EVIDENCE SYNTHESIS BRIEFING NOTE

TOPIC: EFFECTIVE APPROACHES FOR DELIVERING VIRTUAL CARE TO ADULTS WITH MENTAL HEALTH AND ADDICTION DISORDERS

Information finalized as of November 25, 2021.[a]

This Briefing Note was completed by the Research, Analysis, and Evaluation Branch (Ministry of Health) based on information provided by members of the COVID-19 Evidence Synthesis Network. Please refer to the Methods section for further information.

Purpose: This note summarizes scientific evidence and jurisdictional information about effective approaches, prior to and during COVID-19, for delivering virtual care to adults with mental health and addiction disorders by health professionals, including discussions about cost utility, feasibility, acceptability, challenges, and benefits.

Key Findings:

- **Effectiveness**: Virtually-delivered psychotherapy is generally as effective as face-to-face (FTF) care for people with mood, anxiety, and traumatic stress disorders, but a relationship between a therapist and a client may be weaker than in FTF care. Less is known about the effectiveness of remote clinician-led interventions for people with severe mental illness (e.g., eating disorders, personality disorders), but acceptability is high and remote medication reminders in this population may be effective. Group-based, clinician-led virtual care is also feasible and effective. There is substantial evidence supporting virtual cognitive assessment for diagnosing dementia, but there are critical gaps in diagnostic certainty.
- **Approaches to Implementation**: Asynchronous telepsychiatry is potentially a key part of stepped mental health interventions available in primary care. In the United States, there are four telemental health delivery models: 1) hub-and-spoke; 2) integrated care; 3) direct-to-consumer; and 4) mobile applications.
- **Cost-Effectiveness**: Telepsychiatry is not more expensive than FTF delivery of mental health services and is more cost-effective in most studies reviewed. Health Quality Ontario reported that guided internet-delivered cognitive behavioural therapy (iCBT) represents good value for money.
- **Acceptability and Equitable Access**: People with mild to moderate depression or anxiety disorders felt that iCBT provides greater control over time, pace, and location of therapy, and also improves access. People living with dementia were consistently satisfied with telemedicine visits during COVID-19. For Indigenous community members during COVID-19, virtual mental services were hard to access and not satisfying.
- **Challenges**: Mental health providers highlighted persistent barriers to virtual care during the COVID-19 pandemic, including required changes in workflows and scheduling, initial set-up, troubleshooting and other technology-related challenges, and increased provider effort.

Analysis for Ontario: Providers can access virtual visit tools from their electronic medical record or hospital information system, or through stand-alone virtual visit applications from their computer and/or mobile device.

Implementation Implications: Implementing virtual care is facilitated by such factors as patient and provider perceptions of acceptability and appropriateness, patient awareness of and preferences for virtual care, information technology support and infrastructure, organizational culture and management approaches, and reimbursement policies.

[a] This briefing note includes current available evidence as of the noted date. It is not intended to be an exhaustive analysis, and other relevant findings may have been reported since completion.

Supporting Evidence

Table 1 below summarizes scientific evidence and jurisdictional information about effective approaches, prior to and during the COVID-19 pandemic, for delivering virtual care to adults with mental health and addiction disorders by health professionals, including discussions about cost utility, feasibility, acceptability, challenges, and benefits.

Terminology

- **Virtual visit**: An electronic exchange via videoconferencing, secure messaging, or audio digital tools, where one or more health care providers deliver health care services to a patient. Related virtual care services include telemonitoring and digital self-care tools that collect biometric data and often support virtual visits.[1]
- **Secure messaging**: An asynchronous, written clinical encounter, typically without any visual input (except for optional image attachments), and accessible by patients via web browser or mobile application. Secure messaging provides security safeguards, like patient authentication, that are not available with regular email and other unsecure forms of communication.[2]

Table 1: Delivering Virtual Care to Adults with Mental Health and Addiction Issues by Health Care Professionals

Scientific Evidence	• **Effectiveness of Virtual Care for People with Mental Health and Addiction**: A report from the McMaster Health Forum (MHF; July 2020) found that virtually delivered psychotherapy is generally as effective as face-to-face (FTF) care for people with mood, anxiety, and traumatic stress disorders, but a relationship between a therapist and a client may be weaker than in FTF care. Less is known about the effectiveness of remote clinician-led interventions for people with severe mental illness (SMI), including eating disorders, personality disorders, and schizophrenia-spectrum disorders, but acceptability is high and remote medication reminders in this population may be effective.[3] Evidence of effectiveness was also identified in the following contexts: ○ SMI: A systematic review (2018) reported that telephone support was found to be effective in improving medication adherence and reducing the severity of symptoms and inpatient days. Computer-assisted cognitive rehabilitation was effective in improving cognitive function. Delivery of patient education using computers had no benefit over traditional nurse-based methods and was less acceptable to patients.[4] ○ Group-Based, Clinician-Led Virtual Care: The MHF report (2020) noted that this approach to virtual care is feasible and effective. Further, digital interventions that include peer-to-peer networks as a component may be effective in reducing symptoms and increasing knowledge, but the contribution of peer support to the outcomes of multicomponent interventions is unclear. Online peer networks for people with serious mental illness may benefit from clinician moderators.[5] ○ Guided Internet-Delivered Cognitive Behavioural Therapy[b] (iCBT): A study from Health Quality Ontario (HQO; 2019) reports that compared with people on a waiting list, iCBT is

