to 30 days multiple times
	  o Transfer controlled substances to other pharmacies
	  o Deliver controlled substances
	  o Provide physicians with controlled substances if a verbal order is received
	• On 31 July 2020, Yukon's Minister of Health and Social Services announced plans to expand drug testing, establishing a safe consumption site for smoking crack, injection kits and meth pipes
	• On 7 October 2020, the Premier of Yukon announced a $500-million investment aimed to support individuals experiencing mental health challenges, substance-use challenges or homelessness, which will be used to expand clinical mental health and substance-use services provided by local organizations

Northwest Territories	• On 17 June 2020, the Northwest Territories (NWT) RCMP announced the re-emergence of fentanyl in NWT after two overdoses • On 3 July 2020, the Deputy Health Chief of Public Health for Northwest Territories expressed concern about the disruption of drug supply chains in the north and the resurgence of the toxic and dangerous opioid, carfentanil • It is unclear whether specific policies have been enacted that have an impact on the availability of substances • On 7 October 2020, the premier of NWT announced an investment of $595,000 to advance the regional availability of mental health and addictions programs for homeless individuals
Nunavut	• On 11 May 2020, the Nunavut RCMP released a press release warning individuals to avoid synthetic opioids currently circulating in the market • On 19 March 2020, the Department of Health for Nunavut announced that all mental health supports will proceed as usual throughout the pandemic • On 7 October 2020, the premier of Nunavut announced plans to strengthen supports and services for those experiencing mental health or substance-use-related challenges in southern isolation hubs

Bullock H, Waddell K, Bhuiya A, Wilson MG, Gauvin FP, Moat KA, Alam S, Lavis JN. COVID-19 rapid evidence profile #21: What is the impact of the pandemic on substance use (particularly, alcohol and opioid use) in the population, and what policy decisions have been adopted that affect the availability and use of substances, as well as services for people who use substances? Hamilton: McMaster Health Forum, 19 October 2020.

The McMaster Health Forum is one of the three co-leads of RISE, which is supported by a grant from the Ontario Ministry of Health to the McMaster Health Forum. To help Ontario Health Team partners and other health- and social-system leaders as they respond to unprecedented challenges related to the COVID-19 pandemic, the Forum is preparing rapid evidence responses like this one. The opinions, results, and conclusions are those of the McMaster Health Forum and are independent of the ministry. No endorsement by the ministry is intended or should be inferred.

Appendix 1: Methodological details

We use a standard protocol for preparing each rapid evidence profile (REP) to ensure that our approach to identifying research evidence as well as experiences from other countries and from Canadian provinces and territories are as systematic and transparent as possible in the time we were given to prepare the profile.

Identifying research evidence

For each REP, we search our continually updated guide to key COVID-19 evidence sources for:
1) guidelines developed using a robust process (e.g., GRADE);
2) full systematic reviews;
3) rapid reviews;
4) guidelines developed using some type of evidence synthesis and/or expert opinion;
5) protocols for reviews or rapid reviews that are underway;
6) titles/questions for reviews that are being planned; and
7) single studies (when no guidelines, systematic reviews or rapid reviews are identified).

Each source for these documents is assigned to one team member who conducts hand searches (when a source contains a smaller number of documents) or keyword searches to identify potentially relevant documents. A final inclusion assessment is performed both by the person who did the initial screening and the lead author of the rapid evidence profile, with disagreements resolved by consensus or with the input of a third reviewer on the team. The team uses a dedicated virtual channel to discuss and iteratively refine inclusion/exclusion criteria throughout the process, which provides a running list of considerations that all members can consult during the first stages of assessment.

During this process we include published, pre-print and grey literature. We do not exclude documents based on the language of a document. However, we are not able to extract key findings from documents that are written in languages other than Chinese, English, French and Spanish. We provide any documents that do not have content available in these languages in an appendix containing documents excluded at the final stages of reviewing.

Identifying experiences from other countries and from Canadian provinces and territories

For each rapid evidence profile we collectively decide on what countries to examine based on the question posed. For other countries we search relevant sources included in our continually updated guide to key COVID-19 evidence sources. These sources include government-response trackers that document national responses to the pandemic. In addition, we conduct searches of relevant government and ministry websites. In Canada, we search websites from relevant federal and provincial governments, ministries and agencies (e.g., Public Health Agency of Canada).

While we do not exclude countries based on language, where information is not available through the government-response trackers, we are unable to extract information about countries that do not use English, Chinese, French or Spanish as an official language.

Assessing relevance and quality of evidence

We assess the relevance of each included evidence document as being of high, moderate or low relevance to the question and to COVID-19. We then use a colour gradient to reflect high (darkest blue) to low (lightest blue) relevance.

Two reviewers independently appraise the methodological quality of systematic reviews and rapid reviews that are deemed to be highly relevant. Disagreements are resolved by consensus with a third reviewer if needed. AMSTAR rates overall methodological quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. High-quality reviews are those with scores of eight or higher out of a possible 11, medium-quality reviews are those with scores between four and seven, and low-quality reviews are those with scores less than four. It is important to note that the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to systematic reviews pertaining to health-system arrangements or to economic and social responses to COVID-19. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, a review that scores 8/8 is generally of comparable quality to a review scoring 11/11; both ratings are considered 'high scores.' A high score signals that readers of the review can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the review should be discarded, merely that less confidence can be placed in its findings and that the review needs to be examined closely to identify its limitations. (Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1):S8.

Preparing the profile

Each included document is hyperlinked to its original source to facilitate easy retrieval. For all included guidelines, systematic reviews, rapid reviews and single studies (when included), we prepare declarative headings that provide a brief summary of the key findings and act as the text in the hyperlink. Protocols and titles/questions have their titles hyperlinked given that findings are not yet available. We then draft a brief summary that highlights the total number of different types of highly relevant documents identified (organized by document), as well as their key findings, date of last search (or date last updated or published), and methodological quality.

