McMaster University | HEALTH FORUM

RISE Rapid-Improvement Support and Exchange

COVID-19 Rapid Evidence Profile #14 (26 June 2020)

Questions

Where and with what impacts have shifts from in-person to virtual approaches occurred in the delivery of healthcare services in general and mental health and addictions services in particular?

What we found

We included documents that addressed shifts occurring during the pandemic (and excluded those from prior to the pandemic). We organized findings about shifts from in-person to virtual approaches, both in general and specifically for mental health and addictions services, according to whether they occurred:

- in specific sectors;
  - home and community care,
  - primary care,
  - specialty care,
  - rehabilitation care, or
  - long-term care;
- for specific conditions (e.g., anxiety);
- for specific treatments, supports and other types of services (e.g., virtual consultations);
- for specific populations (e.g., people with multiple chronic conditions); and
- for combinations of sectors, conditions, services and populations.

For all of the above we also noted any evaluative results available related to these shifts.

We identified 22 evidence documents that provide highly relevant evidence in relation to one or more of the above categories:

- three guidelines developed using a robust process (e.g., GRADE);
- five rapid reviews;
- one guideline developed using some type of evidence synthesis and/or expert opinion; and
- 13 primary studies with additional insights.

We provide in Table 1 an overview of lessons learned from the highly relevant evidence documents as well as

Box 1: Our approach

We identified documents addressing the question by searching the guide to key COVID-19 evidence sources from 24-26 June 2020.

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. 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. 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: 1) 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; and 2) quality-appraisal scores for rapid reviews are often lower because of the methodological shortcuts that need to be taken to accommodate compressed timeframes.

We identified experiences from select other countries and from Canadian provinces and territories by searching jurisdiction-specific websites (e.g., government ministries and webpages dedicated to COVID-19). Our scan of experiences from other countries focused on those that we identified as being further ahead in their approach to using virtual approaches to care.

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

from two jurisdictional scans (one for other countries and the other for Canadian provinces and territories).

Additional details for those who want to know more are 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) in Appendix 2, relevant titles of ongoing syntheses funded by the Canadian Institutes for Health Research's Knowledge Synthesis COVID-19 in Mental Health and Substance Use Operating grant in Appendix 3, abstracts for highly relevant documents in Appendix 4, and hyperlinks for documents excluded at the final stage of reviewing in Appendix 5.

Table 1: Key findings from highly relevant evidence documents and experiences from other countries and Canadian provinces and territories

Where have shifts occurred	Shifts in healthcare services in general	Shifts in mental health and addictions services in particular
For specific sectors • Home and community care • Primary care • Specialty care • Rehabilitation care • Long-term care	**Highly relevant evidence documents** • Guidelines developed using some type of evidence synthesis and/or expert opinion o An outline guide to deciding when video consultations are appropriate and setting up and conducting video services in primary care is provided, and a guide for patients to prepare for and participate in video consultations is also provided (published 18 March 2020) • Single studies in areas where no reviews were identified o An evaluation of the use of video-enabled telemedicine for healthcare delivery in a large health system (NYU Langone Health) found rapid expansion of telemedicine use for urgent care (135% increase) and non-urgent care visits (4,345% increase) with highest usage among patients aged 20-44 (published 23 April 2020) o Implementing telehealth in a speciality clinic during COVID-19 was facilitated by staff, provider, and patient education; appropriate hardware, software, and IT support; EMR infrastructure; billing codes; and patient and caregiver participation (published 30 April 2020) o A system was developed to triage patients for remote consultations relating to suspected head and neck cancer, with more than 80% of referrals triaged to teleconsultation during a pilot of the tool (published 11 May 2020) o Virtual care may be used for neoadjuvant, adjuvant, perioperative, and first-line palliative treatments to allow them to continue (published 24 June 2020) o Virtual care may be used to provide follow-up care for symptom checking, monitoring and management of side effects from antitumoural therapy for uro-oncology patients (published 20 April 2020 o Otolaryngology patients are very satisfied with the care they receive through telemedicine visits during the COVID-19 pandemic (published 1 June 2020)	**Highly relevant evidence documents** • Single studies in areas where no reviews were identified o A regional acute mental health service in Australia shifted to predominantly telemedicine during COVID-19, with protocols in place to determine when in-person assessment is warranted (published 8 April 2020) o Irish psychiatrists reported that shifting to telepsychiatry during COVID-19 created difficulties during diagnostic assessments, as well as ethical and technical issues (published 22 May 2020) o Ensuring all providers have training in technology platforms and providing virtual care, and implementing a trial period to assess with patients, were critical in supporting a virtual telepsychiatry clinic (published 28 May 2020) **Experiences from other countries** • New Zealand has expanded funding for digital tools to address mental health and substance-use concerns in the community **Experiences from Canadian provinces and territories** • Not available

Where have shifts occurred	Shifts in healthcare services in general	Shifts in mental health and addictions services in particular
	○ Synchronous telehealth exercise programs for older adults with functional impairments and who are living at home is financially and technically feasible, and a viable model for transitioning the in-person support provided by physical therapists to virtual formats during periods of social distancing and quarantine (published 5 May 2020) **Experiences from other countries** • The Netherlands has expanded virtual needs • Assessments for home-care services • In Sweden, while virtual visits to primary-care providers have been available for some time, there has been an expansion in the use of the digital platform as well as training for primary-care physicians to use digital tools in their practice • In the United Kingdom, the NHS has fast-tracked the approval of digital providers to ensure that they can be widely implemented across primary-care practices, and is exploring the development of virtual wards for long-term care **Experiences from Canadian provinces and territories** • Both the Saskatchewan Health Authority and Government of New Brunswick have announced plans to provide long-term care with iPads for residents	
For specific conditions (e.g., anxiety)	**Highly relevant evidence documents** • Rapid reviews ○ Remote delivery can help patients with cardiovascular disease access usual and rehabilitative care, and requires that providers are reimbursed and supported (AMSTAR rating 3/9; published 7 May 2020) ○ Video consultations can greatly reduce the need for face-to-face contact when delivering palliative care during COVID-19, if implemented effectively (search date 17 March 2020) • Single studies in areas where no reviews were identified ○ A system was developed to triage patients for remote consultations relating to suspected head and neck cancer, with more than 80% of referrals triaged to teleconsultation during a pilot of the tool (published 11 May 2020)	**Highly relevant evidence documents** • Single studies in areas where no reviews were identified ○ A regional acute mental health service in Australia shifted to predominantly telemedicine during COVID-19, with protocols in place to determine when in-person assessment is warranted (published 8 April 2020) ○ Ensuring all providers have training in technology platforms and providing virtual care, and implementing a trial period to assess with patients, were

Where have shifts occurred	Shifts in healthcare services in general	Shifts in mental health and addictions services in particular
	○ Virtual care may be used for neoadjuvant, adjuvant, perioperative, and first-line palliative treatments to allow them to continue (published 24 June 2020) ○ Virtual care may be used to provide follow-up care for symptom checking, monitoring and management of side effects from antitumoural therapy for uro-oncology patients (published 20 April 2020) ○ Adding new services such as kindness calls to extended clinical services and other wrap-around care enabled the successful implementation of a virtual-care children's hospice, which also included other virtual aspects such as storytelling, friendship calls, arts and craft sessions, and a pen-pal program (published May 2020) ○ Otolaryngology patients are very satisfied with the care they receive through telemedicine visits during the COVID-19 pandemic (published 1 June 2020) ○ Synchronous telehealth exercise programs for older adults with functional impairments and who are living at home is financially and technically feasible, and a viable model for transitioning the in-person support provided by physical therapists to virtual formats during periods of social distancing and quarantine (published 5 May 2020) **Experiences from other countries** • In the United Kingdom, the NHS is managing cystic fibrosis patients over the age of six as well as recovering stroke patients virtually **Experiences from Canadian provinces and territories** • Not available	critical in supporting a virtual telepsychiatry clinic (published 28 May 2020) **Experiences from other countries** • Not available **Experiences from Canadian provinces and territories** • Not available
For specific treatments, supports and other types of services (e.g., virtual consultations)	**Highly relevant evidence documents** • Rapid reviews ○ Video consultations can greatly reduce the need for face-to-face contact when delivering palliative care during COVID-19, if implemented effectively (search date 17 March 2020) ○ An outline guide to deciding when video consultations are appropriate and setting up and conducting video services in primary care is	**Highly relevant evidence documents** • Single studies in areas where no reviews were identified ○ A regional acute mental health service in Australia shifted to predominantly telemedicine during COVID-19, with protocols in place to determine when in-

Where have shifts occurred	Shifts in healthcare services in general	Shifts in mental health and addictions services in particular
	provided, and a guide for patients to prepare for and participate in video consultations is also provided (published 18 March 2020) • Single studies in areas where no reviews were identified o A system was developed to triage patients for remote consultations relating to suspected head and neck cancer, with more than 80% of referrals triaged to teleconsultation during a pilot of the tool (published 11 May 2020) o Virtual pre-natal care can be provided alongside in-person services for those that cannot be provided remotely and can be included as part of a flexible service pathway (published 12 May 2020) **Experiences from other countries** • Australia dedicated $5 million to fast-tracking e-prescribing for people self-isolating due to confirmed or suspected COVID-19 and for those at greater risk of infection • Similarly, New Zealand has put electronic prescribing in place throughout the duration of the pandemic • In the United States, providers that are registered with the Drug Enforcement Agency may prescribe controlled substances with no initial in-person consultation **Experiences from Canadian provinces and territories** • Not available	person assessment is warranted (published 8 April 2020) o Irish psychiatrists reported that shifting to telepsychiatry during COVID-19 created difficulties during diagnostic assessments, as well as ethical and technical issues (published 22 May 2020) **Experiences from other countries** • Australia announced funding as part of their pandemic response and follow-up National Mental Health and Wellbeing Pandemic Plan to provide additional telephone and digital supports to allow individuals to access pandemic-related mental health supports • In the United States, the Substance Abuse and Mental Health Services Administration is supporting providers to prescribe and dispense methadone and buprenorphine for the treatment of opioid use at an Opioid Treatment Program **Experiences from Canadian provinces and territories** • The Government of Alberta has announced $4 million in funding to expand the virtual opioid dependency program, which enables access to treatment, counselling and other supports via telehealth
For specific populations (e.g., people with multiple chronic conditions; Indigenous)	**Highly relevant evidence documents** • Rapid reviews o An outline guide to deciding when video consultations are appropriate and setting up and conducting video services in primary care is provided, and a guide for patients to prepare for and participate in video consultations is also provided (published 18 March 2020)	**Highly relevant evidence documents** • Not available **Experiences from other countries** • In Australia funding was made available to bolster virtual services available to vulnerable