[b] CBT is an evidence-based, structured, and symptom-focused form of psychotherapy recommended for treating major depression and anxiety disorders. CBT helps people become aware of how certain negative automatic thoughts, attitudes, expectations, and beliefs contribute to feelings of sadness and anxiety. People undergoing CBT learn how their thinking patterns,

effective and likely results in symptom improvement in mild to moderate major depression and social phobia. Guided iCBT may improve the symptoms of generalized anxiety disorder and panic disorder compared with those on a waiting list. However, there is uncertainty about the effectiveness of iCBT compared with individual or group FTF CBT.[6]

- People with Chronic Diseases: A report from the Canadian Institutes of Health Research (CIHR; 2020) found that digital health intervention (DGIs; i.e., telemedicine/teleconsultation, patient portal, electronic health record, web-based/internet intervention, or smart phone application) have a positive effect (e.g., improved quality of life, mood regulation) on depression, anxiety, distress, and psychosocial outcomes for people with chronic diseases and for people currently affected by, or survivors of, cancer.[7]
- Neurocognitive Disorders (NCD):[c] A systematic review (July 2021) on mental health and treatment impacts on COVID-19 on NCD noted that telemedicine has successfully been implemented to partly palliate service disruptions in social support, psychiatric or therapeutic consultations, group therapies, and clinical assessment.[8]
- Individuals Experiencing Domestic Violence (DV) and Sexual Violence (SV): A rapid evidence assessment (2021, in press) found limited evidence on the effectiveness of psychological therapies and treatments specific for individuals experiencing DV and/or SV. However, there is methodologically robust evidence that supports the provision of virtual psychological therapies for reducing psychological symptoms such as depression, anxiety, and post-traumatic stress disorder (PTSD) for survivors of DV and/or SV who are removed from the abusive situations. Further research is needed to examine the delivery of virtual DV and SV-focused interventions from an intersectional lens, as well as attending to inequities in digital access to virtual treatment or care.[9]
- Smoking Addiction: An effectiveness review (2012) concluded that computer and other electronic aids increase the likelihood of cessation compared with no intervention or generic self-help materials, but the effect is small.[10]
  - *Video versus Telephone Counselling*: A Cochrane review (2019) reported that it is unclear how video counselling compares with telephone counselling in terms of helping people to quit smoking. People who used video counselling were more likely than those who used telephone counselling to recommend the program to a friend or someone in their family, but there were no differences in how satisfied they were, the number of video or telephone sessions completed, whether all sessions were completed, and the relationship or bond with the counsellor.[11]

- **Effectiveness of Diagnostic Accuracy of Virtual Cognitive Assessment**: A systematic review (2021) reported that although there is substantial evidence supporting virtual cognitive assessment for diagnosing dementia, there are critical gaps in diagnostic certainty.[12] A study (2020) found some neuropsychological tests administered by videoconferencing showed good agreement with in-person assessment, though they lacked validation and norms/standards. Aspects of the remote NCD neurological examination have been performed reliably by telemedicine.[13]

which may have developed in the past to deal with difficult or painful experiences, can be identified and changed to reduce unhappiness (HQO, 2019).

[c] NCDs are challenging diseases associated with the alteration of one's cognitive and behavioural abilities in a way that disrupts the person's daily activities. Common signs and symptoms include memory deficits, language problems, personality changes, agitation, anxiety, and depressive symptoms. People with an NCD require a multifaceted approach, including but not limited to, medication, cognitive interventions, environmental measures, and exercise interventions (Dellazizzo et al., 2021).