Appendix 2: Evidence documents that address the question, organized by document type and sorted by relevance to the question and COVID-19

- Impact on substance use (e.g., increase in use; change in use patterns)
- Impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care)
- Policy decisions that affect the availability of substances
- Policy decisions that affect the use of substances
- Policy decisions that affect the availability and accessibility of associated mental health and addictions services
- Policy decisions that affect the operation of mental health and addictions services

Type of document	Relevance to question	Key findings	Recency or status
Guidelines developed using a robust process (e.g., GRADE)	• Impact on substance use (e.g., increase in use; change in use patterns) • Impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care) • Policy decisions that affect the availability and accessibility of associated mental health and addictions services • Policy decisions that affect the operation of mental health and addictions services	• The associated confinement, fear, job loss and uncertainty about the future, has been linked with an overall increase in mental health conditions, including depression, anxiety and substance-use disorders • Among people with substance-use disorders, disruption of the supply of alcohol and drugs during the pandemic can result in severe withdrawal states • Health systems must maintain the delivery of essential health services for people with substance-use disorders, including critical harm-reduction interventions and psychosocial services (e.g., uninterrupted opioid agonist maintenance treatment and management of severe withdrawal symptoms) Source (WHO technical guidance)	Last updated 1 June 2020
Full systematic reviews	• Impact on substance use (e.g., increase in use; change in use patterns) • Impact on services and interventions to address substance use (e.g., changes to availability of	• Alcohol may be being used more frequently during the pandemic to cope with increases in anxiety and depression, and while some countries have banned alcohol during the pandemic this	Literature last searched 6 August 2020

Type of document	Relevance to question	Key findings	Recency or status
	services, development of new services, shifts to virtual care) • Policy decisions that affect the availability of substances • Policy decisions that affect the use of substances • Policy decisions that affect the availability and accessibility of associated mental health and addictions services • Policy decisions that affect the operation of mental health and addictions services	may lead to increased risk of complicated withdrawals or distilling of alcohol at home • Many hospitals and other facilities were forced to close alcohol-detox beds leading to reduced support for individuals with alcohol-use disorder • Studies included in the systematic review have demonstrated that opioid overdoses are rising during the COVID-19 pandemic • Interventions have been tried that can help to overcome changes in services to support opiate users including shifting to telemedicine, avoiding requirement of urine for drug screens, co-prescription of naloxone with take-home methadone, in-home initiative of buprenorphine, greater use of community pharmacist for prescribing opiate substitution therapy Source (AMSTAR rating 2/9)	
	• Impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care)	• eHealth interventions can be used to overcome barriers to accessing face-to-face services for common issues addressed through psychotherapy, such as depression, anxiety, substance-use disorder, and general well-being • Findings from 65 systematic reviews and meta-analyses indicate that eHealth approaches to psychotherapy are acceptable and effective at improving depression, anxiety, alcohol-related problems, and general mental health compared to those on waitlists, and can also provide benefits when offered as an adjunct to traditional in-person psychotherapy • There were mixed findings for guided interventions as compared to unguided interventions Source (AMSTAR rating 1/10)	Literature last searched April 2020

Type of document	Relevance to question	Key findings	Recency or status
	• Impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care)	• Moderate-quality evidence found that digital interventions (delivered through computers or mobile devices) that provide personalized advice for reducing heavy drinking may lower alcohol consumption for at least up to six months • The average reduction of alcohol through digital intervention was between one and three standard drinks per week as compared to control participants, with the lower end of the average being found through sensitivity analyses that controlled for the risk of attrition and performance bias • The combination of high prevalence of hazardous alcohol consumption and the low cost and wide reach of digital interventions means that such interventions have the potential for a large impact at the population level on alcohol-related diseases Source (AMSTAR rating 10/11)	Literature last searched March 2017
	• Impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care)	• Approximately 9% of take-home naloxone kits for peer administration for opioid overdose are likely to be used within the first three months of distribution, which equated to approximately 40 naloxone uses per year for every 100 individuals trained • The take-home naloxone kits were found to increase successful reversals without adverse events Source	Literature last searched in 2014
	• Impact on substance use (e.g., increase in use; change in use patterns)	• Insufficient evidence was identified to confirm whether the COVID-19 pandemic has led to an increase in the rates of domestic violence and substance-use disorder • A slight increase in alcohol and tobacco use was found, especially among regular users, but	Literature last searched June 2020

Type of document	Relevance to question	Key findings	Recency or status
		additional studies are required to confirm this finding Source	
	• Impact on substance use (e.g., increase in use; change in use patterns)	• Significant increases in substance use have been reported during the pandemic, including both relapsing and new • Changes to the health system as a result of the pandemic, including closing or reducing access to substance-use and treatment services have led to an increase in people procuring drugs illegally Source	Literature last searched 27 May 2020
	• Impact on substance use (e.g., increase in use; change in use patterns)	• Two scenarios that provide opposite predictions about the impact of the COVID-19 pandemic on the level and patterns of alcohol consumption were derived based on a literature search of the impacts of past public-health crises, and a systematic review of the effects of past economic crises on alcohol consumption • One scenario predicts that some populations (particularly men) will experience an increase in alcohol consumption which is attributable to distress experienced from the pandemic • The second scenario is the opposite and predicts a lower level of consumption during the COVID-19 pandemic than prior to it, which is attributed to decreased physical and financial availability of alcohol • The review speculates that the second scenario will be the most likely given restrictions on alcohol availability, but that the first may become more relevant as distress increases Source	Published May 2020
Rapid reviews	• Impact on substance use (e.g., increase in use; change in use patterns)	• Very limited research evidence and data on the effect of the COVID-19 pandemic on substance use, overdoses, and substance-related deaths	Literature last searched on 16 June 2020