Where have shifts occurred	Shifts in healthcare services in general	Shifts in mental health and addictions services in particular
	• Single studies in areas where no reviews were identified o Adding new services such as kindness calls to extended clinical services and other wrap-around care enabled the successful implementation of a virtual-care children's hospice which also included other virtual aspects such as storytelling, friendship calls, arts and craft sessions, and a pen-pal program (published May 2020) o Synchronous telehealth exercise programs for older adults with functional impairments and who are living at home is financially and technically feasible, and a viable model for transitioning the in-person support provided by physical therapists to virtual formats during periods of social distancing and quarantine (published 5 May 2020) **Experiences from other countries** • Not available **Experiences from Canadian provinces and territories** • British Columbia has established on-demand consultation to support northern, rural and First Nations communities, as well as shifting treatment and healing centres provided by the BC First Nations Health Authority online • The Government of the Yukon has been working to deliver iPads to Indigenous communities to support their participation in virtual heath and social support services	groups who may benefit less from the shift to digital care, including older adults, Aboriginal and Torres Strait Islander peoples, and linguistically diverse populations **Experiences from Canadian provinces and territories** • The Ministry of Children and Family Development in B.C. has adopted virtual care by phone to provide intake services and mental health counselling for children and youth
For combinations of sectors, conditions, services and populations	**Highly relevant evidence documents** • Guidelines developed using a robust process (e.g., GRADE) o Remote consultations for all appointments except those which meet locally defined exception criteria are recommended, but even for those cases, video or tele-triage may be booked in before the appointment (England NHS; last updated 27 March 2020) o It is recommended to document adaptive responses (e.g., teleconsultation) implemented during the pandemic phase that should be considered for longer-term integration into health system operations (WHO technical guidance; last updated 1 June 2020) • Rapid reviews	**Highly relevant evidence documents** • Guidelines developed using a robust process (e.g., GRADE) o Virtual approaches can be used for outpatient follow-up visits, self-help as initial care for patients with mild depression and anxiety, psychological treatments for patients with less severe functional impairment, caregivers, and group settings (WHO technical guidance; last updated 1 June 2020)

Where have shifts occurred	Shifts in healthcare services in general	Shifts in mental health and addictions services in particular
	○ Telemedicine can support health systems' COVID-19 responses and will require adaptation to policy and practice (AMSTAR rating 4/9; published 15 June 2020) ○ Telehealth improves access to care, is acceptable to patients, can be applied in a variety of forms from technical to client-focused, and has been shown to have positive outcomes for stroke, diabetes, heart conditions, ICU, mental health and rehabilitation (search date 16 May 2020) ○ Telehealth is safe and effective for COVID-19 patients needing primary care and all patients for a range of conditions, but attention needs to be paid to regulatory frameworks, policies, operating procedures, communication and data-sharing mechanisms (search date 13 April 2020) • Single studies in areas where no reviews were identified ○ A system was developed to triage patients for remote consultations relating to suspected head and neck cancer, with more than 80% of referrals triaged to teleconsultation during a pilot of the tool (published 11 May 2020) ○ A COVID-19-specific remote patient-monitoring solution (GetWell Loop) was offered to patients with COVID-19 symptoms, which gave them the opportunity to share concerns and have alerts resolved through a virtual-care workforce of providers and medical students, and 74% of patients who completed a satisfaction survey indicated they would be extremely likely to recommend its use to their doctor (published 11 May 2020) **Experiences from other countries** • The Netherlands has changed the billing requirements for providers who are now able to be remunerated for first-time virtual consultations while these previously had to take place in person • In the United States, The National Telehealth Policy Resource Centre has provided an overview of telehealth coverage policy changes for healthcare, which includes greater reimbursement from CMS for providers using telehealth in the place of face-to-face consultations	• Single studies in areas where no reviews were identified ○ A regional acute mental health service in Australia shifted to predominantly telemedicine during COVID-19, with protocols in place to determine when in-person assessment is warranted (published 8 April 2020) **Experiences from other countries** • New Zealand has amended the Mental Health Act to allow the use of audio-visual technology for clinical and judicial assessments of clients during high-alert levels • The Government of the United Kingdom has announced a five million pound investment to local mental health charities providing community mental health services throughout the pandemic, many of which include virtual or online components such as online peer support and online talk therapies **Experiences from Canadian provinces and territories** • The federal government announced in May an investment of $240.5 million to develop, expand and launch virtual care and mental health tools to support Canadians to access their regular providers and specialist mental health services • The Government of Ontario has announced plans to provide $12 million in funding to expand virtual mental health services and supports in the province, which will include

Where have shifts occurred	Shifts in healthcare services in general	Shifts in mental health and addictions services in particular
	Experiences from Canadian provinces and territories • Many Canadian provinces and territories including British Columbia, Saskatchewan, Nova Scotia, Prince Edward Island, and the Yukon have expanded the availability of virtual health services including expanding the list of hosting platforms to include applications such as Zoom for healthcare and PEXIP • Many Canadian provinces including British Columbia, Alberta, Saskatchewan, Manitoba, and Ontario have introduced changes to billing codes that better support telehealth and virtual-care services • The College of Physicians of Prince Edward Island has expanded their telehealth licences in order to provide physicians with emergency licences during the pandemic	free internet-based cognitive-behavioural therapy • Numerous organizations across Quebec have established guidelines for virtual mental health and forensic psychiatry • In Nunavut, mental health counselling for adults and children has moved to virtual means and is now conducted via a central phone line
With what evaluative results (for any of the above)	**Highly relevant evidence documents** • Rapid reviews o Telehealth improves access to care, is acceptable to patients, can be applied in a variety of forms from technical to client-focused, and has been shown to have positive outcomes for stroke, diabetes, heart conditions, ICU, mental health and rehabilitation (search date 16 May 2020) o Telehealth is safe and effective for COVID-19 patients needing primary care and all patients for a range of conditions, but attention needs to be paid to regulatory frameworks, policies, operating procedures, communication and data-sharing mechanisms (search date 13 April 2020 • Single studies in areas where no reviews were identified o An evaluation of the use of video-enabled telemedicine for healthcare delivery in a large health system (NYU Langone Health) found rapid expansion of telemedicine use for urgent care (135% increase) and non-urgent care visits (4,345% increase) with highest usage among patients aged 20-44 (published 23 April 2020) o A system was developed to triage patients for remote consultations relating to suspected head and neck cancer, with more than 80% of referrals triaged to teleconsultation during a pilot of the tool (published 11 May 2020)	**Highly relevant evidence documents** • Single studies in areas where no reviews were identified o A regional acute mental health service in Australia shifted to predominantly telemedicine during COVID-19, with protocols in place to determine when in-person assessment is warranted (published 8 April 2020) o Irish psychiatrists reported that shifting to telepsychiatry during COVID-19 created difficulties during diagnostic assessments, as well as ethical and technical issues (published 22 May 2020) **Experiences from other countries** • Not available **Experiences from Canadian provinces and territories** • Not available

Where have shifts occurred	Shifts in healthcare services in general	Shifts in mental health and addictions services in particular
	○ Otolaryngology patients are very satisfied with the care they receive through telemedicine visits during the COVID-19 pandemic (published 1 June 2020) ○ A COVID-19-specific remote patient-monitoring solution (GetWell Loop) was offered to patients with COVID-19 symptoms, which gave them the opportunity to share concerns and have alerts resolved through a virtual-care workforce of providers and medical students, and 74% of patients who completed a satisfaction survey indicated they would be extremely likely to recommend its use to their doctor (published 11 May 2020) **Experiences from other countries** • Not available **Experiences from Canadian provinces and territories** • Not available	

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

Type of document	Total	Shifts in healthcare services in general	Shifts in mental health and addictions services in particular
Guidelines developed using a robust process (e.g., GRADE)	19	17	2
Full systematic reviews	4	3	1
Rapid reviews	26	22	6
Guidelines developed using some type of evidence synthesis and/or expert opinion	5	5	0
Protocols for reviews that are underway	6	4	3
Titles/questions for reviews that are being planned	1	1	1
Single studies in areas where no reviews were identified	22	19	3

Table 3: International experiences with shifting to virtual care

Country	Key findings
Australia	• $669 million was invested to expand publicly funded telehealth services: o A number of temporary billing codes (in place until September 2020) were added for general practitioners, nurse practitioners, specialists, midwives, allied health providers, and mental health providers o Providers are also incentivized to spend at least four hours per day providing face-to-face care • Up to $5 million was invested to fast track e-prescribing for people self-isolating due to confirmed or suspected COVID-19 infection, or people at greater risk • On 29 March, a number of telephone and digital supports were announced: o Professional support accessible by telephone and digital online to address pandemic-related mental health concerns, through non-profit Beyond Blue o Online and phone mental health support to frontline providers through non-profit Black Dog Institute o Funding boost for existing helplines, including phone lines for children, people at risk of suicide, and expectant and new parents o Digital peer-support services for people with severe and persistent mental illness o Expansion of digital supports for youth via Headspace • On 15 May, Australia released a $48.1 million National Mental Health and Wellbeing Pandemic Plan. Elements relevant to virtual care include: o Support monitoring and modelling the mental health impact of COVID-19 by sharing data, including from virtual services o Creating a system for connecting those accessing federal digital and telephone supports to local services o Bolstering services to support vulnerable groups who may benefit less from the shift to digital care, including older adults, Aboriginal and Torres Strait Islander peoples, and culturally and linguistically diverse populations
Netherlands	• At the beginning of 2020, the government of the Netherlands announced an investment in virtual-care services, which was accelerated by the pandemic and has included expanding virtual needs assessment for home-care services • In hospitals located in areas where the outbreak is most severe, all face-to-face consultations have been postponed or, where possible, reverted to telephone or virtual consultations • For patients without severe symptoms, hospitals have been sending patients home with a self-test kit that enables them to measure their temperature, blood oxygen levels and blood pressure, and report their values on a daily video call with the hospital • To enable transitions to virtual care, the Dutch Healthcare Authority is allowing patient consultation to be conducted by telephone or other remote ways and still be eligible for remuneration, whereas under normal circumstances an in-person visit would need to take place
New Zealand	• Released in May 2020, Kia Kaha, Kia Māia, Kia Ora Aotearoa: COVID-19 Psychosocial and Mental Wellbeing Recovery Plan includes calls for: o Funding digital tools for mental health and substance-use concerns o Promoting access to free digital mental health and substance-use services including telehealth and e-therapy o Fast-tracking a national digital mental health and addictions framework (which includes attention to cultural sensitivity of digital offerings)