- When implementing cognitive assessments in a remote setting, it is important to consider participants' digital competence, symptom severity, and potential environmental distractors, all of which can affect performance over and above cognitive deficits. Reminder notifications, clear instructions, and pre-assessment practice may all help to address these potential issues.[14]

- **Implementing Virtual Care**: The MHF review (July 2020) notes that implementing virtual care is facilitated by factors such as patient and provider perceptions of acceptability and appropriateness, patient awareness of and preferences for virtual care, information technology support and infrastructure, organizational culture and management approaches, and reimbursement policies. There is a need for further research to address who may benefit from virtual care and what levels and patterns of uptake can be expected.[15] Other information identified about approaches to implementation include:
  - Asynchronous versus Synchronous: One study (July 2021) found no significant difference in clinical outcomes between synchronous telepsychiatry (STP) and asynchronous telepsychiatry (ATP).[16]
    - The authors of the study suggest that ATP is potentially a key part of stepped mental health interventions available in primary care. ATP presents a possible solution to the workforce shortage of psychiatrists and a strategy for improving existing systems of care.[17]
    - A rapid evidence assessment (2021, in press) found that effective online psychological therapies for PTSD and other forms of trauma for some DV and SV survivors included cognitive-processing therapy (CPT), CBT, and tele-psychotherapy, which were delivered through synchronous technologies, such as telehealth, mobile health, and videoconferencing.[18]
  - Text Messaging: A study (2016) determined that text messaging was used as a mental health care approach in a wide range of mental health situations including substance abuse (31%), schizophrenia (22%), and affective disorders (17%). Text messages were used for: reminders (14%), information (17%), supportive messages (42%), and self-monitoring procedures (42%). Applications were sometimes combined.[19]
  - Psychiatric Out-Patients: A review (2016) on the types of phone technology used with the adult outpatient psychiatric population identified direct communication, text messaging, interactive voice response, cameras, and smart phone apps. Studies with Hispanic populations used more text messaging, while studies in psychiatry favoured direct communication. Improvements in health outcomes were reported in both populations.[20]
- **Cost-Effectiveness of Virtual Care**: A review (2016) of studies on the cost-effectiveness of telepsychiatry outcomes indicated that telepsychiatry is not more expensive than FTF delivery of mental health services and is more cost-effective in most studies reviewed.[21] An HQO health technology assessment (2019) reported that guided iCBT represents good value for money and could be offered for the short-term treatment of adults with mild to moderate major depression or anxiety disorders.[22]
  - Major Depression or Anxiety Disorders: The 2019 HQO report noted that for adults with mild to moderate major depression, guided iCBT was associated with increases in both quality-adjusted life-years (QALYs) and cost (CAD $1,257), yielding an incremental cost-effectiveness ratio (ICER) of CAD $31,575 per QALY gained when compared with usual care. In adults with anxiety disorders, guided iCBT was associated with increases in both quality-adjusted survival and cost (CAD $1,395), yielding an ICER of CAD $43,214 per QALY gained when compared with unguided iCBT; and with an ICER of CAD $26,719 per

	QALY gained when compared with usual care.[d] The probability of cost-effectiveness of guided iCBT for major depression and anxiety disorders, respectively, was 67% and 70% at willingness-to-pay of CAD $100,000 per QALY gained.[23,e] ○ Smoking Addiction: A review (2012) suggests that making some form of electronic support available to smokers actively seeking to quit is highly likely to be cost-effective whether the electronic intervention is delivered alongside brief advice or more intensive counselling. The key source of uncertainty is around the comparative effectiveness of different types of electronic interventions (e.g., tailored with computer-generated feedback, interactive websites, generic self-help material delivered by email and/or static websites).[24] ○ Services in Rural and Remote Settings: A study (2020) focused on residents of Northern Ontario where they have limited access to local psychiatric care finding that costs per visit were lowest in telepsychiatry (CAD $360), followed by traveling physicians (CAD $558) and patient reimbursement (CAD $620). The break-even analysis found telepsychiatry was the least costly program after an annual patient visit threshold of approximately 76 visits (compared to traveling psychiatrists) and 126 visits (compared to reimbursed patients).[25] • **Patient Experience and Acceptability of Virtual Care**: The HQO health technology assessment (2019) reported that most people with mild to moderate depression or anxiety disorders felt that, despite some perceived limitations, iCBT provides greater control over the time, pace, and location of therapy. It also improves access for people who could not otherwise access therapy because of cost, time, or the nature of their health condition.[26] A review (July 2021) on mental health and treatment impacts of COVID-19 noted that people living with dementia (PLWD) were consistently satisfied with telemedicine visits during COVID-19 and expressed willingness to continue the telemedicine program.[27] ○ Mobile Phone-Based Psychotherapies: A systematic review (2017) concluded that mobile phone-based psychotherapies are a feasible and acceptable treatment option for patients with mental disorders (e.g., substance use disorders, depression, bipolar disorders, schizophrenia). However, there remains a paucity of data on their effectiveness in real-world settings, especially from low- and middle-income countries.[28] ○ SMI: A systematic review (2016) determined that the hypothetical acceptability of online and mobile phone-delivered interventions for SMI was relatively low, while actual acceptability tended to be high. Most studies that assessed the impact of demographic characteristics on acceptability reported no significant relationships between the two. Additionally, actual acceptability was higher when participants were provided remote online support. Common qualitative factors relating to acceptability were safety and privacy concerns, the importance of an engaging and appealing delivery format, the inclusion of peer support, computer and mobile phone literacy, technical issues, and concerns about the impact of psychological state on intervention use.[29]