Type of document	Relevance to question	Key findings	Recency or status
	• Impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care) • Policy decisions that affect the availability of substances • Policy decisions that affect the use of substances • Policy decisions that affect the availability and accessibility of associated mental health and addictions services	o People who use substances have reduced access to harm-reduction and treatment services o A disruption to the supply of illicit drugs in Canada is affecting the availability and cost o No clear trends in overdoses or substance-related deaths during the COVID19 pandemic • New strategies for people who use substances to respond to COVID-19 o Changing legislation to allow longer prescription duration, mail, and remote supplying of medications to treat substance use disorders o Providing or prescribing alternative substances, such as safe supply of pharmaceutical grade substances o Providing naloxone for unsupervised dosing of medications to treat substance-use disorders o Providing harm-reduction education related to safe use in isolation o Providing supplies for sanitization in harm-reduction kits • Existing strategies have been enhanced or emphasized during the COVID-19 pandemic o Ensuring a safe supply of substances o Providing drug safety checking o Providing sterile supplies o Sanitizing supplies in harm-reduction kits Source (AMSTAR rating 8/10)	
	• Impact on substance use (e.g., increase in use; change in use patterns) • Policy decisions that affect the operation of mental health and addictions services	• Limited evidence was found on the effect of the COVID-19 pandemic on alcohol use and related harms o Trends in changes to alcohol intake among the global population during the pandemic are unclear o Studies in Canada reported that more people have increased their alcohol intake during the	Literature last searched 16 June 2020

Type of document	Relevance to question	Key findings	Recency or status
		pandemic than decreased, particularly in younger people aged 18–34 o A survey in Canada found that 99% of participants had not experienced injuries due to alcohol during the pandemic • Few studies provided evidence regarding alcohol-related harm-reduction strategies o A survey in Canada found only a small proportion of people who drink alcohol sought resources to reduce their alcohol intake (2%) Source (AMSTAR rating 8/10)	
	• Impact on substance use (e.g., increase in use; change in use patterns) • Impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care) • Policy decisions that affect the availability and accessibility of associated mental health and addictions services • Policy decisions that affect the operation of mental health and addictions services	• During the pandemic, an increase in the care needs of people with addiction problems or in a situation of homelessness is to be expected, as well as an increase in addiction problems and the number of people in a situation of homelessness in the general population • Several creative and effective initiatives put in place during the pandemic should be maintained during the recovery phase o The development of a range of remote services and mobile clinics o The opening of emergency beds and accommodation o Increased funding for community organizations o Adapting the management of opioid dependence o The development of effective intersectoral or interdisciplinary collaborations o The establishment of training focused on trauma for workers, community resources and care providers called upon to intervene with these populations Source (AMSTAR rating 3/11)	Literature last searched 20 April 2020

Type of document	Relevance to question	Key findings	Recency or status
	• Policy decisions that affect the operation of mental health and addictions services	• Found no peer-reviewed literature about benefits or harms of safe-supply programs during the pandemic • However, the review found evidence related to substitution treatment which found that slow-release oral morphine as compared to methadone resulted in fewer cravings, improvements in mental symptoms and treatment satisfaction, and similar retention rates and safety outcomes in treatment groups • Canadian clinical trials have found that for dependent opioid users, injectable pharmaceutical heroin was more effective in retaining participants and reducing illicit drug use than methadone treatment, however hydromorphone is as effective for sub-groups with severe opioid-use disorder Source (AMSTAR rating 3/9)	Published April 2020
	• Impact on substance use (e.g., increase in use; change in use patterns) • Policy decisions that affect the availability and accessibility of associated mental health and addictions services • Policy decisions that affect the operation of mental health and addictions services	• The harmful effects on the mental health of the population in the event of a pandemic are numerous and can last over time and the literature consulted noted the importance of various actions o Effectively communicating information to the population o Adapting psychosocial services according to the needs of the population and the most vulnerable groups o Ensuring access to a set of mental health services adapted to their needs • Technological means should be favoured • It is important to focus on the autonomy of individuals and on the capacity for initiative, mutual aid and solidarity of living environments Source (AMSTAR rating 3/11)	Literature last searched March 2020

Type of document	Relevance to question	Key findings	Recency or status
	• Policy decisions that affect the operation of mental health and addictions services	• More targeted and integrated interventions to lessen mental health impacts (e.g. anxiety, depression, harmful use of substances) are needed o Fully engaging people and fostering understanding about COVID-19 and mental health through common media channels o Diverse and flexible approaches such as shared healthcare planning, online counselling, and genuine social interaction and integration o Rehabilitation guidelines for COVID-19 for reducing the mental health burden of recovery Source	Published 21 June 2020
	• Policy decisions that affect the operation of mental health and addictions services	• Adapted the traditional Niikaniganaw model for providing support to Indigenous peoples in Ottawa Gatineau area who are living with or affected by HIV or related issues, including substance use, mental illness, poverty or homelessness • Transitioned to creating virtual Indigenous spaces co-facilitated by researchers and Knowledge Carriers as well as documenting and implementing innovative ways of providing ceremonies at-distance and online for Indigenous peoples, including Knowledge Sharing circles with those providing health services Source	Published 22 June 2020
	• Impact on substance use (e.g., increase in use; change in use patterns) • Policy decisions that affect the availability and accessibility of associated mental health and addictions services • Policy decisions that affect the operation of mental health and addictions services	• COVID-19 is expected to disproportionately impact people with a lived experience of mental health issues partly as a result of person-related factors of poor health and difficulty following quarantine restrictions, provider-level factors such as lack of infection-control practices in mental health facilities, and system-level factors including limited access to community care or interruptions in medications	Published 27 May 2020