Country	Key findings
	• Electronic prescription was enabled to support virtual care, with new regulations lasting until the Epidemic Preparedness (Covid-19) Notice 2020 expires • Healthcare providers, including mental healthcare providers, were encouraged to offer virtual visits unless in-person care was deemed necessary (prior to the country returning to a lower alert level as of June 8). The NZ Telehealth Forum and Resource Centre web portal provides updates and offers resources and webinars for providers implementing virtual care. • The Mental Health Act was amended to allow use of audio-visual technology for clinical and judicial assessment of clients during high-alert levels
Sweden	• Digital visits for primary care were already available for all residents in Sweden, but there has been an expansion in the use of existing digital platforms in addition to many regions offering training for professionals to use digital platforms
Taiwan	• Unable to find information
United Kingdom	• Throughout the pandemic, the NHS has fast-tracked the approval of digital providers to ensure that most general-practice consultations can be undertaken remotely using telephone, video or text messaging software o In addition, general practitioners have been told to proactively reach out to high-risk patients using telehealth and virtual services to offer enhanced remote care where possible • With respect to the management of select conditions, the NHS is providing virtual supports for all cystic fibrosis patients over the age of six, as well as for the ongoing management and rehabilitation of stroke patients • The Adult Social Care Action Plan notes that the Government is supporting care homes to take up video-consultation approaches including options for establishing virtual wards • Though separate from the health system, NHS England is investing in the rapid rollout of virtual-health technologies across the prison system which will remain in place to improve healthcare delivery in prisons post-pandemic • The U.K. government is investing five million pounds to support local charities delivering community health services, many of which include online or virtual components including online peer services and online talk therapies
United States	• The National Telehealth Policy Resource Center provides a detailed overview of federal and state telehealth coverage policy changes for healthcare services in general and for mental health and addictions services due to COVID-19, including: o policy changes from the Centers for Medicare & Medicaid Services (CMS), where general and hospital-employed providers will be able to provide live-video and audio-only behavioural health counselling and educational services to patients living at home and across state lines; o CMS will reimburse providers utilizing telehealth in place of face-to-face consultations for healthcare services in general; o Drug Enforcement Agency (DEA)-registered healthcare providers may prescribe controlled substances with no initial in-person consultation under one of the exceptions to the Ryan Haight Act for telehealth (with restrictions such as prescription for medical reasons, consultation via audio-visual real-time communication, and healthcare-provider compliance to Federal and State law); o Health and Human Services (HHS) Office for Civil Rights may waive penalties due to Health Insurance Portability and Accountability Act (HIPAA) violations against healthcare providers who use non-HIPAA compliant telehealth technologies (i.e., FaceTime, Skype), while also subject to state laws and regulations;

Country	Key findings
	○ state-specific resources for implementing telehealth and a continuously updated webpage of state policies and actions that help to remove barriers of telehealth during COVID-19 (e.g., coverage, licensure, site fees); and ○ information about some private insurers now accepting and covering telehealth services. • The Substance Abuse and Mental Health Services Administration (SAMHSA) provides guidance related to mental health and addictions services during COVID-19, including: ○ care and treatment of mental and substance-use disorders, where SAMHSA strongly recommends the use of telehealth during initial consultations and treatment, and during individual or group-based behavioural therapy where possible; ○ prescription and dispensing of methadone and buprenorphine for the treatment of opioid-use disorder at an Opioid Treatment Program, where SAMHSA has the authority to allow healthcare providers at OTPs to provide services over telehealth (including audio-only), such as an initial evaluation of new patients treated with buprenorphine only, provide treatment to existing OTP patients using methadone and buprenorphine, and dispense medication based on telehealth evaluations; ○ outpatient settings, where SAMHSA recommends the use of telehealth where possible; and ○ state psychiatric hospitals, where SAMHSA indicates psychiatric care is reserved for persistent cases with additional non-virtual care considerations. • The American Psychiatric Association provides psychiatrists with federal and state-level guidance on providing mental health and addictions services to patients (including policy shifts and changes related to telehealth by both private and public payers). • The Centers for Disease Control and Prevention (CDC) released guidance on telehealth services, and note that telehealth can be used for services related to mental and behavioural health.

Table 4: Canadian provinces' and territories' experiences shifting to virtual care

Province/ territory	Key findings
Pan-Canadian	• The College of Family Physicians of Canada and Canada Health Infoway have partnered to offer family physicians practical guidance about the use of electronic medical record capabilities in a novel guide, since many family-practice environments have adopted an electronic medical record system and are now integrating more digital health tools into practice. • The College of Family Physicians of Canada, The Royal College of Physicians and Surgeons of Canada, and the Canadian Medical Association have partnered to create the Virtual Care Playbook for Canadian Physicians, which aims to help Canadian physicians introduce virtual patient encounters into their daily practices. It focuses on video visits, although phone calls and patient messaging are also considered virtual care. The key considerations related to providing safe, effective and efficient care include: integrating virtual care into practice workflow; technology requirements; scope of practice; "webside" manner; and the virtual visit from beginning to end. • The College of Family Physicians of Canada, The Royal College of Physicians and Surgeons of Canada, and the Canadian Medical Association have complemented the Virtual Care Playbook with the Virtual Care Guide for Patients – a bilingual resource that was co-created with members of the Canadian Medical Association Patient Voice. • The federal government announced an investment of $240.5 million in May 2020 to develop, expand and launch virtual care and mental health tools to support Canadians, allowing more people to safely engage with their regular health providers and specialist mental health services through telephone, text, or videoconferencing. • The federal government has established Wellness Together Canada, an online portal that provides Canadians with free resources, tools, and professional support services to help with wellness and resilience, as well as mental health and substance-use problems. o Wellness Together Canada connects Canadians to peer-support workers, social workers, psychologists and other professionals for confidential chat sessions or phone calls, while facilitating the process of gathering credible information to help address mental health and substance-use issues. • In March 2020, the federal government announced $7.5 million in funding to Kids Help Phone to provide children and youth with mental health services and counselling supports during the pandemic.
British Columbia	• The Office of Virtual Health and Digital Health Team at the Provincial Health Services Authority has developed a Virtual Health toolkit for clinicians to use during the COVID-19 pandemic to provide safe patient care at a distance. o The toolkit guides clinical programs as they integrate virtual health visits, remote patient monitoring, clinical digital messaging, and online treatment and resources into their services. Doctors of BC, with the guidance of the Doctors Technology Office, have piloted several learning initiatives to support physicians with virtual-care visits, including: a video series and a webinar that offer guidance to physicians on the use of Zoom and Doxy.Me for Virtual Care; the use of MailChimp and Fongo Works for Patient Communications; a Virtual Care Support Network which is mobilizing a network of physicians and medical office assistants, as well as the Practice Support Program Regional Support Team members to provide clinics with virtual at-the-elbow coaching services to implement virtual care in their practice; and a variety of other health-technology resources to help navigate clinic privacy and security, electronic medical record troubleshooting, billing, and other related items.

Province/ territory	Key findings
	• The Medical Services Plan has introduced temporary billing changes due to COVID-19 that allow: o telehealth fees to be used when the service is rendered over the telephone, including services for all COVID-19 patients; and o telehealth fees to be claimed for consultations, office visits, and non-procedural interventions where there is currently no telehealth fee; these may be claimed under the "face to face" fee with a claim note record that the service was provided via video technology or telephone and is payable by the Medical Services Plan. • Real-Time Virtual Support pathways provide on-demand consultation to support patient care and rural healthcare collaboration. These pathways enable the delivery of timely emergency and urgent patient-centred care closer to home, and can be accessed by residents in rural and remote communities, and BC First Nations citizens, as well as rural healthcare providers. o Support for residents in rural and remote communities and BC First Nations Citizens include: HealthLink BC Emergency iDoctor-in-assistance, which introduced a virtual physician to the provincial 8-1-1 nurses' call flow to increase capacity and assist nurses with decision support to help meet the needs of the COVID-19 crisis; and First Nations Virtual Doctor of the Day, which ensures that First Nations people and their family members can access primary healthcare closer to home through virtual appointments. o Support for rural healthcare providers include: 1) Zoom for Healthcare licences for rural physicians and nurse practitioners; 2) Virtual Locum Service, which offers a more flexible approach to locum support, such as linking locums with community; and 3) Pathways accessible by Zoom, including rural urgent doctor-in-aid and rural outreach support. • The government of B.C. has expanded existing virtual mental health programs and new services including: o BounceBack, which provides free access to online, video and phone-based coaching and skill-building program; o community counselling services for individuals or groups have been implemented at low or no cost; o virtual mentoring and goal-oriented supports offered by peer support and system navigation workers; o Living Life to the Full peer support and practical-skills courses for coping with stress, problem solving, and boosting mood that is now offered virtually and led by a trained facilitator; and o COVID-19 psychological support service, which is a free psychological first aid available over the phone to all B.C. residents aged 19 and over, including frontline healthcare workers, who are experiencing stress, anxiety, or uncertainty due to the COVID-19 pandemic. • The Ministry of Children and Family Development has adopted virtual care by phone and online to provide intake services and mental health counselling for children and youth across B.C. • The BC First Nations Health Authority supports treatment and healing centres across B.C. that have shifted to providing virtual support to individuals and families who have attended their programs previously, and are responding to new requests for emotional and cultural support from First Nations people. • The government of British Columbia launched Here2Talk on April 2020, a new mental health counselling and referral service for post-secondary students that offers free, confidential, single-session services by app, phone or online chat 24/7.
Alberta	• On June 8, the Government of Alberta announced permanent billing codes which allow for physicians to be compensated for providing virtual patient care. Billing codes will include patient visits, consultations and mental health support which take place via video or phone. • The Government of Alberta has additionally partnered with TELUS Health to provide residents with access to virtual care options and COVID-19 support through an online app.

Province/ territory	Key findings
	○ The app enables residents to check symptoms, book appointments, access providers, and receive prescriptions and referrals. • On June 22, the Government of Alberta announced $4 million in funding to expand the Virtual Opioid Dependency Program, which enables residents to access treatment, counselling and other supports via telehealth.
Saskatchewan	• On March 8, the Saskatchewan Health Authority announced a plan to donate $25,000 to long-care homes for the purpose of purchasing iPads for residents. The iPads are hoped to address mental health concerns, such as loneliness, during COVID-19. • On March 13, the Saskatchewan Ministry of Health introduced new billing codes which allow for physicians to provide telehealth services. • The Government of Saskatchewan has also worked to develop a secure online video platform, PEXIP, to enable providers to connect with patients via video calls.
Manitoba	• On April 24, the Government of Manitoba announced temporary tariffs which could be claimed by providers for virtual-care visits. • The Government of Manitoba has additionally partnered with stakeholders to provide residents with free access to virtual mental health supports, such as internet-based therapy. • It is unclear whether additional changes have been implemented to transition from in-person to virtual care within other sectors.
Ontario	• On March 13, The Ministry of Health and Ministry of Long-Term Care announced the introduction of temporary billing codes which enable physicians to bill for virtual-care visits via telephone or video. • The ministry has also introduced several procedures which guide providers across multiple sectors on how to implement virtual care. • On April 2, the Government of Ontario announced plans to provide $12 million in funding to expand virtual mental health services and supports. ○ As part of this commitment, internet-based cognitive-behavioural therapy will be provided free of cost for Ontario residents and frontline workers. ○ Virtual training programs on how to provide appropriate mental health support will also be delivered to telehealth and emergency-department staff under this plan. • The Government of Ontario has additionally established a Mental Health and Addictions COVID-19 Response Table to identify mental health needs during the pandemic, as well as to develop and implement virtual-care strategies.
Quebec	• The Quebec government established a subcommittee on teleconsultation to issue recommendations to the COVID-19 clinical steering committee of the Ministry of Health and Social Services to ensure coordinated management of teleconsultation services. • On March 31, the College des médecins published guidelines on the use of teleconsultation during the COVID-19 pandemic. Many of the recommendations in the guidelines are only valid during the pandemic. More comprehensive guidelines on teleconsultations will be developed in coming months. ○ Physicians can bill medical services performed remotely in connection with COVID-19 by telephone or video, in accordance with the guidelines from the ministry. • The Ministry launched the Quebec Telehealth Network (https://telesante.quebec) to provide information and best practices on the use of collaborative applications and videoconferencing systems.