[d] ICERs were calculated from the perspective of the Ontario Ministry of Health and Long-Term Care and estimated the five-year budget impact of publicly funding iCBT for mild to moderate major depression or anxiety disorders in Ontario (HQO, 2019).
[e] Guided iCBT delivered within stepped-care models appears to represent good value for money for the treatment of mild to moderate major depression and anxiety disorders. Assuming a 3% increase in access per year (from about 8,000 people in year one to about 32,000 people in year five), the net budget impact of publicly funding guided iCBT for the treatment of mild to moderate major depression would range from about CAD $10 million in year one to about CAD $40 million in year five. The corresponding net budget impact for the treatment of anxiety disorders would range from about CAD $16 million in year one (about 13,000 people) to about CAD $65 million in year five (about 52,000 people) (HQO, 2019).

	• **Benefits of Virtual Care**: A systematic review (2019) highlighted that through telehealth systems, access to mental health care services is more immediate, especially for those living in rural settings and for those who have mobility or transportation issues. An effective reduction in the use of emergency and hospital inpatient services has the consequence of increasing capacity within finite health care resources. Benefits of using real-time telehealth for mental health care service delivery, especially in older adults with depressive symptoms, include increased collaboration between clients and their mental health nurses, providing the opportunity for nurses to connect with their clients in-between scheduled visits, and promoting autonomy with regard to clients' health care management.[30] A qualitative evaluation (September 2021) identified facilitators of delivering mental care virtually at the operational, cultural, and system/policy levels, including having pre-existing infrastructure and IT support to enable widespread uptake, physician billing codes, and provider and staff acceptance of virtual care.[31] • **Challenges of Virtual Care**: In the qualitative evaluation (September 2021), mental health providers and clinic staff highlighted persistent barriers to use at the operational and behavioural levels during the COVID-19 pandemic, including required changes in workflows and scheduling, initial set-up, troubleshooting and other technology-related challenges, and increased provider effort.[32] ○ A systematic review (July 2021) noted several limitations for telemedicine for NCD including the lack of availability of appropriate conditions to perform tele-consultations (e.g., quality of connection, patients' ownership of webcam), knowledge and familiarity among caregivers with these technologies, and ethical concerns about patients' confidentiality, which require caution and specific privacy policies.[33] ○ An HQO study (2019) reported limitations to iCBT that include the rigidity of the program (i.e., not flexible in terms of therapeutic content), the lack of FTF interactions with a therapist, technological difficulties, and the inability of an internet protocol to treat severe depression and some types of anxiety disorders.[34] • **Future Research**: Five protocols for systematic reviews currently underway were identified on topics concerning telemedicine for mental health during COVID-19, including: 1) the effectiveness of telepsychiatry or psychological online interventions during COVID-19 on mental health outcomes;[35,36,37] 2) the impact of telemedicine group interventions on the mental, behavioural, and physical health of adults;[38] and 3) mental health interventions for health care professionals during COVID-19.[39,40]
International Scan	• **Australia**: The Royal Australian & New Zealand College of Psychiatrists offers resources for telehealth in psychiatry during COVID-19 (e.g., professional practice guidelines, guidelines for technology-based consultations, technical specifications for telepsychiatry).[41] • **United Kingdom**: In 2018, an extension of the Crisis Resolution and Home Treatment from the National Health Services was being piloted. A team of mental health nurses and medics offer telepsychiatry in addition to FTF appointments for patients who either cannot travel or who find it hard to get to appointments due to other commitments.[42] No updated information on the pilot was identified. • **United States**: Four telemental health delivery models were identified: ○ Hub-and-Spoke: A centralized hub (typically a headquarters office) with on-site services connects to either its own satellite locations or contracted remote sites (spokes) via telehealth. They are often implemented in hospital systems and clinic networks. While the