Type of document	Relevance to question	Key findings	Recency or status
		• Suggested practices include active screening programs, reductions in the use of restricted practices, and developing tailored mental health plans Source	
	• Policy decisions that affect the operation of mental health and addictions services	• Virtual care is underutilized for youth and their families to mitigate the impact of the COVID-19 pandemic on pain, mental health and substance use • Guidance for implementing virtual care and selecting virtual care platforms is provided o Being freely available across all technologies (telephone, apps, websites, videoconference) o Being individualized or customizable o Being able to integrate social and peer support Source	Literature last searched on 25 May 2020
	• Impact on substance use (e.g., increase in use; change in use patterns) • Policy decisions that affect the operation of mental health and addictions services	• Policy responses to COVID-19 pandemic, such as isolation and lockdowns, exacerbate intimate partner violence (IPV) and substance use (SU) • SU and IPV are bidirectionally related, in that SU among perpetrators and/or victims can accompany violence, and SU can be a lasting adaptive coping mechanism for survivors after IPV • Improved and sharpened responses from healthcare providers, SU workers and first responders to address IPV and SU during the COVID-19 pandemic must be developed Source	Literature last searched in August 2020
	• Impact on substance use (e.g., increase in use; change in use patterns) • Impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care)	• No findings directly addressed substance use, however two studies included in a rapid review found that persons with mental illness had fewer admissions to psychiatric hospital wards during the pandemic, but it remains unclear whether other services were provided as a replacement	Published June 2020

Type of document	Relevance to question	Key findings	Recency or status
		Source	
Guidance developed using some type of evidence synthesis and/or expert opinion	• Impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care) • Policy decisions that affect the availability and accessibility of associated mental health and addictions services • Policy decisions that affect the operation of mental health and addictions services	• This guidance assists substance misuse and homelessness services in providing advice to their staff about COVID-19 (and about infection prevention and control) while continuing to support their clients • This guidance covers various services o Day services for both substance misuse services and people who are homeless o Community treatment services for substance misuse o People with co-occurring conditions o Community services for people who are homeless o Hostels and temporary accommodation o Substance-misuse outreach services and mobile services o Homelessness outreach services, mobile units and soup runs o Residential rehabilitation services o Community drug and alcohol services Source	Last updated 19 May 2020
	• Impact on substance use (e.g., increase in use; change in use patterns) • Policy decisions that affect the availability of substances • Policy decisions that affect the availability and accessibility of associated mental health and addictions services • Policy decisions that affect the operation of mental health and addictions services	• People who misuse or are dependent on drugs and alcohol may be at increased risk of becoming infected (and infecting others) with COVID-19, andbeing more vulnerable to poor health outcomes due to underlying conditions, as well as mental health issues associated with lockdown • This guidance offers advice to policymakers, managers and staff who need to consider contingency plans for various situations o Reduced or interrupted supply of medicines, or access to medicines when pharmacies are closed o Reduced access to, or interrupted supply of, illicit drugs or alcohol	Last updated 24 September 2020

Type of document	Relevance to question	Key findings	Recency or status
		○ Greater vulnerability to the effects of COVID-19 because of reduced immunity from poor health, drug and alcohol use, or medication for other conditions ○ Increased risk of domestic violence Source	
	• Impact on substance use (e.g., increase in use; change in use patterns) • Policy decisions that affect the availability and accessibility of associated mental health and addictions services	• This guidance aims to support individuals who are drinking daily at high levels and are dependent on alcohol during the pandemic • It addresses the risk of withdrawal and other serious complications, and provides advice for self-management, as well as advice to informal and family caregivers Source	Last updated 7 May 2020
Protocols for reviews that are underway	• Impact on substance use (e.g., increase in use; change in use patterns)	• Examining rates of alcohol and substance use during the COVID-19 pandemic Source	Anticipated date of completion 31 December 2020
	• Impact on substance use (e.g., increase in use; change in use patterns)	• Examining the impact of COVID-19 and other pandemics and epidemics on people with pre-existing mental disorders including substance use Source	Not yet completed
	• Impact on substance use (e.g., increase in use; change in use patterns)	• Changes in substance use during the pandemic and examining whether and how the pandemic may aggravate the use of substances Source	Not yet completed
Titles/questions for reviews that are being planned	• Impact on services and interventions to address substance use (e.g., changes to availability of services, development of new services, shifts to virtual care)	• Impacts of COVID-19 mitigation on non-COVID-19 populations with pre-existing mental health conditions Source	Not yet completed

Appendix 3: List of primary studies organized by relevance to key findings

Key finding	Hyperlink to primary study
Substance use is increasing during COVID-19 and is associated with increased psychological distress due to the pandemic, however not all segments of the population are experiencing increases	• Self-reported alcohol, tobacco, and cannabis use during COVID-19 lockdown measures: Results from a web-based survey • Alcohol use in Australia during the early days of the COVID-19 pandemic: Initial results from the COLLATE project • Depression, anxiety and stress during COVID-19: Associations with changes in physical activity, sleep, tobacco and alcohol use in Australian adults • Epidemic of COVID-19 in China and associated psychological problems • Increased addictive internet and substance-use behaviour during the COVID-19 pandemic in China • Impacts of COVID-19 on youth mental health, substance use, and well-being: A rapid survey of clinical and community samples • Drinking to cope during COVID-19 pandemic: The role of external and internal factors in coping motive pathways to alcohol use, solitary drinking, and alcohol problems • What does adolescent substance use look like during the COVID-19 pandemic? Examining changes in frequency, social contexts, and pandemic-related predictors • Did the general population in Germany drink more alcohol during the COVID-19 pandemic lockdown? • Global changes and factors of increase in caloric/salty food intake, screen use, and substance use during the early COVID-19 containment phase in the general population in France: Survey study • Exposure to health misinformation about COVID-19 and increased tobacco and alcohol use: a population-based survey in Hong Kong • A syndemic of COVID-19 and methanol poisoning in Iran: Time for Iran to consider alcohol use as a public-health challenge? • Alcohol consumption reported during the COVID-19 pandemic: The initial stage • Threatening increase in alcohol consumption in physicians quarantined due to coronavirus outbreak in Poland: the ALCOVID survey • Health behaviour changes during COVID-19 pandemic and subsequent "Stay-at-Home" orders • The opioid epidemic within the COVID-19 pandemic: Drug testing in 2020 • Drinking to cope with the pandemic: The unique associations of COVID-19-related perceived threat and psychological distress to drinking behaviours in American men and women • Changes in alcohol use as a function of psychological distress and social support following COVID-19 related University closings • At home and online during the early months of the COVID-19 pandemic and the relationship to alcohol consumption in a national sample of U.S. adults • Knowledge, beliefs, mental health, substance use, and behaviors related to the COVID-19 pandemic among U.S. adults: A national online survey