Province/ territory	Key findings
	• As of May 21, the ministry updated the guidelines for resuming specialized activities, which summarizes the procedures to be put in place to ensure that activities are resumed safely in healthcare settings. The guidelines emphasize the need to ensure the judicious use of teleconsultation, with a target of around 30%. • Several other guidelines have been developed specifically for mental health and forensic psychiatry, general social services, services for those with physical impairment, intellectual impairment and autism spectrum disorder, and physical-health rehabilitation needs, troubled youth, perinatal and early childhood services, etc. The guidelines generally recommend telephone follow-up, teleconsultation, telerehabilitation, virtual care, or self-care approaches, rather than face-to-face meetings or home visits (whenever possible).
New Brunswick	• On April 22, the Government of New Brunswick announced plans to equip nursing homes with iPads to connect residents with healthcare providers via virtual-care platforms. • It is unclear whether additional changes have been implemented to transition from in-person to virtual care within other sectors.
Nova Scotia	• On March 24, the Government of Nova Scotia announced the expansion of virtual-care platforms which enable healthcare providers to connect with patients via telephone or video. • The Government of Nova Scotia has additionally approved the use of Zoom for Healthcare as a platform for healthcare providers to connect with patients. • On March 27, the Department of Health And Wellness also committed to distributing iPads to long-term care residents to address mental health risks of social isolation.
Prince Edward Island	• When possible, P.E.I. recommends that care be provided through virtual means, including phone calls and videoconferencing; however, if people are not interested in virtual care, alternate arrangements will be made. o For those who do choose to access virtual care, video appointments will be conducted by Zoom for Healthcare, which has increased security. • Due to increased demand for telehealth during Covid-19, the College of Physicians revised its telemedicine policy in order to provide physicians with emergency telemedicine licences during the pandemic. o On March 20, 2020, the College adopted this rapid-licensing program, ensuring emergency licences would last until seven days after the public health emergency was removed. • As of March 18, Addictions Services Walk-in/Call-in Clinics began utilizing the call-in clinic model to provide immediate support for substance use and gambling.
Newfoundland and Labrador	• No information found
Yukon	• Virtual appointments with doctors will be conducted by telehealth, through doxy.me. The government has created an online database of physicians who are conducting telehealth through doxy.me to help connect patients with virtual care. • Disability services has begun providing care, including speech and language pathology and occupational therapy, over online platforms. • In order to provide better care to Indigenous people, the government has been working on delivering iPads to people so they will be able to attend virtual conferences and/or medical appointments, and access other support services.

Province/ territory	Key findings
Northwest Territories	• Non-essential medical services which require travel both in-territory and to Alberta are to be virtually delivered where possible, and appointments with specialist physicians who travel to the territory have also been transitioned to telehealth.
Nunavut	• In-territory specialty clinics and non-essential medical travel is not taking place, and wherever possible have been moved to virtual platforms. • Mental health counselling in Iqaluit moved to virtual means, and is now conducted through a central phone line. • In addition, the Youth Wellness team offers phone-based counselling support, both for current clients and people looking for a referral.

Waddell K, Bullock HL, Evans C, Wilson M, Gauvin FP, Moat KA, Mansilla C, Wang Q, Bhuiya AR, Ahmad A, Filbey L, Lavis JN. COVID-19 rapid evidence profile #14: Where and with what impacts have shifts from in-person to virtual approaches occurred in the delivery of healthcare services in general and mental health and addictions services in particular? Hamilton: McMaster Health Forum, 26 June 2020.

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The authors declare that they have no professional or commercial interests relevant to the rapid evidence profile. The funders played no role in the identification, selection, assessment, synthesis, or presentation of the research evidence or experiences profiled in the rapid evidence profile.

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

Type of document	Relevance to question	Focus	Recency or status
Guidelines developed using a robust process (e.g., GRADE)	• Combinations of sectors, conditions, services and populations	Virtual approaches can be used for outpatient follow-up visits, self-help as initial care for patients with mild depression and anxiety, psychological treatments for patients with less severe functional impairment, caregivers, and group settings (WHO technical guidance)	Last updated 1 June 2020
	• Combinations of sectors, conditions, services and populations	Remote consultations for all appointments except those which meet locally defined exception criteria are recommended, but even for those cases, video or tele-triage may be booked in before the appointment (England NHS)	Last updated 27 March 2020
	• Combinations of sectors, conditions, services and populations	It is recommended to document adaptive responses (e.g., teleconsultation) implemented during the pandemic phase that should be considered for longer-term integration into health-system operations (WHO technical guidance)	Last updated 1 June 2020
	• Specific sectors; o Home and community care • Specific conditions	The use of telemedicine for patient monitoring, including psychological support, should be implemented for the management of home parenteral nutrition (European Society for Clinical Nutrition and Metabolism)	Last updated 8 May 2020
	• Specific sectors; o Home and community care • Specific populations	Community-based healthcare, including outreach and campaigns should consider teleconsultations and telecounselling (WHO technical guidance)	5 May 2020
	• Specific sectors; o Specialty care	The safe resumption of non-urgent radiology care during the COVID-19 pandemic requires the use of telehealth whenever feasible (e.g., pre- and post-procedure visits) (American College of Radiology)	6 May 2020
	• Specific sectors; o Specialty care • Specific conditions	For upper GI procedures, triaging should consider the following options: a telephone consultation with the referring provider; a telehealth visit with the	31 March 2020

Type of document	Relevance to question	Focus	Recency or status
		patient; or a multidisciplinary team approach to facilitate decision-making for complicated patients (American Gastroenterological Association Institute)	
	• Specific sectors; o specialty care, • Specific conditions • Specific treatments, supports and other types of services	Telemedicine (including telehealth, telephone evaluation and management, virtual check-in, e-visit) should be considered for cancer care delivery during the pandemic (American Society of Clinical Oncology)	19 May 2020
	• Specific sectors; o Specialty care • Specific populations	Antenatal care units should use teleconferencing and videoconferencing whenever possible, and consider which appointments can be most appropriately conducted remotely, but considerations should be given to challenges/limitations of virtual care for vulnerable groups (Royal College of Obstetricians and Gynaecologists)	Last updated 4 June 2020
	• Specific sectors; o Specialty care • Specific treatments, supports and other types of services	Early pregnancy units should use telephone triage and telephone consultation during the pandemic (Royal College of Obstetricians and Gynaecologists)	Last updated 15 May 2020
	• Specific sectors; o Specialty care	Teleconsultation should be considered for the management of cardiac electrophysiology and cardiac implantable electronic devices (Cardiac Society of Australia and New Zealand)	Last updated 11 June 2020
	• Specific sectors; o Specialty care	Where possible, reduce in-person (face-to-face, in the same room) consultations and replace with telephone or video for new-patient consultation and routine weekly on-treatment reviews for head and neck cancer radiotherapy (European Society for Radiotherapy and Oncology/American Society for Radiation Oncology)	Last updated 15 July 1010
	• Specific sectors; o Specialty care, • Specific treatments, supports and other types of services	Telehealth ECG reading and cardiology consultation 24/7 should be uniformly available to support regional and rural patient care (Cardiac Society of Australia and New Zealand)	Last updated 11 April 2020

Type of document	Relevance to question	Focus	Recency or status
	• Specific sectors; o Specialty care • Specific treatments, supports and other types of services	Phone visits or telemedicine are recommended to replace in-person visits, conduct patient education and social work, dietitian, and financial consultations, and replace outreach clinics for hepatology and liver transplants (American Association for the Study of Liver Diseases)	Last updated 7 April 2020
	• Specific sectors; o Specialty care	Telehealth or telephone should be considered for inpatient consultation and outpatient clinic for cardiac electrophysiology (Heart Rhythm Society/American College of Cardiology/American Heart Association)	Last updated 25 March 2020
	• Specific sectors; o Specialty care	Telephone or virtual interactions are recommended for new referrals and follow-up visit for cardiac patients (Canadian Cardiovascular Society)	Last update 7 April 2020
	• Specific sectors; o Long-term care	Alternatives to in-person visiting should be explored, including the use of telephones or video, in long-term care facilities (WHO technical guidance)	Last updated 21 March 2020
	• Specific conditions	Whenever possible, it is recommended to use telemedicine strategies to optimize the prevention and treatment of patients with severe emergent cardiovascular diseases during the pandemic (Chinese Society of Cardiology)	Last updated May 2020
	• Combinations of sectors, conditions, services and populations	For children and young people who are immunocompromised, patients with chronic kidney disease, patients with gastrointestinal and liver conditions taking drugs affecting the immune response, patients with interstitial lung disease, dialysis patients, patients with rheumatological autoimmune, inflammatory and metabolic bone disorders, patients with severe asthma, COPD patients, cystic fibrosis patients, patients receiving anticancer treatments, dermatology patients, and hematopoietic stem cell transplant recipients, it is recommended to safely reduce usual face-to-face contact with alternative approaches (e.g., telephone, video or email consultations whenever possible,	April-May 2020

Type of document	Relevance to question	Focus	Recency or status
		contacting people via text message, telephone or email, and using electronic prescriptions rather than paper), well enabling telephone or video consultations and virtual attendance at multidisciplinary team meetings (National Institute for Health and Care Excellence)	
Full systematic reviews	• Specific sectors o Primary care • Specific treatments, supports and other types of services	During coronavirus epidemics, telemedicine should be used to address concerns raised by the public, such as providing information about symptoms, prevention, and available treatments, and can be used to support screening and guidance for people who have symptoms	Literature last searched 31 March 2020
	• Specific sectors o Specialty care • Specific conditions (e.g., anxiety)	Tele-orthodontics and dental tele-assistance are able to address most patient emergencies remotely, and reduce the need for office visits while still facilitating ongoing monitoring during the COVID-19 pandemic	Published 15 June 2020
	• Specific sectors o Specialty care • Specific conditions (e.g., anxiety)	Telemedicine can be used as a contingency for otolaryngology services during the COVID-19 pandemic, but precautions have to be taken when handling confidential information remotely and prescribing treatments, and providers must ensure telemedicine is only used for the right conditions and in patient groups for which it is an appropriate approach	Published 7 May, 2020
	• Specific treatments, supports and other types of services • Specific populations (e.g., people with multiple chronic conditions; Indigenous)	Transitioning to teleneuropsychology assessments with older adults during the COVID-19 pandemic is a valid approach for cognitive screening, Digit Span Task, some language tests, memory tests and some intelligence tests, with more evidence needed to support tests that can support differential diagnoses, such as executive function	Literature last searched 22 March 2020