	services are telehealth-based, patients must still travel to a clinic to connect to a remote provider (e.g., go to a local hospital to access a psychiatrist in a different city). ○ Integrated Care: Primary care offices contract with a mental health provider to connect to patients within the primary care practice for telehealth services. Services are still accessed in a clinical location (e.g., connecting at the patient's local primary care office to a psychologist in a neighboring county). ○ Direct-to-Consumer: Mental health providers directly connect to patients using telehealth; thus services are accessed at home. ○ Mobile Applications: Patients use mobile technology for home-based symptom management and/or tracking (e.g., "prescribed" mindfulness exercises or depression symptom tracking).[43,f]
Canadian Scan	• **Secure Virtual Care Platforms**: A scan by the Canadian Agency for Drugs and Technologies in Health (CADTH; Summer 2021) of Canadian provinces and territories noted that secure virtual care platforms are needed to connect physicians and patients with an emphasis on individual safety, and the security and privacy of personal health information. Examples of virtual care technologies health care providers may use or leverage include: Reacts System, Sigma Health tech, Ontario Telemedicine Network (OTN), Pexip, Webex, Lumeca, Doxy.me, Memora Health, Accuro EMR – QHR Technologies, Med Access EMR – Telus, Zoom for Healthcare, Maple, eCONSULT, and eDOCSNL.[44] For example, in Prince Edward Island, Zoom for Healthcare is a short-term solution to provide patient care during COVID-19. The province has purchased the license on behalf of community-based health care providers and those working in mental health and addictions. Zoom for Healthcare offers important enhanced security features for delivering health care. The Department of Health and Wellness will introduce a long-term virtual care framework and strategy later.[45] ○ Selecting a Virtual Care Platform: The CADTH scan (2021) noted additional considerations and questions to be addressed when selecting/employing a virtual care platform include ensuring: 1) the correct mix of phone, email, instant messaging, video, and in-person visits; 2) a fair and correct payment model; 3) the privacy and security of personal health information; 4) data management and recording of personal health information virtual visits; 5) patient-centred good quality care; and 6) equitable and fair access to marginalized patient populations.[46] • **Equitable Delivery of Mental Health Services**: Two CIHR reports (2021) described the experience of accessing mental health services by Indigenous people and refugees in Canada during COVID-19. ○ For Indigenous community members in Ottawa-Gatineau during COVID-19, study participants spoke about the mental health impacts due to lack of social interactions. Many lacked access to technology and the internet, which further complicated their access to care and their virtual participation. Virtual mental services were hard to access and not satisfying. Many Indigenous people reported preferring not to have the service at all than to have virtual sessions.[47] ○ Challenges for refugees and service providers are related to privacy (e.g., finding private spaces for both providers and newcomers), trust (e.g., building therapeutic relationships, not knowing who else is "in the room"), and the limits of technology (e.g., managing multiple

[f] The expansion of home delivery of telehealth for virtually all diagnoses in emergency COVID-19 guidance and payer policy has dramatically expanded access to care. In addition, the pandemic has created a fifth hybrid approach for telemental health: hub-and-spoke and integrated care providers are extending their services to be direct-to-consumer. This allows patients to access the same providers at home whom they previously saw only at clinical sites (Warren & Smalley, 2020).

	language translation on group calls, dropped calls or poor connections). Most providers and agencies plan to retain a virtual component to their services. Adequate training and support to providers and service users, both in terms of training and technology, is needed. Integrating some in-person elements may be the most effective approach to enhancing virtual mental health accessibility for the diversity of refugee newcomers' needs.[48]
Ontario Scan	• Over the last ten years, the Centre for Addiction and Mental Health (CAMH) has provided virtual mental health services and capacity-building for physicians and inter-professional teams, with the goal of improving access to care and addressing critical gaps in service delivery. CAMH tools for mental health care professionals can be found here, including Guidelines for Virtual Clinical Visits.[49] • Ontario Health (Quality; 2020) notes that providers can access virtual visit tools from their electronic medical record or hospital information system, or through stand-alone virtual visit applications from their computer and/or mobile device. Under Ministry of Health direction, the Ontario Telemedicine Network (OTN) is supporting the development of minimum requirements for videoconferencing and secure messaging technologies. Mental health care providers can leverage OntarioMD Privacy and Security Training and resources to support understanding and compliance with privacy and security requirements.[50]

Methods

The COVID-19 Evidence Synthesis Network is comprised of groups specializing in evidence synthesis and knowledge translation. The group has committed to provide their expertise to provide high-quality, relevant, and timely synthesized research evidence about COVID-19 to inform decision makers as the pandemic continues. The following members of the Network provided evidence synthesis products that were used to develop this Evidence Synthesis Briefing Note:

- Al-Khateeb S, Bain T, Bhuiya A, Mansilla C, Lavis JN, Wilson MG. COVID-END in Canada existing resource response #13: What are acceptable, effective approaches to organizing and delivering mental health and addictions services to adults virtually by registered health professionals? Hamilton: McMaster Health Forum, COVID-END in Canada, November 25, 2021.
- Canadian Agency for Drugs and Technologies in Health (CADTH). Summer 2021. Informal Jurisdictional Scan on Virtual Care Visits.
- SPOR Evidence Alliance. November 9, 2021. Personal Communication to Research, Analysis and Evaluation Branch.