Key finding	Hyperlink to primary study
	• Behavioural Health and Service Usage During the Coronavirus Disease 2019 Pandemic Among Emerging Adults Currently or Recently Experiencing Homelessness • Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic - United States, June 24-30, 2020 (US) • Psychological factors associated with substance-use initiation during the COVID-19 pandemic • Signal of increased opioid overdose during COVID-19 from emergency medical services data • Problem drinking before and during the COVID-19 crisis in U.S. and U.K. adults: Evidence from two population-based longitudinal studies • Factors associated with drinking behaviour during COVID-19 social distancing and lockdown among adults in the U.K. • Mental health and health behaviours before and during the initial phase of the COVID-19 lockdown: longitudinal analyses of the UK Household Longitudinal Study • Poor inhibitory control and stress as risk-factors for alcohol (mis)use during the COVID-19 pandemic in the U.K.: a national cross-sectional study utilizing data from four birth cohorts • Heaviest drinkers still drinking during lockdown: U.K. research • Fear of COVID-19 Scale—Associations of its scores with health literacy and health-related behaviours among medical students
There is a range of impacts of the pandemic on people who use substances, as well as a number of impacts on treatment and supports	• The effect of lockdown following COVID-19 pandemic on alcohol use and help seeking behaviour: Observations and insights from a sample of alcohol-use disorder patients under treatment from a tertiary care centre • Social support is key to retention in care during Covid-19 pandemic among older people with HIV and substance-use disorders in Ukraine • Psychiatric emergency care during Coronavirus 2019 (COVID 19) pandemic lockdown: results from a Department of Mental Health and Addiction of northern Italy • Association of the Covid-19 lockdown with smoking, drinking, and attempts to quit in England: an analysis of 2019-2020 data • Potential influences of the COVID-19 pandemic on drug use and HIV care among people living with HIV and substance-use disorders: Experience from a pilot mHealth intervention • Naloxone use by emergency medical services during the COVID-19 pandemic: A national survey • Early effects of COVID-19 on programs providing medications for opioid-use disorder in jails and prisons • Psychological impact of the acute COVID-19 period on patients with substance-use disorders: We are all in this together • Opium addiction and COVID-19: Truth or false beliefs • Psychopathological burden and quality of life in substance users during the COVID-19 lockdown period in Italy
Shifts in access to legal and illicit substances during the pandemic, with decreases in	• A global survey on changes in the supply, price and use of illicit drugs and alcohol, and related complications during the 2020 COVID-19 pandemic • COVID-19 survey among people who use drugs in three cities in Norway

Key finding	Hyperlink to primary study
availability and increases in price	
The pandemic has led to shifts in treatment modalities to telemedicine, virtual-care approaches and other innovations in service delivery	• Telehealth capability among substance-use disorder treatment facilities in counties with high versus low COVID-19 social distancing • Reorganization of substance-use treatment and harm-reduction services during the COVID-19 pandemic: A global survey • Treatment of opioid-use disorder during COVID-19: Experiences of clinicians transitioning to telemedicine • Take-home dosing experiences among persons receiving methadone maintenance treatment during COVID-19 • Assessing the validity of the Australian Treatment Outcomes Profile for telephone administration in drug health treatment populations
Policy decisions (e.g., whether alcohol is considered essential commodity during lockdown) has impacted substance use. Access to withdrawal management and other treatments is also a concern	• Shifts in alcohol consumption during the COVID-19 pandemic: early indications from Australia • Rebound of severe alcoholic intoxications in adolescents and young adults after COVID-19 lockdown • Complicated alcohol withdrawal-an unintended consequence of COVID-19 lockdown • Impact of COVID-19 related policy changes on Buprenorphine dispensing in Texas

Appendix 4: Abstracts for highly relevant documents

Note that the table below only includes the abstracts for the documents that we identified on page 1 as being highly relevant to the question.

