EVALUATING AND IMPROVING E-MENTAL HEALTH SERVICES

A guiding framework for evaluating e-mental health services

November 2020

Ontario Centre of Excellence for Child & Youth Mental Health
Centre d'excellence de l'Ontario en santé mentale des enfants et des adolescents

CMHO
Children's Mental Health Ontario
Santé mentale pour enfants Ontario

RECOMMENDED CITATION

Danseco, E., Brown, J., Sundar, P., & Khan, R. (2020). *Evaluating and improving e-mental health services*. Ontario Centre of Excellence for Child and Youth Mental Health. Ottawa, ON. Available online: www.cymh.ca/virtual

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BACKGROUND

E-mental health technologies have the potential to increase access to mental health services (Lal, 2019), improve efficacy and empowerment (Ontario Ministry of Health, 2019) and reduce costs related to mental health care delivery (Leblanc et al., 2019). In recent years, service providers in Ontario's child and youth mental health sector have been exploring how best to integrate virtual care options into service delivery as a complement to providing face-to-face supports. The emergence of the COVID-19 pandemic, however, has accelerated these efforts. To continue to meet the needs of children, youth and families, many service-providing agencies are rapidly moving to deliver care through telecommunication technologies.

To ensure high-quality care, and to plan for longer-term implementation of e-mental health services for children and youth, agencies are encouraged to evaluate current virtual care offerings. Understanding what has worked well, challenges and how these have been addressed will enable the sector, post-pandemic, to take planful and deliberate steps to adding virtual care options to their suite of mental health services for families.

The Ontario Centre of Excellence for Child and Youth Mental Health (the Centre) and Children's Mental Health Ontario (CMHO) have partnered to provide guidance to the child and youth mental health sector on the evaluation of virtual mental health services. We have compiled:

- a summary of relevant findings from the literature on the implementation and evaluation of virtual mental health services; and
- a checklist for evaluating e-mental health services.

The contents of this document were gathered through a rapid environmental scan, and not an exhaustive or systematic review of the literature. Studies that focused exclusively on the use of apps or crisis telephone counseling were excluded. As new evidence emerges, recommendations may evolve.

Within this document, the following terms are used interchangeably to refer to the provision of client care using telecommunication technologies as alternatives to face-to-face services: e-mental health, tele-mental health, telehealth, telepsychology, e-services, telepractice, online treatment, video counselling, tele-rehabilitation, virtual mental health care.

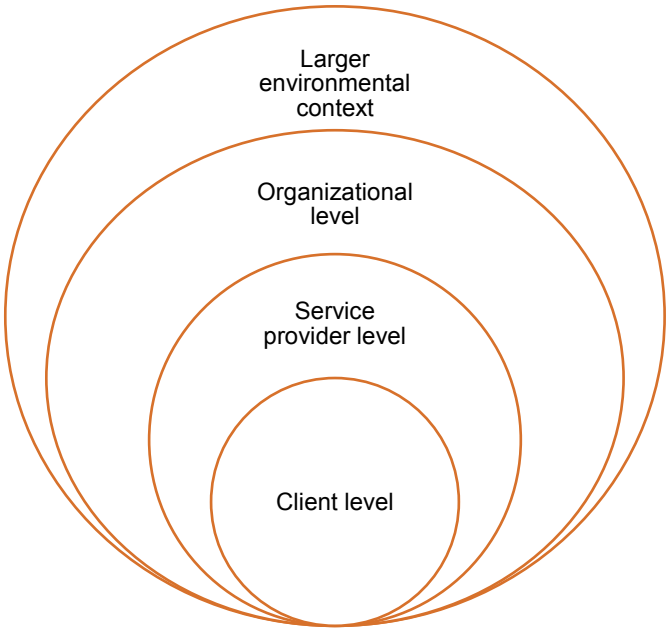
GUIDING FRAMEWORK

It is important to remember that while virtual platforms offer an alternative way of providing mental health services (Mohr, Weingardt & Reddy, 2017), the therapeutic elements within an evidence-based practice (EBP) remain the foundation for addressing the mental health needs of children, youth and families. The effectiveness of virtual service delivery hinges on the effectiveness of the therapeutic intervention or EBP itself.

Implementation science and quality improvement approaches provide a useful framework to guide the evaluation of virtual mental health care for children and youth. In particular, the Consolidated Framework for Implementation Research [CFIR] (Damschroder, Aron, Keith, Kirsh, Alexander & Lowery, 2009) and the Nonadoption, Abandonment, Scale-up, Spread and Sustainability [NASSS] framework (Greenhalgh, et al. 2017) identify several elements to examine at the client, provider, organizational and larger environmental levels.