Type of document	Relevance to question	Focus	Recency or status
Rapid reviews	• Specific conditions (e.g., anxiety)	Remote delivery can help patients with cardiovascular disease access usual and rehabilitative care, and requires that providers are reimbursed and supported (AMSTAR rating 3/9)	Published 7 May 2020
	• Specific treatments, supports and other types of services (e.g., virtual consultations) • Specific conditions	Video consultations can greatly reduce the need for face-to-face contact when delivering palliative care during COVID-19, if implemented effectively	Search date 17 March 2020
	• Combinations of sectors, conditions, services and populations	Telemedicine can support health systems' COVID-19 responses and will require adaptation to policy and practice (AMSTAR rating 4/9)	Published 15 June 2020
	• Combinations of sectors, conditions, services and populations • Evaluative results	Telehealth improves access to care, is acceptable to patients, can be applied in a variety of forms from technical to client-focused, and has been shown to have positive outcomes for stroke, diabetes, heart conditions, ICU, mental health and rehabilitation	Search date 16 May 2020
	• Combinations of sectors, conditions, services and populations • Evaluative results	Telehealth is safe and effective for COVID-19 patients needing primary care and all patients for a range of conditions, but attention needs to be paid to regulatory frameworks, policies, operating procedures, communication and data-sharing mechanisms	Search date 13 April 2020
	• Specific sectors o Specialty care	Tele-ophthalmology, although not widely practised, may offer an alternate option for diabetic retinopathy screening where available during the COVID-19 pandemic, and the mainstay of treatment to halt or slow the progression of diabetic retinopathy should be optimization of diabetes care, which will likely continue to happen remotely via virtual clinics in most instances during the current pandemic	Last updated 12 May 2020

Type of document	Relevance to question	Focus	Recency or status
	• Specific sectors o Specialty care • Specific conditions (e.g., anxiety)	To ensure cardiovasular patients continue to receive needed care during the COVID-19 pandemic, health systems need to be prepared for remote delivery of services (i.e., establishing appropriate funding and remuneration mechanisms, training staff and investing in the equipment needed for virtual care), while ensuring cardiac-rehabilitation programs and usual care (i.e., prescriptions, mental health supports and timely access to emergency care) are maintained	Literature last searched 1 April 2020
	• Specific sector o Specialty care • What evaluative results (for any of the above)	Hub-and-spoke (provision of simultaneous virtual care for several locations from a single centre), and virtual consultations (remote intensivist individually examining several patients) are the most described models of telemedicine in ICUs, showing a potential decrease in patient mortality, but no significant difference in length of stay	Search date 20 March 2020
	• Specific conditions (e.g., anxiety) • Specific treatments, supports and other types of services (e.g., virtual consultations)	Text-message interventions and self-monitoring of blood glucose are promising interventions to improve self-management of or self-education for diabetes during the COVID-19 pandemic and evidence on smartphone based applications and web- and computer-based interventions is limited and mixed	Last updated 8 April 2020
	• Specific conditions (e.g., anxiety) • Specific populations (e.g., people with multiple chronic conditions; Indigenous)	Evidence is very uncertain about whether video-call interventions can help reduce loneliness and depression, and improve quality of life among older adults during the COVID-19 pandemic	Literature last searched 7 April 2020
	• Specific conditions (e.g., anxiety)	It is recommended that important parts of the management of patients with chronic cardiac insufficiency are done via teleconsultation with a cardiologist	Last update 10 April 2020
	• Specific conditions (e.g., anxiety)	In patients living with HIV during the COVID-19 pandemic, teleconsultation should be used for	Last update 10 April 2020

Type of document	Relevance to question	Focus	Recency or status
		patients initially booked for in-person consultation, and with stable infection	
	• Specific conditions (e.g., anxiety)	Teleconsultation is recommended to be used in patients with hypertension to maintain the frequency of medical consultations	Last update 10 April 2020
	• Specific populations (e.g., people with multiple chronic conditions; Indigenous)	The management of patients with psychiatric conditions after lockdown measures are over would combine in-person and virtual care, properly involving the patients in these decisions, and assuring the integration of the different health professionals	Last update 5 June 2020
	• Specific populations (e.g., people with multiple chronic conditions; Indigenous)	The integration of technology in addiction programs and services developed during the pandemic should be considered as a promising avenue for the future.	Search date 20 April 2020
	• Specific populations (e.g., people with multiple chronic conditions; Indigenous)	Maintaining ambulatory care using video transmission or telephone is recommended for stressful situations in patients living with psychiatric conditions in lockdown situations	Last update 2 April 2020
	• Combinations of sectors, conditions, services and populations	Telehealth is widely available and recommended for many non-COVID-19 conditions. While integrating telehealth into the public health response to COVID-19 involves several regulatory, operational and communicational concerns, adequate training, privacy and safety, and technological issues are among the main implementation considerations identified	Search date 13 April 2020
	• Combinations of sectors, conditions, services and populations	Teleconsultation and virtual healthcare allow for the management of patients with COVID-19 symptoms, facilitate access to acute care, the continuity of care for chronic conditions and pregnancy, support patients in their lifestyles during lockdown, and protect healthcare personnel.	Last update 2 April 2020
	• Combinations of sectors, conditions, services and populations	Online tools have been leveraged by many countries throughout the pandemic to monitor patients and to reduce the demand on healthcare facilies, however a lack of network readiness, limited standardized	Search date 4 May 2020

Type of document	Relevance to question	Focus	Recency or status
		policies and government regulation have restricted their widespread use	
	• Evaluative results	Although the general available evidence is low quality, virtual care and telemedicine have been shown to improve access, while being acceptable to patients and providers. The evidence is stronger for stroke management	Search date 16 May 2020
	• Specific conditions (e.g., anxiety)	Whereas previous evidence supports the use of telehealth for the delivery of diabetes services, emerging evidence is being produced for the use of telehealth for diabetic patients in the COVID-19 pandemic	Search date 6 April and 3 May 2020
	• Specific conditions (e.g., anxiety)	Online interventions guided by a therapist are among the strategies to maintain for people with existing mental health conditions during reopening context after lockdowns	Search date 20 April 2020
	• Specific conditions (e.g., anxiety)	Tele-rehabilitation (including the development of the proper technology for its implementation) is considered as a strategy for people having a physical disability during the reopening phase	Search date 20 April 2020
	• Specific conditions (e.g., anxiety)	The literature identifies the inclusion of virtual care as part of the modification of healthcare services provided to people with intellectual disabilities or autism spectrum disorders, although no document addressed the maintenance of these services for the reopening phase	Search date 20 April 2020
	• Specific treatments, supports and other types of services (e.g., virtual consultations)	There is no evidence that any smartphone technology is accurate for the measurement of blood oxygen saturation for clinical use and the scientific basis of such technologies is questionable	Last updated 19 May 2020
	• Combinations of sectors, conditions, services and populations	Digital health is considered as a fundamental tool for governments and the healthcare sector to respond to the COVID-19 public-health crisis. Online platforms and machine learning have been leveraged in the COVID-19 response for healthcare delivery	Search date 4 May 2020

Type of document	Relevance to question	Focus	Recency or status
Guidelines developed using some type of evidence synthesis and/or expert opinion	• Specific sectors o Primary care • Specific treatments, supports and other types of services (e.g., virtual consultations) • Specific populations (e.g., people with multiple chronic conditions; Indigenous)	An outline guide to deciding when video consultations are appropriate, and setting up and conducting video services in primary care is provided, and a guide for patients to prepare for and participate in video consultations is also provided	Published 18 March 2020
	• Specific sectors o Specialty care • Specific treatments, supports and other types of services (e.g., virtual consultations) • Specific populations (e.g., people with multiple chronic conditions; Indigenous)	COVID-19 will place a significant demand on cardiovascular services, especially for regional and rural areas; improved access to telehealth consultation will benefit regional and rural outpatients, and specialist-led 24/7 electrocardiogram reading and acute cardiology services will minimize potential impacts on acute care (Cardiac Society of Australia and New Zealand, CSANZ)	Published 7 May 2020
	• Specific treatments, supports and other types of services (e.g., virtual consultations)	Virtual visit guide for midwives, including complying with privacy and security requirements, obtaining consent, documenting virtual visit records, etc. (Association of Ontario Midwives)	Published 25 March 2020
	• Specific sectors o Primary care	Implementing a telephone navigation and triage service in primary-care practices to minimize contact with patients with respiratory symptoms and help ensure patient safety and the safety of staff required to support the sickest in our communities (The Scottish Government)	Published 18 March 2020
	• Specific sectors o Primary care	All primary-care providers are encouraged to continue to implement a system for virtual and/or telephone consultations as a preferred option, when and where possibl,e; and they should conduct a consultation over the phone, video or secure messaging to determine if a virtual/telephone consultation will suffice, or if an in-person appointment is necessary and essential (Ministry of Health, Ontario)	Published 22 May 2020

Type of document	Relevance to question	Focus	Recency or status
Protocols for reviews that are underway	• Specific conditions (e.g., anxiety)	Description of adaptations to mental health services during COVID-19 and other epidemics and local outbreaks	Anticipated completion 19 June 2020
	• Specific conditions (e.g., anxiety)	Effects of COVID-19 on mental health services, and innovations to mitigate these effects	Anticipated completion 31 May 2020
	• Specific populations (e.g., people with multiple chronic conditions; Indigenous)	Challenges and strategies for promoting health equity in virtual care	Anticipated completion 1 December 2020
	• Specific conditions (e.g., anxiety); • Specific treatments, supports and other types of services (e.g., virtual consultations) • Combinations of sectors, conditions, services and populations • Evaluative results	Effect of online psychosocial interventions to prevent cognitive decline in older adults who are at risk of dementia, which could be implemented during the pandemic	Anticipated completion 25 September 2020
	• Specific conditions (e.g., anxiety) • Specific treatments, supports and other types of services (e.g., virtual consultations) • Combinations of sectors, conditions, services and populations	Telehealth urological interventions that could be safely and effectively implemented during the pandemic	Anticipated completion 8 May 2020
	• Specific conditions (e.g., anxiety) • Specific treatments, supports and other types of services (e.g., virtual consultations); • Combinations of sectors, conditions, services and populations • Evaluative results	Measurement properties and safety of remote functional exercise tests for people with chronic lung disease during COVID-19	Anticipated completion 25 May 2020
Titles/questions for reviews that are being planned	• For combinations of sectors, conditions, services, and populations	What is the use of telephone/video consultations in palliative care and its impact on physical/psychological/social and spiritual well being during COVID-19?	Question in development
Single studies in areas where no reviews were identified	• Specific sectors o Primary care o Specialty care	An evaluation of the use of video-enabled telemedicine for healthcare delivery in a large health system (NYU Langone Health) found rapid expansion of telemedicine use for urgent care (135%	Published 23 April 2020