Type of document	Abstract and link to full text
Full systematic reviews	Addictions in the COVID-19 era: Current evidence, future perspectives - a comprehensive review **Abstract** In the context of the COVID-19 worldwide pandemic, an up-to-date review of current challenges in addictions is necessary. While large scale disasters may have an impact on substance use and addictions, the use of some substances is also likely to modify the risk of COVID-19 infection or course. Many countries have imposed lockdowns. Whether this quarantine or the end of lockdown measures will have an impact on substance use is discussed. The aim of this review is to gather knowledge for clinicians and to guide public-health policies during/after lockdown. PubMed was reviewed on August 6th (2020), to determine the current evidences and observations concerning the addictions and SARS-CoV2. We used all the names of the severe acute respiratory syndrome of coronavirus 2 (SARS-CoV2 previously 2019 nCoV), the name of the coronavirus disease 2019 (COVID-19), and common substances of abuse. For the physiopathological parts, searches were conducted using key words such as "infection" or "pneumonia". For the lockdown effects, key words such as "quarantine", "disaster" or "outbreak" were used. Overall, pathophysiological data showed an increased risk of infections for individuals with Substance Use Disorders (SUD) and a possible protective role of nicotine. During lockdown, there is a substantial risk of increasing SUDs. Individuals with opioid-use disorder are particularly at risk of relapse or of involuntary withdrawal. After lockdown, increase of use may be observed as far as years after. Individuals with addictions are at higher risk of multimorbidity and mortality during COVID-19 outbreak. This review describes useful strategies in clinical practice, including a systematic assessment of addiction comorbidity during this almost worldwide lockdown/pandemic. This review also highlights important areas for future research.
	eHealth to Redress Psychotherapy Access Barriers Both New and Old: A Review of Reviews and Meta-Analyses **Abstract** COVID-19 public-health proscriptions have created severe if temporary, barriers to accessing face-to-face psychotherapy across the world. As disruptive as these are, they come on top of more long-standing barriers to getting psychotherapy faced by millions in need. eHealth interventions offer an avenue for redressing both types of barriers, but evidence about their efficacy remains a concern. This review of reviews and meta-analyses outlines the strength of evidence and effect sizes for guided and unguided approaches to eHealth interventions targeting common problems in psychotherapy (i.e., depression, anxiety, substance abuse, and general well-being). After a comprehensive search, a total of 65 reviews and meta-analyses were identified and evaluated for treatment effects, moderators, acceptability, and attrition. Findings show eHealth is acceptable and effective at improving depression, anxiety, alcohol-related problems, and general mental health compared to waitlist, and can even offer benefit as an adjunct to traditional psychotherapy. Mixed evidence was found when comparing guided versus unguided interventions as well as the strength of benefit relative to active controls and the

Type of document	Abstract and link to full text
	degree to which these approaches are associated with attrition. eHealth interventions have the potential to be an effective tool for redressing both new and old psychotherapy access barriers.
	Personalized digital interventions for reducing hazardous and harmful alcohol consumption in community-dwelling populations **Abstract** Excessive alcohol use contributes significantly to physical and psychological illness, injury and death, and a wide array of social harm in all age groups. A proven strategy for reducing excessive alcohol consumption levels is to offer a brief conversation-based intervention in primary-care settings, but more recent technological innovations have enabled people to interact directly via computer, mobile device or smartphone with digital interventions designed to address problem alcohol consumption. To assess the effectiveness and cost-effectiveness of digital interventions for reducing hazardous and harmful alcohol consumption, alcohol-related problems, or both, in people living in the community, specifically: (i) Are digital interventions more effective and cost-effective than no intervention (or minimal input) controls? (ii) Are digital interventions at least equally effective as face-to-face brief alcohol interventions? (iii) What are the effective component behaviour-change techniques (BCTs) of such interventions and their mechanisms of action? (iv) What theories or models have been used in the development and/or evaluation of the intervention? Secondary objectives were (i) to assess whether outcomes differ between trials where the digital intervention targets participants attending health, social care, education or other community-based settings, and those where it is offered remotely via the internet or mobile phone platforms; (ii) to specify interventions according to their mode of delivery (e.g., functionality features) and assess the impact of mode of delivery on outcomes. We searched CENTRAL, MEDLINE, PsycINFO, CINAHL, ERIC, HTA and Web of Knowledge databases; ClinicalTrials.com and WHO ICTRP trials registers and relevant websites to April 2017. We also checked the reference lists of included trials and relevant systematic reviews. We included randomized controlled trials (RCTs) that evaluated the effectiveness of digital interventions compared with no intervention or with face-to-face interventions for reducing hazardous or harmful alcohol consumption in people living in the community and reported a measure of alcohol consumption. We used standard methodological procedures expected by The Cochrane Collaboration. We included 57 studies which randomized a total of 34,390 participants. The main sources of bias were from attrition and participant blinding (36% and 21% of studies respectively, high risk of bias). Forty-one studies (42 comparisons, 19,241 participants) provided data for the primary meta-analysis, which demonstrated that participants using a digital intervention drank approximately 23 g alcohol weekly (95% CI 15 to 30) (about three U.K. units) less than participants who received no or minimal interventions at end of follow up (moderate-quality evidence). Fifteen studies (16 comparisons, 10,862 participants) demonstrated that participants who engaged with digital interventions had less than one drinking day per month fewer than no intervention controls (moderate-quality evidence), 15 studies (3,587 participants) showed about one binge drinking session less per month in the intervention group