In line with this, we recommend that evaluations of virtual care assess processes and outcomes across three levels: client level (including the perspectives of children, youth and families), service provider level and organizational level. Other factors in the larger environmental context are also important considerations (e.g. legislative and socio-cultural factors), but beyond the scope of work at any one agency.

Image 1: Evaluation of virtual care services.



Quality improvement (QI) approaches are helpful in providing tools and processes for improving the delivery of virtual services. Consider these steps when developing your evaluation and improvement strategy:

- Identify the areas in which you and your organization are already collecting information or data. This current-state inventory will serve as a baseline for you to build on. Also, consider areas that your agency has been planning to evaluate but has not yet been able to.
- Identify the areas where you see gaps and opportunities for adapting questions for virtual services. Consider using the Plan-Do-Study-Act (PDSA) cycle to adjust or introduce new processes for collecting data.
- Listen to feedback from clients and service providers. During a pilot project, you may want to collect data on a daily or weekly basis, then move to a monthly summary to check on trends.
- Communicate to clients and staff about how you are using the information collected to make changes to virtual care delivery. Showcase these improvements and celebrate successes along the way.

Client-level factors

Typical client-level factors that are monitored and evaluated during face-to-face service delivery can also be assessed during and after receiving virtual mental health care. These can include factors like specific mental health outcomes related to the counselling or intervention provided, clients' perceptions of the care they received, satisfaction with services, completion of the program and perceptions of the therapeutic alliance.

Additional areas to examine that specifically focus on e-mental health services include clients' perspectives on usability (e.g. how easy it was to use the technology), usefulness of the service, access to the internet and a safe space, and intention to use or continue with the virtual service (Baumel, 2018; Castañeda, Muñoz-Leiva, & Luque, 2007).

The above areas should also be monitored for equity (Were, Sinha & Catalani, 2019) to ensure barriers that racialized and marginalized populations experience when accessing face-to-face services are not amplified when accessing virtual care. The evidence base around equity implications of e-mental health is still growing, but there is evidence of variations due to gender (Glasgow, Phillips, & Sanchez, 2014; Zelmer, van Hoof, Notarianni, van Mierlo, Schellenberg, & Tannenbaum 2018). For example, youth who identify as female are more likely to use online counselling, text and chat-based services than those who identify as male (Ersahin & Hanley, 2017).

There is a wide range of mental health concerns that can be addressed through virtual care. A systematic review of studies on online counselling for 11 to 25-year-olds showed that issues included "abuse/violence, family/peer relationships, self-harm, depression, sexual abuse/rape, anxiety/stress, alcohol/drug misuse, anger, self-esteem, sex/sexuality issues and eating disorders" (Ersahin & Hanley, 2017, p. 537). Youth who opted for online counselling tended to

have higher levels of distress, compared with those who chose face-to-face counselling (Sefi & Hanley, 2012).

Given that evaluation and research on the effectiveness of virtual care and its appropriateness to a wide spectrum of mental health issues is ongoing, it is important to monitor the mental health concerns and issues that are most amenable to technology-assisted services. Concerns have been recently raised about clinical and ethical issues when clients present serious psychiatric symptoms, for example (Sadler & Tekin, 2020). Initial criteria for clients who are offered virtual services may need to be modified, based on evaluation results and clinical judgment.

Service provider-level factors

Training of service providers to offer virtual services is essential, as noted in the toolkit on the implementation of e-mental health developed by the Mental Health Commission of Canada (McGrath, Wozney, Rathore, Notarianni & Schellenberg, 2018). This document provides a comprehensive framework and specific suggestions for various training considerations (McGrath et al., 2018).

Service provider-level factors to evaluate may include readiness to use technology for delivering virtual services (Li, Ray, Seale & MacIntyre, 2012), perceptions on ease of use and fidelity, and adherence to evidence-based practice (Davidson et al., 2019; Owen, Woodward, Drummond et al., 2019). Purveyors of evidence-based practice will identify the core components that must be implemented during the therapeutic encounter (and monitored through the various sessions) and usually provide guidance on the tools or process to assess fidelity and how these can be modified in a virtual setting. For example, one study used the Therapy Process Observational Coding System for Child Psychotherapy (TPOCS) to assess adherence to a tablet-facilitated trauma-focused cognitive behaviour therapy (Davidson et al., 2019). In another study implementing tele-mental health services in rural settings, facilitation techniques were provided by the developers or purveyors of the evidence-based practice to ensure fidelity to the model (Owen et al., 2019).