Type of document	Relevance to question	Focus	Recency or status
	• Evaluative results	increase) and non-urgent care visits (4,345% increase) with highest usage among patients aged 20-44	
	• Specific sectors o Specialty care	Implementing telehealth in a speciality clinic during COVID-19 was facilitated by: staff, provider, and patient education; appropriate hardware, software, and IT support; EMR infrastructure; billing codes; and patient and caregiver participation.	Published 30 April 2020
	• Specific sectors o Specialty care, • Specific conditions (e.g., anxiety); • Specific treatments, supports and other types of services (e.g., virtual consultations); • Combinations of sectors, conditions, services and populations; and • Evaluative results	A regional acute mental health service in Australia shifted to predominantly telemedicine during COVID-19, with protocols in place to determine when in-person assessment is warranted.	Published 8 April 2020
	• Specific sectors o Specialty care • Specific conditions (e.g., anxiety) • Specific treatments, supports and other types of services (e.g., virtual consultations) • Combinations of sectors, conditions, services and populations • Evaluative results	A system was developed to triage patients for remote consultations relating to suspected head and neck cancer, with more than 80% of referrals triaged to teleconsultation during a pilot of the tool.	Published 11 May 2020
	• Specific sectors o Specialty care • Specific treatments, supports and other types of services (e.g., virtual consultations) • Evaluative results	Irish psychiatrists reported that shifting to telepsychiatry during COVID-19 created difficulties during diagnostic assessments, as well as ethical and technical issues	Published 22 May 2020
	• Specific sectors o Specialty care • Specific conditions (e.g., anxiety)	Virtual care may be used for neoadjuvant, adjuvant, perioperative, and first-line palliative treatments to allow them to continue	Published 24 June 2020
	• Specific sectors o Home and community care	Ensuring all providers have training in technology platforms and providing virtual care, and	Published 28 May 2020

Type of document	Relevance to question	Focus	Recency or status
		implementing a trial period to assess with patients, were critical in supporting a virtual telepsychiatry clinic	
	• Specific sector o Specialty care • Specific conditions (e.g., anxiety)	Virtual care may be used to provide follow-up care for symptom checking, monitoring and management of side effects from antitumoural therapy for uro-oncology patients	Published 20 April 2020
	• Specific conditions (e.g., anxiety) • Specific populations (e.g., people with multiple chronic conditions; Indigenous)	Adding new services such as kindness calls to extended clinical services and other wrap-around care enabled the successful implementation of a virtual-care children's hospice which also included other virtual aspects such as storytelling, friendship calls, arts and craft sessions, and a pen-pal program	Published May 2020
	• Specific sector o Specialty care • Specific conditions (e.g., anxiety) • Evaluative results	Otolaryngology patients are very satisfied with the care they receive through telemedicine visits during the COVID-19 pandemic	Published 1 June 2020
	• Specific sector o Specialty care • Specific conditions (e.g., anxiety) • Specific populations (e.g., people with multiple chronic conditions; Indigenous)	Synchronous telehealth exercise programs for older adults with functional impairments and who are living at home is financially and technically feasible, and a viable model for transitioning the in-person support provided by physical therapists to virtual formats during periods of social distancing and quarantine	Published 5 May 2020
	• Specific treatments, supports and other types of services (e.g., virtual consultations)	Virtual pre-natal care can be provided alongside in-person services for those that cannot be provided remotely, and can be included as part of a flexible service pathway	Published 12 May 2020
	• Combinations of sectors, conditions, services and populations • Evaluative results	A COVID-19-specific remote patient-monitoring solution (GetWell Loop) was offered to patients with COVID-19 symptoms, which gave them the opportunity to share concerns and have alerts resolved through a virtual care workforce of providers and medical students, and 74% of patients who completed a satisfaction survey indicated they	Published 11 May 2020

Type of document	Relevance to question	Focus	Recency or status
		would be extremely likely to recommend its use to their doctor	
	• Specific sectors o Specialty care	Rise in the use of virtual care occurred in three different waves including to re-examine the potential for its continued use throughout the post-pandemic recovery	Published 17 May 2020
	• Specific sectors o Specialty care	Existing information technology infrastructure and interconnected EMRs supported a quick pivot to virtual neurological services	Published June 2020
	• Specific sectors o Home and community care o Specialty care • Specific conditions (e.g., anxiety) • Specific treatments, supports and other types of services (e.g., virtual consultations); • Combinations of sectors, conditions, services and populations; and • Evaluative results	Patients with primary antibody deficiency who were shifted from hospital to remote-assistance home-based treatment during COVID-19 had similar health-related quality of life as those patients who continued usual home-based care	Published 9 April 2020
	• Specific sectors; o Specialty care, • Specific conditions (e.g., anxiety); • Specific treatments, supports and other types of services (e.g., virtual consultations); • Evaluative results	An ophthalmic hospital network in India created a remote consultation and triage service during COVID-19, and found only 16% of callers required in-person follow-up	Published 25 May 2020
	• Specific treatments, supports and other types of services • Evaluative results	An evaluation of the use of WhatsApp to enable family participation in clinical rounds found that family members had positive experiences with respect to whether they were happy to virtually attend the clinical round, the information gained, and if they thought their loved one was happy to see them, but the real presence bedside was considered irreplaceable given the need to say good-bye before dying	Published 4 May 2020

Type of document	Relevance to question	Focus	Recency or status
	• Evaluative results	Virtual care was found to provide efficient triaging in the counties with the highest number of COVID-19 cases	Published 15 April 2020
	• Specific conditions (e.g., anxiety)	Remote diabetes care may be possible for patients in India during COVID-19, but further research is needed.	Published 4 April 2020
	• Specific conditions (e.g., anxiety)	Some patients with female pelvic medicine and reconstructive surgical conditions can be managed remotely using conservative and behavioural approaches, while others will continue to require in-person care during COVID-19	Published 27 April 2020
	• Specific conditions (e.g., anxiety)	Specific strategies can help physicians providing telemedicine care to patients with head and neck cancer during COID-19	Published 28 April 2020
	• Combinations of sectors, conditions, services and populations	Virtual reality could be beneficial for remote sites for telemedicine, planning, treatment, and controlling of the infections	Published 12 May 2020

Appendix 3: Ongoing rapid syntheses addressing virtual mental healthcare and funded by the CIHR Mental Health and Substance Use Responses to COVID-19 Knowledge Synthesis grant

Title	Principal investigators	Institution
Examining the efficacy of evidence-based psychosocial interventions for schizophrenia-spectrum disorders delivered through virtual care	Best, Michael W Arbour, Simone C Bowie, Christopher R Grossman, Michael Wang, Linbo	University of Toronto
Rapid evidence and gap map of virtual care solutions for youth and families to mitigate the impact of the COVID-19 pandemic on pain, mental health, and substance use	Birnie, Kathryn A Noel, Melanie E Stinson, Jennifer N	University of Toronto
COVID-19 physical distancing and post-traumatic stress injury: Utilization of digital health and remote mental health services for military, veterans, and public safety personnel	Bremault-Phillips, Suzette C Clelland, Steven R Snaterse, Mark Agyapong, Vincent O Ferguson-Pell, Martin W	University of Calgary
Knowledge synthesis for mechanistic and targeted in-person and digital social-connection intervention for wellness and resilience in older adults in pandemic context and beyond	Dubé, Laurette	McGill University
School-based suicide risk assessment using eHealth: A scoping review	Exner-Cortens, Deinera M	University of Calgary
Depression in community residing elders (DIRE): A rapid review and network meta-analysis of depression telemedicine treatments for older adults living in the community	Goodarzi, Zahra S Holroyd-Leduc, Jayna M Watt, Jennifer A	University of Calgary
Harnessing digital mental health to improve equity in mental health care in the context of COVID-19: Needs, best practices and opportunities in the Asia Pacific region	Lam Raymond W Michalak, Erin Murphy, Jill	University of British Columbia
Remote cognitive assessment in severe mental illness: A scoping review	Lepage, Martin Lavigne, Katie M Sauvé, Geneviève	CIUSSS de l'Ouest-de-l'Ile-de-Montréal-Douglas Hospital
The effectiveness of virtual interventions targeting mental health in people with chronic musculoskeletal pain: A systematic review and network meta-analysis	Macdermid, Joy C	University of Western Ontario

Mobilizing knowledge on the use of virtual care interventions to provide trauma-focused treatment to individuals and families at-risk of domestic violence during COVID-19	Montesanti, Stephanie R Silverstone, Peter H	University of Alberta
A systematic review on the effectiveness of virtual sleep intervention delivery to improve sleep and mental health outcomes in the post-secondary student population	Papaconstantinou Efrosini A Cote, Pierre Martin, Krystle	University of Ontario Institute of Technology
Digital health solutions to support women with addiction during COVID-19: Applying a gender- and trauma-informed lens	Quilty, Lena C Agic, Branka Buckley, Leslie	Centre for Addiction and Mental Health
Digital interventions to support population mental health during and after the COVID-19 pandemic: A knowledge synthesis	Strudwick, Gillian Crawford, Allison Sockalingam, Sanjeev	Centre for Addiction and Mental Health

Appendix 4: Abstracts for highly relevant documents

Type of document	Abstract
Rapid reviews	Video consultations can greatly reduce the need for face-to-face contact when delivering palliative care during COVID-19, if implemented effectively **Abstract** During the Covid-19 pandemic, a strategy to minimise face-to-face (FtF) visits and limit viral spread is essential. Video consultations offer clinical assessment despite restricted movement of people. We undertook a rapid literature review to identify the highest currently available level of evidence to inform this major change in clinical practice. We present a narrative synthesis of the one international and one national guideline and two systematic reviews—all published within the last 18 months. The global evidence appears to support video consultations as an effective, accessible, acceptable and cost-effective method of service delivery. Organisations must ensure software is simple, effective, reliable and safe, with the highest level of security for confidentiality. Although video consultations cannot fully replace FtF, they can radically reduce the need for FtF and the risk of Covid-19 spread in our communities while maintaining high standards of care. For patient safety, it will be critical to follow the WHO guidance regarding: a standard operating procedure; clinical protocols for when video consultations can (and cannot) be used; policies to ensure equity of access in disadvantaged populations; adequate staff training; and administrative support to coordinate appointments.
	Telehealth improves access to care, is acceptable to patients, can be applied in a variety of forms from technical to client-focused, and has been shown to have positive outcomes for stroke, diabetes, heart conditions, ICU, mental health and rehabilitation **Abstract** • Telehealth has been shown to improve access to care, is acceptable to patients and clinicians, and available technology can provide high-quality and secure information transfer. • The application of telehealth spans from the highly technical to the person centred and from time-limited acute encounters to ongoing episodes or series of care. • Strongest evidence is available for the acute management of ischaemic stroke via telestroke and for monitoring and management of chronic conditions such as diabetes and heart failure. • Tele-ICU, tele-mental health and tele-rehabilitation have also been associated with positive outcomes. • Much of the available evidence is of low quality.
	Telehealth is safe and effective for COVID-19 patients needing primary care and all patients for a range of conditions, but attention needs to be paid to regulatory frameworks, policies, operating procedures, communication and data sharing mechanisms