Type of document	Abstract and link to full text
	compared to no intervention controls (moderate-quality evidence), and in 15 studies (9,791 participants) intervention participants drank one unit per occasion less than no intervention control participants (moderate-quality evidence). Only five small studies (390 participants) compared digital and face-to-face interventions. There was no difference in alcohol consumption at end of follow up (MD 0.52 g/week, 95% CI -24.59 to 25.63; low-quality evidence). Thus, digital alcohol interventions produced broadly similar outcomes in these studies. No studies reported whether any adverse effects resulted from the interventions. A median of nine BCTs were used in experimental arms (range = 1 to 22). 'B' is an estimate of effect (MD in quantity of drinking, expressed in g/week) per unit increase in the BCT, and is a way to report whether individual BCTs are linked to the effect of the intervention. The BCTs of goal setting (B -43.94, 95% CI -78.59 to -9.30), problem solving (B -48.03, 95% CI -77.79 to -18.27), information about antecedents (B -74.20, 95% CI -117.72 to -30.68), behaviour substitution (B -123.71, 95% CI -184.63 to -62.80) and credible source (B -39.89, 95% CI -72.66 to -7.11) were significantly associated with reduced alcohol consumption in unadjusted models. In a multivariable model that included BCTs with B > 23 in the unadjusted model, the BCTs of behaviour substitution (B -95.12, 95% CI -162.90 to -27.34), problem solving (B -45.92, 95% CI -90.97 to -0.87), and credible source (B -32.09, 95% CI -60.64 to -3.55) were associated with reduced alcohol consumption. The most frequently mentioned theories or models in the included studies were Motivational Interviewing Theory (7/20), Transtheoretical Model (6/20) and Social Norms Theory (6/20). Over half of the interventions (n = 21, 51%) made no mention of theory. Only two studies used theory to select participants or tailor the intervention. There was no evidence of an association between reporting theory use and intervention effectiveness. There is moderate-quality evidence that digital interventions may lower alcohol consumption, with an average reduction of up to three (U.K.) standard drinks per week compared to control participants. Substantial heterogeneity and risk of performance and publication bias may mean the reduction was lower. Low-quality evidence from fewer studies suggested there may be little or no difference in impact on alcohol consumption between digital and face-to-face interventions. The BCTs of behaviour substitution, problem solving and credible source were associated with the effectiveness of digital interventions to reduce alcohol consumption and warrant further investigation in an experimental context. Reporting of theory use was very limited and often unclear when present. Over half of the interventions made no reference to any theories. Limited reporting of theory use was unrelated to heterogeneity in intervention effectiveness.
Rapid review	What is the effect of the COVID-19 pandemic on opioid and substance use and related harms? **Abstract** There has been no scientific assessment to date of the effects of the COVID-19 pandemic on opioid and substance use. Minimal surveillance evidence is available to identify effects on overdoses and deaths, and these findings do not show a consistent trend during the COVID-19 pandemic. Guidance and expert opinion are providing some direction to service

Type of document	Abstract and link to full text
	providers and people who use illicit drugs, and this direction is summarized in this review. The uptake, feasibility and effectiveness of these strategies is not known. Evidence related to the main question: what is the effect of the COVID-19 pandemic on opioid and substance use and related harms, is summarized under three sub-questions, with most evidence sources addressing both questions 1 and 3: • Based on research evidence, what is the effect of the COVID-19 pandemic on substance use, overdoses, and substance-related deaths? o People who use substances have reduced access to harm-reduction and treatment services. o There has been a disruption to the supply of illicit drugs in Canada, affecting the availability and cost, and increasing the risk of drug adulteration. o People who use substances may be at risk for more serious consequences of COVID-19 infection due to pre-existing conditions and vulnerabilities. o The evidence is of low (synthesis) or moderate (guidance document) quality; findings are consistent. • How have rates of overdoses and substance-related deaths been affected during the COVID-19 pandemic, according to surveillance data? o Surveillance data within Canada is currently very limited. Data was identified from only five jurisdictions (two provincial, one regional, two municipal). The limited data and inconsistency in findings mean that no clear trends in overdoses or substance-related deaths have emerged at this time. o It is likely that surveillance data is currently being collected by other jurisdictions, but it is not yet readily available. • What strategies have been used to mitigate substance use during the COVID-19 pandemic? o There exist some guidance documents and expert opinion pieces on strategies to modify harm reduction or treatment strategies for implementation during the COVID-19 pandemic, as well as strategies to minimize the risk of COVID-19 infection among people who use substances. o New strategies to respond to COVID-19 ▪ Legislation changes, including to the Canadian Controlled Substances Act, allowing longer prescription duration, mail, and remote supplying of medications to treat substance-use disorders ▪ Providing or prescribing alternative substances, such as safe supply of pharmaceutical-grade substances ▪ Provision of naloxone for unsupervised dosing of medications to treat substance-use disorders ▪ Harm-reduction education related to safe use in isolation ▪ Providing supplies for sanitization in harm-reduction kits ▪ Existing strategies that have been enhanced or emphasized due to COVID-19 ▪ Ensuring a safe supply of substances ▪ Providing drug safety checking ▪ Providing sterile supplies

Type of document	Abstract and link to full text
	▪ Sanitizing supplies in harm-reduction kits
	What is the effect of the COVID-19 pandemic on alcohol use and alcohol-related harms? **Abstract** Evidence on the effect of the COVID-19 pandemic on alcohol use and related harms is currently limited, consisting mainly of survey data. Epidemiological data is not yet available in Canada for the pandemic period. While a few reports describe efforts to implement harm-reduction strategies during the pandemic, data on outcomes is not currently available. Evidence related to the effect of the COVID-19 pandemic on alcohol use and related harms is summarized under three sub-questions: • Based on research evidence, what is the effect of the COVID-19 pandemic on alcohol use and alcohol-related harms? o Among the global population, trends in changes to alcohol intake during the pandemic are unclear. o Several studies reported that more people have increased their alcohol intake; a similar number of studies reported that more people have decreased their intake. o Findings are inconsistent and quality of evidence is low. Of note, studies conducted in Canada reported that more people have increased their alcohol intake during the pandemic than decreased, particularly in younger people aged 18–34. o Findings are consistent and quality of evidence is low. Overall, studies reported that the largest proportion of people have not changed their alcohol intake. o Findings are consistent and quality of evidence is low. Most studies did not report on alcohol-related harms, such as injuries or hospitalizations. A survey conducted in Canada found that 99% of participants had not experienced injuries due to alcohol during the pandemic. • How have rates of alcohol-related harms in Canada been affected during the COVID-19 pandemic? o It was not possible to compare the rates of alcohol-related harms in Canada during the pandemic to similar timeframes in prior years since relevant population-level data is not yet available for the pandemic period. • What strategies have been used to mitigate alcohol-related harms during the COVID-19 pandemic? o Few studies provided any evidence regarding harm-reduction strategies. A survey conducted in Canada found only a small proportion of people who drink alcohol sought resources to reduce their alcohol intake (2%). Quality of evidence is moderate.
	Possible benefits of providing safe supply of substances to people who use drugs during public-health emergencies such as the COVID-19 pandemic **Abstract** Safe supply is an approach that focuses on saving lives by prescribing pharmaceutical-grade substances such as opioids and stimulants to individuals at risk of overdose (1) and does not include substitution or opioid agonist treatments, such