For more information, please contact the Research, Analysis and Evaluation Branch (Ministry of Health).

REFERENCES

[1] Ontario Health (Quality). March 12, 2020. Adopting and Integrating Virtual Visits into Care: Draft Clinical Guidance: For Health Care Providers in Ontario.
[2] Ontario Health (Quality). March 12, 2020. Adopting and Integrating Virtual Visits into Care: Draft Clinical Guidance: For Health Care Providers in Ontario.
[3] Evans, Bullock, Wilson, Lavis (2020). Rapid Synthesis Assessing the Effectiveness of Virtual Care for Adults with Mental Health and/or Addictions Issues. McMaster Health Forum.
[4] Lawes-Wickwar S, McBain H, Mulligan K. Application and Effectiveness of Telehealth to Support Severe Mental Illness Management: Systematic Review. JMIR Mental Health. 2018 Nov 21;5(4):e62.
[5] Evans, Bullock, Wilson, Lavis (2020). Rapid Synthesis Assessing the Effectiveness of Virtual Care for Adults with Mental Health and/or Addictions Issues. McMaster Health Forum.
[6] Health Quality Ontario. Internet-Delivered Cognitive Behavioural Therapy for Major Depression and Anxiety Disorders: A Health Technology Assessment. Ontario Health Technology Assessment Series. 2019 Feb 19;19(6):1-199.
[7] Gagnon MP, LeBlanc A, Sasseville M, Boucher M, Dugas M, Mbemba G, Tchuente J, Barony R, Chouinard MC, Beaulieu M, Cholete P, Aspiros C, Laboruch A, Chabot G, and Beaudet N. (November 23, 2020). Digital Health Interventions for the Prevention, Detection and Management of Mental Health Problems in People with Chronic Diseases in Times of COVID-19: An Overview. Canadian Institutes of Health Research (CIHR).
[8] Dellazizzo, L., Léveillé, N., Landry, C., & Dumais, A. (2021). Systematic Review on the Mental Health and Treatment Impacts of COVID-19 on Neurocognitive Disorders. *Journal of personalized medicine*, *11*(8), 746.
[9] Ghidei, W., Montesanti, S., Tomkow, K, Silverstone, P, Wells, L., Campbell, S. (2021) Examining the Effectiveness, Acceptability and Feasibility of Virtually Delivered Trauma-Focused Domestic Violence and Sexual Violence Interventions: A Rapid Evidence Assessment. *Trauma, Violence, & Abuse*. In Press.
[10] Chen YF, Madan J, Welton N, Yahaya I, Aveyard P, Bauld L, Wang D, Fry-Smith A, Munafò MR. Effectiveness and cost-effectiveness of computer and other electronic aids for smoking cessation: a systematic review and network meta-analysis. Health Technology Assessment. 2012;16(38):1-205, iii-v.
[11] Tzelepis F, Paul CL, Williams CM, Gilligan C, Regan T, Daly J, Hodder RK, Byrnes E, Byaruhanga J, McFadyen T, Wiggers J. (October 29, 2019). Real-time video counselling for smoking cessation. Cochrane Database of Systematic Reviews 2019, Issue 10. Art. No.: CD012659.
[12] Watt JA, Lane NE, Veroniki AA, Vyas MV, Williams C, Ramkissoon N, Thompson Y, Tricco AC, Straus SE, Goodarzi Z. Diagnostic accuracy of virtual cognitive assessment and testing: Systematic review and meta-analysis. Journal of the American Geriatrics Society. 2021 Jun;69(6):1429-1440. doi: 10.1111/jgs.17190. Epub 2021 May 4.
[13] Dellazizzo, L., Léveillé, N., Landry, C., & Dumais, A. (2021). Systematic Review on the Mental Health and Treatment Impacts of COVID-19 on Neurocognitive Disorders. *Journal of personalized medicine*, *11*(8), 746.
[14] Lavigne, K. M., Sauvé, G., Raucher-Chéné, D., & Lepage, M. (2020). Remote Cognitive Assessment in Severe Mental Illness: A Scoping Review.
[15] Evans, Bullock, Wilson, Lavis (2020). Rapid Synthesis Assessing the Effectiveness of Virtual Care for Adults with Mental Health and/or Addictions Issues. McMaster Health Forum.
[16] Yellowlees PM, Parish MB, Gonzalez AD, Chan SR, Hilty DM, Yoo BK, Leigh JP, McCarron RM, Scher LM, Sciolla AF, Shore J, Xiong G, Soltero KM, Fisher A, Fine JR, Bannister J, Iosif AM. Clinical Outcomes of Asynchronous Versus Synchronous Telepsychiatry in Primary Care: Randomized Controlled Trial. Journal of Medical Internet Research. 2021 Jul 20;23(7):e24047
[17] Yellowlees PM, Parish MB, Gonzalez AD, Chan SR, Hilty DM, Yoo BK, Leigh JP, McCarron RM, Scher LM, Sciolla AF, Shore J, Xiong G, Soltero KM, Fisher A, Fine JR, Bannister J, Iosif AM. Clinical Outcomes of Asynchronous Versus Synchronous Telepsychiatry in Primary Care: Randomized Controlled Trial. Journal of Medical Internet Research. 2021 Jul 20;23(7):e24047
[18] Ghidei, W., Montesanti, S., Tomkow, K, Silverstone, P, Wells, L., Campbell, S. (2021) Examining the Effectiveness, Acceptability and Feasibility of Virtually Delivered Trauma-Focused Domestic Violence and Sexual Violence Interventions: A Rapid Evidence Assessment. *Trauma, Violence, & Abuse*. In Press.
[19] Berrouiguet S, Baca-García E, Brandt S, Walter M, Courtet P. Fundamentals for Future Mobile-Health (mHealth): A Systematic Review of Mobile Phone and Web-Based Text Messaging in Mental Health. Journal of Medical Internet Research. 2016 Jun 10;18(6):e135.
[20] Duarte AC, Thomas SA. The Use of Phone Technology in Outpatient Populations: A Systematic Review. Open Nursing Journal. 2016 Apr 30;10:45-58.
[21] Hubley, S., Lynch, S. B., Schneck, C., Thomas, M., & Shore, J. (2016). Review of key telepsychiatry outcomes. World journal of psychiatry, 6(2), 269–282.
[22] Health Quality Ontario. Internet-Delivered Cognitive Behavioural Therapy for Major Depression and Anxiety Disorders: A Health Technology Assessment. Ontario Health Technology Assessment Series. 2019 Feb 19;19(6):1-199.