	Abstract • For COVID-19 patients, most primary care services can be managed remotely. • Key issues for the integration of telehealth into the public health response to COVID-19 include regulatory frameworks, strategic and operational planning, communication toolkits, data sharing, mechanisms for evaluation. • Experts from the US have published advice for COVID-19 applications on the use of telehealth for palliative care to expand rural hospital capacity and facilitate COVID-19 containment and quarantine, including the use of hospitalists in hub and spoke, collaborative team and cross-cover models, post-discharge transitions of care, hospital at home, tele-emergency department and respiratory illness triage clinics. • Telehealth consultations are also suitable for many non-COVID-19 patients during the pandemic. • Before COVID-19, systematic reviews showed telehealth to be effective either in improving outcomes or providing services with no difference in outcomes, for a range of clinical conditions, such as cardiac failure, coronary artery disease, diabetes and for stroke rehabilitation. • Safety concerns pre-COVID-19 span malfunctioning equipment, potential adverse effects of delayed or missing information, misleading advice provided by apps, misunderstanding sound advice, or inaccurate findings as a result of patient or caregiver error.
	Remote delivery can help patients with cardiovascular disease access usual and rehabilitative care, and requires that providers are reimbursed and supported **Abstract** Background: Although attention is focused on addressing the acute situation created by the COVID-19 illness, it is imperative to continue our efforts to prevent cardiovascular morbidity and mortality, particularly during a period of prolonged social isolation which may limit physical activity, adversely affect mental health and reduce access to usual care. One option may be to deliver healthcare interventions remotely through digital healthcare solutions. Therefore, the aim of this paper is to bring together the evidence for remote healthcare during a quarantine situation period to support people living with cardiovascular disease during COVID-19 isolation. Methods: The PubMed, CINAHL and Google Scholar were searched using telehealth OR digital health OR mHealth OR eHealth OR mobile apps AND COVID-19 OR quarantine search terms. We also searched for literature relating to cardiovascular disease AND quarantine. Results: The literature search identified 45 potentially relevant publications, out of which nine articles were included. Three overarching themes emerged from this review: (1) preparing the workforce and ensuring reimbursement for remote healthcare, (2) supporting mental and physical health and (3) supporting usual care. Conclusion: To support people living with cardiovascular disease during COVID-19 isolation and to mitigate the effects of quarantine and adverse effect on mental and physical well-being, we should offer remote healthcare and provide access to their usual care.
	Telemedicine can support health systems' COVID-19 responses and will require adaptation to policy and practice **Abstract**

	The current coronavirus disease 2019 (COVID-19) pandemic has caused significant strain on medical centers' resources. Thus, concerns about the reducing and management of COVID-19 are on the rise, as there is need to provide diagnosis, treatment, monitoring, and follow-ups during the pandemic. Therefore, the COVID-19 pandemic has radically and quickly altered how medical practitioners provide care to patients. Medical centers are now responding to COVID-19 through rapid adoption of digital tools and technologies such as telemedicine and virtual care which refer to the delivery of healthcare services digitally or at a distance using Information and Communications Technology (ICT) for treatment of patients. Telemedicine is expected to deliver timely care while minimizing exposure to protect medical practitioners and patients. Accordingly, a rapid literature review was conducted, and 35 research studies published from 2019 to May 2020 were employed to provide theoretical and practical evidence on the significance of using telemedicine and virtual care for remote treatment of patients during the COVID-19 pandemic. This article provides a practical guide based on how to use telemedicine and virtual care during the COVID-19 pandemic. This study provides implication on the potential of consolidating virtual care solutions in the near future towards contributing to integrate digital technologies into healthcare.
Single studies in areas where no reviews were identified	An evaluation of the use of video-enabled telemedicine for healthcare delivery in a large health system (NYU Langone Health) found rapid expansion of telemedicine use for urgent care (135% increase) and non-urgent care visits (4,345% increase) with highest usage among patients aged 20-44 **Abstract** This study provides data on the feasibility and impact of video-enabled telemedicine use among patients and providers and its impact on urgent and non-urgent health care delivery from one large health system (NYU Langone Health) at the epicenter of the COVID-19 outbreak in the United States. Between March 2nd and April 14th 2020, telemedicine visits increased from 369.1 daily to 866.8 daily (135% increase) in urgent care after the system-wide expansion of virtual health visits in response to COVID-19, and from 94.7 daily to 4209.3 (4345% increase) in non-urgent care post expansion. Of all virtual visits post expansion, 56.2% and 17.6% urgent and non-urgent visits, respectively, were COVID-19-related. Telemedicine usage was highest by patients aged 20-44, particularly for urgent care. The COVID-19 pandemic has driven rapid expansion of telemedicine use for urgent care and non-urgent care visits beyond baseline periods. This reflects an important change in telemedicine that other institutions facing the COVID-19 pandemic should anticipate.
	Implementing telehealth in a speciality clinic during COVID-19 was facilitated by staff, provider, and patient education; appropriate hardware, software, and IT support; EMR infrastructure; billing codes; and patient and caregiver participation. **Abstract** Background: In the novel coronavirus disease 2019 (COVID-19) pandemic, social distancing has been necessary to help prevent disease transmission. As a result, medical practices have limited access to in-person visits. This poses a challenge to maintain appropriate patient care while preventing a substantial backlog of patients once stay-at-home restrictions are lifted. In practices that are naïve to telehealth as an alternative option, providers and staff are experiencing challenges with telemedicine implementation. We aim to provide a comprehensive guide on how to rapidly integrate telemedicine into practice during a pandemic.

	Methods: We built a toolkit that details the following 8 essential components to successful implementation of a telemedicine platform: provider and staff training, patient education, an existing electronic medical record system, patient and provider investment in hardware, billing and coding integration, information technology support, audiovisual platforms, and patient and caregiver participation. Results: Rapid integration of telemedicine in our practice was required to be compliant with our institution's COVID-19 task force. Within 3 days of this declaration, our large specialty-care clinic converted to a telemedicine platform and we completed 638 visits within the first month of implementation. Conclusions: Effective and efficient integration of a telemedicine program requires extensive staff and patient education, accessory platforms to facilitate video and audio communication, and adoption of new billing codes that are outlined in this toolkit.
	A regional acute mental health service in Australia shifted to predominantly telemedicine during COVID-19, with protocols in place to determine when in-person assessment is warranted. **Abstract** In the wake of the recent pandemic of Corona Virus Disease 2019 (COVID-19), with confirmed cases having crossed 750,000, health systems across the world are getting overwhelmed; making it strenuous to maintain essential health services. Several changes were implemented in our acute mental health care service using a collaborative approach to maintain a balance between preventive measures to 'flatten the curve' and to provide care to those who were in need. Mode of service delivery was changed predominantly to tele-medicine, amongst others. It was found to be a workable model, albeit further follow up will be required to better understand its viability and feasibility to withstand the COVID-19 cataclysm.
	A triage system was developed to triage patients for remote consultations relating to suspected head and neck cancer, with more than 80% of referrals triaged to teleconsultation during a pilot of the tool. **Abstract** Background: Outpatient telemedicine consultations are being adopted to triage patients for head and neck cancer. However, there is currently no established structure to frame this consultation. Methods: For suspected referrals with cancer, we adapted the Head and Neck Cancer Risk Calculator (HaNC-RC)-V.2, generated from 10 244 referrals with the following diagnostic efficacy metrics: 85% sensitivity, 98.6% negative predictive value, and area under the curve of 0.89. For follow-up patients, a symptom inventory generated from 5123 follow-up consultations was used. A customized Excel Data Tool was created, trialed across professional groups and made freely available for download at http://www.entintegrate.co.uk/entuk2wwtt, alongside a user guide, protocol, and registration link for the project. Stakeholder support was obtained from national bodies. Results: No remote consultations were refused by patients. Preliminary data from 511 triaging episodes at 13 centers show that 77.1% of patients were discharged directly or have had their appointments deferred. Discussion: Significant reduction in footfall can be achieved using a structured triaging system. Further refinement of HaNC-RC-V.2 is feasible and the authors welcome international collaboration.

	Irish psychiatrists reported that shifting to telepsychiatry during COVID created difficulties during diagnostic assessments, as well as ethical and technical issues **Abstract** Objective: In response to the COVID-19 pandemic, there has been a shift globally from face-to-face consultations to remote consultations. In our department, remote consultations have taken the form of telephone consultations. In this paper, we set out to study a group of Irish psychiatrists' experience of these consultations. Methods: We identified recurrent themes in the existing literature on doctors' experience of telephone consultations with a view to determining the applicability of these themes to a group of Irish psychiatrists. A questionnaire was developed based on themes in the literature. This was sent to all psychiatrists working in a busy psychiatric service in Dublin. Results: The questionnaire response rate was 72% (n = 26/35). Diagnostic challenges, the effect of phone consultation on the therapeutic alliance, challenges associated with the use of technology and ethical concerns were identified as issues. Flexibility in the working day and convenience were identified as possible benefits to telephone consultations. Conclusions: The group that participated in this research study identified a number of challenges to carrying out successful phone consultations. This study highlights the need at our clinical site for interventions to address the issues identified by staff. The findings also highlight the requirement for larger studies with stronger methodologies to determine the generalisability of our results.
	Virtual care may be used for neoadjuvant, adjuvant, perioperative, and first-line palliative treatments to allow them to continue **Abstract** Background: During the coronavirus disease (COVID-19) pandemic, patients with cancer in rural settings and distant geographical areas will be affected the most by curfews. Virtual management (telemedicine) has been shown to reduce health costs and improve access to care. Objective: The aim of this survey is to understand oncologists' awareness of and views on virtual management, challenges, and preferences, as well as their priorities regarding the prescribing of anticancer treatments during the COVID-19 pandemic. Methods: We created a self-administrated electronic survey about the virtual management of patients with cancer during the COVID-19 pandemic. We evaluated its clinical sensibility and pilot tested the instrument. We surveyed practicing oncologists in Gulf and Arab countries using snowball sampling via emails and social media networks. Reminders were sent 1 and 2 weeks later using SurveyMonkey. Results: We received 222 responses from validated oncologists from April 2-22, 2020. An awareness of virtual clinics, virtual multidisciplinary teams, and virtual prescriptions was reported by 182 (82%), 175 (79%), and 166 (75%) respondents, respectively. Reported challenges associated with virtual management were the lack of physical exam (n=134, 60%), patients' awareness and access (n=131, 59%), the lack of physical attendance of patients (n=93, 42%), information technology (IT)