Type of document	Abstract and link to full text
	as methadone, buprenorphine/suboxone, or slow-release oral morphine, as these therapies do not contain the mind/body altering properties that people seek in recreational drugs.(2) Safe-supply initiatives have begun in Canadian cities including Toronto (3), London and Ottawa without any overdose-related deaths (4; 5), and Vancouver has begun a pilot program that dispenses prescribed hydromorphone (Dilaudid) tablets.(6) We found no peer-reviewed literature regarding the potential benefits or harms of safe-supply programs. However, we did find some evidence related to substitution treatments. Clinical trials that compared slow-release oral morphine to methadone found that those in the slow-release oral morphine group had: fewer heroin cravings,(7; 8) a statistically significant improvement in mental symptoms and treatment satisfaction,(9) and similar retention rates and safety outcomes as the methadone treatment group.(10) Canadian clinical trials have found that among severe opioid dependent users, injectable diacetylmorphine (pharmaceutical heroin) was more effective in retaining participants and reducing rates of illicit drug use or other illegal activity than methadone.(11) Hydromorphone is as effective as diacetylmorphine for sub-groups of individuals with severe opioid-use disorder,(12) indicating that these treatments may be effective for patients who are resistant to or unsuccessful with other types of treatment. There is a call for efforts to address safe-supply needs through pharmacological stimulant-based interventions that provide larger doses with greater frequency with methylphenidate and extended-release amphetamines as potential treatment candidates.(13)

Type of document	Abstract and link to full text
Guidance developed using some type of evidence synthesis and/or expert opinion	COVID-19: guidance for commissioners and providers of services for people who use drugs or alcohol **Abstract** It is important that drug and alcohol services keep open and operating as they protect vulnerable people who are at greater risk from COVID-19 and help reduce the burden on other healthcare services. Where emergency-response plans have been put in place for services during the pandemic they should be continuously reviewed to check that local and individual treatment need is being met, that there are no unintended consequences, and that opportunities are being taken to improve and get services back to normal. Where interventions such as detoxification, supervised consumption, and blood-borne virus (BBV) testing and treatment were curtailed or reduced because of COVID-19, services should now be making plans to reintroduce or expand them in line with national clinical guidance. Services should continue to keep face-to-face contact to a minimum. Biological drug testing and breathalysers can be used with appropriate personal protective equipment (PPE) and following manufacturers' precautions and instructions for cleaning. Follow up-to-date guidance for infection prevention and control, including: hand-washing, surface-cleaning, the appropriate use of PPE, isolation and sending symptomatic staff home. Arrangements for prescribing and dispensing of medicines used in drug and alcohol treatment were changed to take account of service and pharmacy closures, staff unavailability, patients having to maintain social distance or self-isolate (including the clinically extremely vulnerable being shielded), and the need to reduce the spread of COVID-19. These arrangements should be reviewed and returned to compliance with national drug and alcohol clinical guidance, and to meet service-user needs, as soon as circumstances allow. Measures to reduce drug and alcohol-related harm, such as needle and syringe programmes (NSP), take-home naloxone, thiamine, advice on gradual reduction of alcohol consumption and e-cigarettes, should all be increased where possible. Usual expectations on services for local monitoring and reporting, contract and performance management, and contract re-tendering can all be scaled back to enable services to focus on delivery.

Appendix 5: Documents excluded at the final stages of reviewing

Type of document	Hyperlinked title
Full systematic reviews	• Alcohol consumption and alcohol-related problems during the COVID-19 pandemic: A narrative review • The potential impact of the COVID-19 pandemic on child growth and development: a systematic review • Substance Use Disorder Education in Medical Schools: A Scoping Review • Interprofessional Substance Use Disorder Education in Health Professions Education Programs: A Scoping Review • Substance use education in US schools of pharmacy: A systematic review of the literature • Undergraduate Medical Education in Substance Abuse: A Review of the Quality of the Literature • Marital violence precipitating/intensifying elements during the COVID-19 pandemic. • Emergency Department-initiated Interventions for Patients With Opioid Use Disorder: A Systematic Review
Rapid reviews	• Impacts of COVID-19 mitigation on people with pre-existing substance use and addictions issues
Single studies in areas where no reviews were identified	• COVID-19 Fear, Mental Health, and Substance Use Among Israeli University Students • Physical and Psychological Characteristics of Nitrous Oxide Abusers During the COVID-19 Pandemic: An Observational Study • Examining the impact of COVID-19 on stress and coping strategies in individuals with disabilities and chronic conditions • Impact of COVID-19-related stress and lockdown on mental health among people living with HIV in Argentina • Alcohol-related self-harm due to COVID-19 pandemic: Might be an emerging crisis in the near future: A case report • COVID-19 risk and outcomes in patients with substance use disorders: analyses from electronic health records in the United States • Effect of Underlying Comorbidities on the Infection and Severity of COVID-19 in Korea: a Nationwide Case-Control Study • In-Person Contacts and Their Relationship With Alcohol Consumption Among Young Adults With Hazardous Drinking During a Pandemic • COVID-19 pandemic as an opportunity for improving mental health treatments of the homeless people • Prohibiting alcohol sales during the coronavirus disease 2019 pandemic has positive effects on health services in South Africa