[23] Health Quality Ontario. Internet-Delivered Cognitive Behavioural Therapy for Major Depression and Anxiety Disorders: A Health Technology Assessment. Ontario Health Technology Assessment Series. 2019 Feb 19;19(6):1-199.
[24] Chen YF, Madan J, Welton N, Yahaya I, Aveyard P, Bauld L, Wang D, Fry-Smith A, Munafò MR. Effectiveness and cost-effectiveness of computer and other electronic aids for smoking cessation: a systematic review and network meta-analysis. Health Technology Assessment. 2012;16(38):1-205, iii-v.
[25] Serhal E, Lazor T, Kurdyak P, Crawford A, de Oliveira C, Hancock-Howard R, Coyte PC. A cost analysis comparing telepsychiatry to in-person psychiatric outreach and patient travel reimbursement in Northern Ontario communities. J Telemed Telecare. 2020 Dec;26(10):607-618.
[26] Health Quality Ontario. Internet-Delivered Cognitive Behavioural Therapy for Major Depression and Anxiety Disorders: A Health Technology Assessment. Ontario Health Technology Assessment Series. 2019 Feb 19;19(6):1-199.
[27] Dellazizzo, L., Léveillé, N., Landry, C., & Dumais, A. (2021). Systematic Review on the Mental Health and Treatment Impacts of COVID-19 on Neurocognitive Disorders. *Journal of personalized medicine*, *11*(8), 746.
[28] Menon V, Rajan TM, Sarkar S. Psychotherapeutic Applications of Mobile Phone-based Technologies: A Systematic Review of Current Research and Trends. Indian J Psychol Med. 2017 Jan-Feb;39(1):4-11.
[29] Berry N, Lobban F, Emsley R, Bucci S. Acceptability of Interventions Delivered Online and Through Mobile Phones for People Who Experience Severe Mental Health Problems: A Systematic Review. Journal of Medical Internet Research. 2016 May 31;18(5):e121.
[30] Harerimana B, Forchuk C, O'Regan T. The use of technology for mental healthcare delivery among older adults with depressive symptoms: A systematic literature review. Int J Ment Health Nurs. 2019 Jun;28(3):657-670. doi: 10.1111/inm.12571. Epub 2019 Jan 21. PMID: 30666762.
[31] Budhwani, S., Fujioka, J. K., Chu, C., Baranek, H., Pus, L., Wasserman, L., Vigod, S., Martin, D., Agarwal, P., & Mukerji, G. (2021). Delivering mental health care virtually during the COVID-19 pandemic: Qualitative evaluation of provider experiences in a scaled context. *JMIR formative research*, *5*(9), e30280. https://doi.org/10.2196/30280
[32] Budhwani, S., Fujioka, J. K., Chu, C., Baranek, H., Pus, L., Wasserman, L., Vigod, S., Martin, D., Agarwal, P., & Mukerji, G. (2021). Delivering mental health care virtually during the COVID-19 pandemic: Qualitative evaluation of provider experiences in a scaled context. *JMIR formative research*, *5*(9), e30280. https://doi.org/10.2196/30280
[33] Dellazizzo, L., Léveillé, N., Landry, C., & Dumais, A. (2021). Systematic Review on the Mental Health and Treatment Impacts of COVID-19 on Neurocognitive Disorders. *Journal of personalized medicine*, *11*(8), 746.
[34] Health Quality Ontario. Internet-Delivered Cognitive Behavioural Therapy for Major Depression and Anxiety Disorders: A Health Technology Assessment. Ontario Health Technology Assessment Series. 2019 Feb 19;19(6):1-199.