	support (n=82, 37%), and the safety of virtual management (n=78, 35%). Overall, 111 (50%) and 107 (48%) oncologists did not prefer the virtual prescription of chemotherapy and novel immunotherapy, respectively. However, 188 (85%), 165 (74%), and 127 (57%) oncologists preferred the virtual prescription of hormonal therapy, bone modifying agents, and targeted therapy, respectively. In total, 184 (83%), 183 (83%), and 176 (80%) oncologists preferred to continue neoadjuvant, adjuvant, and perioperative treatments, respectively. Overall, 118 (53%) respondents preferred to continue first-line palliative treatment, in contrast to 68 (30%) and 47 (21%) respondents indicating a preference to interrupt second- and third-line palliative treatment, respectively. For administration of virtual prescriptions, all respondents preferred the oral route and 118 (53%) preferred the subcutaneous route. In contrast, 193 (87%) did not prefer the intravenous route for virtual prescriptions. Overall, 102 (46%) oncologists responded that they would "definitely" prefer to manage patients with cancer virtually. Conclusions: Oncologists have a high level of awareness of virtual management. Although their survey responses indicated that second- and third-line palliative treatments should be interrupted, they stated that neoadjuvant, adjuvant, perioperative, and first-line palliative treatments should continue. Our results confirm that oncologists' views on the priority of anticancer treatments are consistent with the evolving literature during the COVID-19 pandemic. Challenges to virtual management should be addressed to improve the care of patients with cancer.
	Ensuring all providers have training in technology platforms and providing virtual care, and implementing a trial period to assess with patients, were critical in supporting a virtual telepsychiatry clinic **Abstract** In anticipation of a surge of COVID-19 cases in Northern California, the outpatient psychiatric clinic at UC Davis Health, in which 98% of visits initially occurred in person, was converted to a telepsychiatry clinic, with all visits changed to virtual appointments within 3 business days. The clinic had 73 virtual appointments on its first day after full conversion. This column describes the process, challenges, and lessons learned from this rapid conversion. Patients were generally grateful, providers learned rapidly how to work from home, and the clinic remained financially viable with no immediate losses.
	Virtual care may be used to provide follow-up care for symptom checking, monitoring and management of side-effects from antitumoural therapy for uro-oncology patients **Abstract** The coronavirus disease 2019 (COVID-19) pandemic is challenging for physicians treating patients with genitourinary cancers as they are considered at high risk of severe events. The uro-oncology outpatient clinic at our academic institution was affected early by the outbreak owing to the widespread infection of healthcare personnel. Subsequently, we developed a strategy to ensure the patient's safety by efforts focused on strict quarantine observation, reduction of clinic visits and implementation of virtual patient management into the workflow. Furthermore, we analysed susceptibility to COVID-19 and its effects on patients with uro-oncological cancer treated with antitumoural agents. The goal is to warrant high-quality cancer care, despite being an academic centre on the front line of Germany's response to COVID-19.
	Adding new services such as kindness calls to extended clinical services and other wrap around care enabled the successful implementation of a virtual care children's hospice which also included other virtual aspects such as storytelling, friendship calls, arts and craft sessions and a pen-pal program

	Abstract This case report describes a pediatric hospice provider in Scotland and their experience implementing a telehospice program in response to COVID-19. Children's Hospices Across Scotland (CHAS) is the only provider of pediatric hospice care in the entire of Scotland, and we describe their experience offering pediatric telehospice. CHAS had strategically planned to implement a telehospice program, but COVID-19 accelerated the process. The organization evaluated its pediatric clinical and wrap-around hospice services and rapidly migrated them to a virtual environment. They creatively added new services to meet the unique needs of the entire family, who were caring for a child at end of life during COVID-19. CHAS's experience highlights the planning and implementing processes of telehospice with key lessons learned, while acknowledging the challenges inherent in using technology to deliver hospice care.
	Otolaryngology patients are very satisfied with the care they receive through telemedicine visits during the COVID-19 pandemic **Abstract** Background: In light of the COVID-19 pandemic, there has been a rapid increase in telemedicine visits. Otolaryngology patient satisfaction with these visits has not yet been extensively studied using a validated survey. Methods: All patients who had telemedicine visits with three head and neck surgeons, by phone or video-based platform, between March 25, 2020 and April 24, 2020. Retrospective chart reviews were conducted to determine demographic, disease, and treatment information. Patients who had a video visit were contacted by telephone and, if they could be reached and consented, were administered the telehealth usability questionnaire (TUQ). Results: One hundred surveys were completed. The average score across all questions was 6.01 on a scale from 1 to 7, where 7 indicated the highest level of patient agreement. The highest scores were for questions related to satisfaction with telehealth (6.29), while the lowest were related to reliability (4.86). Conclusions: Patients are generally highly satisfied with telemedicine.
	Synchronous telehealth exercise programs for older adults with functional impairments and who are living at home are financially and technically feasible, and a viable model for transitioning the in-person support provided by physical therapists to virtual formats during periods of social distancing and quarantine **Abstract** Objective: The purpose of this study was to describe the process and cost of delivering a physical therapist–guided synchronous telehealth exercise program appropriate for older adults with functional limitations. Such programs may help alleviate some of the detrimental impacts of social distancing and quarantine on older adults at-risk of decline. Methods: Data were derived from the feasibility arm of a parent study, which piloted the telehealth program for 36 sessions with 1 participant. The steps involved in each phase (ie, development, delivery) were documented, along with participant and program provider considerations for each step. Time-driven activity-based costing was used to track all costs over the course of the study. Costs were categorized as program development or delivery and estimated per session and per participant.

	Results: A list of the steps and the participant and provider considerations involved in developing and delivering a synchronous telehealth exercise program for older adults with functional impairments was developed. Resources used, fixed and variable costs, per-session cost estimates, and total cost per person were reported. Two potential measures of the "value proposition" of this type of intervention were also reported. Per-session cost of $158 appears to be a feasible business case, especially if the physical therapist to trained assistant personnel mix could be improved. Conclusions: The findings provide insight into the process and costs of developing and delivering telehealth exercise programs for older adults with functional impairments. The information presented may provide a "blue print" for developing and implementing new telehealth programs or for transitioning in-person services to telehealth delivery during periods of social distancing and quarantine.
	Virtual pre-natal care can be provided alongside in-person services for those that cannot be provided remotely and can be included as part of a flexible service pathway **Abstract** Each year, over 98% of the almost 4 million pregnant patients in the United States receive prenatal care – a crucial preventive service to improve outcomes for moms and babies. National guidelines currently recommend 12-14 in-person prenatal visits, a schedule unchanged since 1930. In scrutinizing the standard prenatal visit schedule, it quickly becomes clear that prenatal care is overdue for a redesign. We have strong evidence of the benefit of many prenatal services, like screening for gestational diabetes and maternal vaccination. Yet how to deliver these services is much less clear. Studies of prenatal services consistently demonstrate such care can be delivered in fewer than 14 visits, and that we do not need to provide all maternity services in person. Telemedicine has emerged as a promising care delivery option for patients seeking greater flexibility, and early trials leveraging virtual care and remote monitoring have shown positive maternal and fetal outcomes with high patient satisfaction. Our institution has worked for the past year on a new prenatal pathway. Our initial work assessed the literature, elicited patient perspectives, and captured the insights of experts in patient-centred care delivery. Two key principles emerged to inform prenatal care redesign: 1) design care delivery around essential services, using in-person care for services that cannot be delivered remotely and offering video visits for other essential services; and 2) create flexible services for anticipatory guidance and psychosocial support that allow patients to tailor support to meet their needs through opt-in programs. The rise of COVID-19 prompt us to extend this early work and rapidly implement a redesigned prenatal pathway. In this paper, we outline our experience rapidly transitioning prenatal care to a new model with 4 in-person visits, 1 ultrasound visit, and 4 virtual visits. We then explore how lessons from this implementation can inform patient-centred prenatal care redesign during and beyond the COVID-19 pandemic.
	A COVID-19-specific remote patient monitoring solution (GetWell Loop) was offered to patients with COVID-19 symptoms which gave the opportunity to share concerns and have alerts resolved through a virtual care workforce of providers and medical students, and 74% of patients that completed a satisfaction survey indicated they would be extremely likely to recommend its use to their doctor **Abstract**

	Objective: To evaluate early lessons from a remote patient monitoring engagement and education technology solution for patients with COVID-19 symptoms. Materials and Methods: A COVID-19-specific remote patient monitoring solution (GetWell Loop) was offered to patients with COVID-19 symptoms. The program engaged patients and provided educational materials and the opportunity to share concerns. Alerts were resolved through a virtual care workforce of providers and medical students. Results: Between March 18 and April 20, 2020, 2,255 of 3,701 (60.93%) patients with COVID-19 symptoms enrolled resulting in over 2,303 alerts, 4,613 messages, 13 hospital admissions, and 91 emergency room visits. A satisfaction survey was given to 300 patient respondents, 74% of whom would be extremely likely to recommend their doctor. Discussion: This program provided a safe and satisfying experience for patients while minimizing COVID-19 exposure and in-person healthcare utilization. Conclusion: Remote patient monitoring appears to be an effective approach for managing COVID-19 symptoms at home.

Appendix 5: Documents excluded at the final stages of reviewing

Type of document	Focus
Guidelines developed using a robust process (e.g., GRADE)	None identified
Full systematic reviews	Telephone consultation and triage: effects on health care use and patient satisfaction
	A systematic review of economic analyses of telehealth services using real time video communication
	A systematic review of the economic evaluation of telemedicine in Japan
	Interventions to reduce wait times for primary care appointments: A systematic review
	Systematic review of telemedicine applications in emergency rooms
	Effect of telehealth interventions on hospitalization indicators: A systematic review
	The empirical foundations of telemedicine interventions in primary care
	Interventions to reduce wait times for primary care appointments: A systematic review
	Remote monitoring of patients with heart failure: An overview of systematic reviews
	A systematic review of the research evidence for the benefits of teledentistry
	Interactive telemedicine: Effects on professional practice and health care outcomes
	Telephone follow-up as a primary care intervention for postdischarge outcomes improvement: A systematic review
	Telephone consultations for general practice: A systematic review
	Telemonitoring to manage chronic obstructive pulmonary disease: Systematic literature review
	What is the economic evidence for mHealth? A systematic review of economic evaluations of mHealth solutions

	Is the 'Lifelight' app adequately validated for blood pressure measurement?
	An updated systematic review on the coronavirus pandemic: lessons for psychiatry
Rapid reviews	None identified
Guidelines developed using some type of evidence synthesis and/or expert opinion	None identified
Protocols for reviews that are underway	None identified
Titles/questions for reviews that are being planned	None identified
Single studies in areas where no reviews were identified	Onsite telemedicine strategy for coronavirus (COVID-19) screening to limit exposure in ED