Interviews or focus groups can also be conducted to understand facilitators and barriers to the implementation of the technology or virtual counselling. For example, Edridge and colleagues interviewed teachers about the facilitators and barriers in implementing a mobile intervention program for students (Edridge, Deighton, Wolpert, & Edbrooke-Childs, 2019). Engagement of teachers who were delivering the e-mental health program was enhanced by integrating their suggestions for implementation.

Organizational-level factors

Factors at the service provider level mentioned above need organizational resources to support ongoing training, start-up costs for the technology and involvement of other personnel such as information technology (IT) staff (Ahmed, Dannhauser & Philip, 2019; Owen, Woodward, Drummond et al., 2019). The resources required for longer-term implementation, together with projections for scaling up, will need to be monitored and evaluated (Greenhalgh et al., 2017).

From implementation science frameworks, other organizational factors that can be evaluated include organizational culture and readiness for change (Damschroeder et al., 2009).

With the rapid shift to virtual services and uncertainty surrounding the COVID-19 pandemic, it is also important for agencies to monitor the mental health and well-being of service providers. Service providers can be encouraged to practice self-care — and more importantly, organizations need to put policies and practices in place to support staff wellness. Strategies to avoid staff burnout such as the Joy in Work quality improvement framework (Perlo, Balik, Swensen, Kabcenell, Landsman & Feeley, 2017; Feeley, 2020), need to be planned and implemented at the organizational level.

Other contextual factors

Evaluation of the shift to virtual counselling takes place within the larger environmental context, with its unique socio-cultural, legislative or historical elements. While changing these features to improve services on the ground might not be feasible or timely, these system-level aspects will need to be addressed for successful longer-term implementation of e-mental health services.

These contextual factors include:

- guidance from professional associations, and identification of potential conflicting guidance.
- legislation requirements, usually relating to privacy considerations, government policies relating to reimbursement of services provided virtually and for service coordination for clients with complex needs.
- infrastructure, particularly in remote areas (insufficient access to reliable internet services).
- technologies available in both official languages (and potentially other languages given the diversity in Ontario).

EVALUATION CHECKLIST

This checklist summarizes suggested areas to evaluate based on implementation science frameworks, including CFIR (Damschroeder et al., 2009), the NASSS framework and findings from the Centre's implementation supports (Danseco, Barber, Carter & Brown, 2017).

How do we know our virtual services are having good clinical outcomes for children, youth and families?

- ☐ Obtain a profile of who has accessed virtual services and what their mental health concerns are.
- ☐ Get feedback from clinicians on the appropriateness of virtual services at the end of each encounter or visit, as well as any safety concerns.
- ☐ Assess adherence to the evidence-based practice with a fidelity measure that your agency is using.
- ☐ Collect feedback from clients on goal attainment, using similar tools your agency is using to assess this in the context of face-to-face visits.
- ☐ Compare outcome measures among children, youth and families who have face-to-face services and those who have virtual services.

How can we assess and improve client engagement and satisfaction?

- ☐ Collect information on therapeutic alliance and clients' perception of care and services using the tools your agency is using.

Additional questions for virtual services:

- ☐ Usability (e.g. ease of use, accessibility) (Baumel, 2018; Castañeda, Muñoz-Leiva, & Luque, 2007):
  - I found this service accessible and easy to use.
- ☐ Usefulness (Baumel, 2018; Castañeda, Muñoz-Leiva, & Luque, 2007):
  - I liked using this service.
  - I can see how, after a certain amount of time using the program, people would feel better.

- Using this service makes my life easier.

- ☐ Intention to use (Baumel, 2018; Castañeda, Muñoz-Leiva, & Luque, 2007):
  - I would like to use this service.
  - I intend to continue using this service rather than stop using it.
- ☐ Personal readiness to use e-mental health and provision of internet services (e.g. availability of internet service, ease in using the internet or websites) (Castañeda, Muñoz-Leiva, & Luque, 2007):
  - Does your home have a computer connected to the internet?
  - Does your home (select one):
    - have an internet connection that is fast enough for you?
    - have an internet connection that is too slow for what you need?
    - have no internet connection?

How can we assess and improve our skills in delivering virtual care?

- ☐ Evaluate the training sessions on delivering virtual care, including feedback from staff on challenges or barriers in using any new platform or technology.
- ☐ Assess service provider's competency or self-efficacy in using the new technology. Identify if any future training sessions are needed to enhance competency or self-efficacy.
- ☐ Monitor any concerns, questions or critical incidents through clinical supervision or peer-support meetings. Review a random sample of recorded sessions for quality assurance or to review how unique situations were handled so that others can learn.
- ☐ Review and update any relevant organizational policy or clinical procedures.
- ☐ Gather success stories and helpful tips when delivering virtual sessions.
- ☐ Consider developing a manual for delivering virtual services so that new staff can benefit from your lessons learned.

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