[35] Katie Patrick, Navya Pothamsetty, Lawrence Yin Tello. A Systematic Review of the Impact of Tele-psychiatry Interventions during COVID-19 on Mental Health Outcomes. PROSPERO 2020 CRD42020215647 (Anticipated completion: April 2021).
[36] Erika Fanti, Alberto Milesi. Effectiveness of Psychological Online Interventions on Mental Health During COVID-19 Pandemic: A Systematic Review. PROSPERO 2021 CRD42021229661 (Anticipated completion: March 2021).
[37] Julie Williams, Lucy Goulding, Harriet Jordan, Phoebe Barnett, Nick Sevdalis, Fiona Gaughran, Sonia Johnson, Rebecca Appleton, Merle Schlief, Luke Sheridan Rains, Monika Badhan, Justin Needle. Remote Delivery of Mental Health Services: A Rapid Review of COVID-19 Specific Literature with Recommendations for Clinical Practice and Research. PROSPERO 2021 CRD42021211025 (Anticipated completion: April 2021).
[38] Currie CL, Larouche R, Voss ML, Higa EK, Spiwak R, Scott D, Tallow T. The Impact of eHealth Group Interventions on the Mental, Behavioral, and Physical Health of Adults: A Systematic Review Protocol. Syst Rev. 2020 Sep 23;9(1):217. doi: 10.1186/s13643-020-01479-3. PMID: 32967717; PMCID: PMC7513289.
[39] Angela M Kunzler, Nikolaus Röthke, Saskia Lindner, Jutta Stoffers-Winterling, Maria-Inti Metzendorf, Alexandra Sachkova, Guido Schwarzer, Harald Binder, Eva Rehfuess, Jacob Burns, Michaela Coenen, Christine Schmucker, Joerg J Meerpohl, Klaus Lieb. Interventions to Foster Mental Health, Psychosocial Support, Resilience and/or Stress Management in Healthcare Workers in Face of the COVID-19 Pandemic – Protocol for a Living Systematic Review.
[40] Gita Mihelcic, Andreja Kukec, Helena Jeriček Klanšček. Mental Health Interventions for Healthcare Professionals During the COVID-19 Pandemic - A Systematic Review of the Literature. PROSPERO 2021 CRD42021241453
[41] The Royal Australian & New Zealand College of Psychiatrists. (May 6, 2020). Telehealth in Psychiatry.
[42] National Health Service (NHS). (2018). Telepsychiatry – Innovative Technology to help people with mental health conditions in their recovery.
[43] Warren, J.C. and Smalley, K.B. (June 18, 2020). Using Telehealth to Meet Mental Health Needs During the COVID-19 Crisis. The Commonwealth Fund.
[44] Canadian Agency for Drugs and Technologies in Health (CADTH). Summer 2021. Informal Jurisdictional Scan on Virtual Care Visits.
[45] CADTH. (Summer 2021). Informal Jurisdictional Scan on Virtual Care Visits.
[46] CADTH. (Summer 2021). Informal Jurisdictional Scan on Virtual Care Visits.

[47] Laperrière, H. et al., (2021). Niikaniganaw (All My Relations) II – the COVID-19 Rapid Response: Indigenous approaches to synthesizing knowledge for culturally-safe and stigma free mental health care for under-served Indigenous communities in Ottawa-Gatineau. Canadian Institutes of Health Research (CIHR).
[48] Hynie, M. (2021). Promising Practices in Accessing Virtual Mental Health: Supporting Refugees During COVID-19. CIHR
[49] CADTH. (Summer 2021). Informal Jurisdictional Scan on Virtual Care Visits.
[50] Ontario Health (Quality). (March 12, 2020). Adopting and Integrating Virtual Visits into Care: Draft Clinical Guidance.