Using technology to deliver mental health services to children and youth in Ontario

October 2013

Prepared by:
Katherine M. Boydell
Michael Hodgins
Antonio Pignatiello
Helen Edwards
John Teshima
David Willis

www.excellenceforchildandyouth.ca
Prepared by:

Katherine M. Boydell, MHSc, PhD
Senior Scientist, Child Health Evaluative Sciences Research Institute, The Hospital for Sick Children
Professor, Department of Psychiatry, University of Toronto

Michael Hodgins, BEd
Research Coordinator, Community Health Systems Resource Group, The Hospital for Sick Children

Antonio Pignatiello, MD, FRCP(C)
Associate Psychiatrist-in-Chief, Medical Director, TeleLink Mental Health Program,
The Hospital for Sick Children
Assistant Professor, Department of Psychiatry, University of Toronto

Helen Edwards, RN, BA, MN
Director, Clinical Informatics and Technology Nursing, The Hospital for Sick Children

John Teshima, BSc, MD, FRCP(C), MEd
Staff Psychiatrist, Sunnybrook Health Sciences Centre
Assistant Professor, Department of Psychiatry, University of Toronto

David Willis, MBA
Clinical Manager, Tele-Link Mental Health Program and The Ontario Child and Youth Telepsychiatry Program

Acknowledgements

This paper was initiated by the Ontario Centre of Excellence for Child and Youth Mental Health. It was developed in collaboration by a team of practitioners and policy researchers to describe the use of technology in the delivery of mental health services and supports to children and youth, and to provide a link between the research evidence and a policy landscape that demands the efficient delivery of effective services.

We thank the policy and decision-makers who attended workshops, responded to e-mails and participated in individual interviews. We thank as well the child and youth mental health agencies in Ontario and direct service providers who contributed their practice experiences and information on their use of technology to our scan of the current landscape in Ontario and beyond.
MAIN MESSAGES

There is a worldwide increase in both the number of technologies used to deliver child and youth mental health (CYMH) services, and in their use. Such technologies will likely continue to grow in importance and have the potential to transform the CYMH sector.

Technology is viewed as a way to enhance access to mental health services for children, youth and their families.

Technology use is changing client-practitioner relationships and offers opportunities to empower clients. Technology can enhance service integration and inter-professional collaboration.

Live interactive telephone and videoconferencing have a substantial history in delivering mental health services and supports to children, youth and their parents and caregivers.

The evidence base in the field of tele-mental health is well established and demonstrates a high degree of practitioner/user satisfaction, enhanced capacity of practitioners and families in rural communities, and overall therapeutic success.

Evidence for e-mental health is emerging and to date demonstrates the potential to engage young people, and deliver outcomes that are as good if not better than services as usual.

Existing services in Ontario have the capacity to make increased use of e-mental health as a vehicle for service delivery.

There is a strong need to address the outstanding issues and concerns related to privacy and confidentiality when using e-mental health to deliver services and supports.

Substantial gaps exist in the evidence base underlying e-mental health programs, especially regarding mobile applications. Much of what is currently available has not been evaluated.

A solid program of education and training in the use of particular technologies is needed for practitioners and consumers. Real time, ongoing technical support is a best practice.

Ethical and regulatory guidelines or frameworks are required to keep pace with the emergence of new technologies.

Targeted knowledge exchange is essential to the demystification, uptake and integration of new service delivery technologies. Government has been recognized as an enabler for local innovation in the use of technology.

Technology is changing more quickly than our ability to properly assess its application. Practice is moving ahead of evidence, and opportunities for research are not fully realized.
EXECUTIVE SUMMARY

Introduction

The Internet and other technologies have great potential for delivering mental health services to children, youth and their families. The use of technologies such as mobile applications (apps), videoconferencing and Internet-based cognitive-behavioural therapy is burgeoning and there is a critical need to take stock of the impact of this movement, consider the advantages and difficulties associated with its use and develop strategies and policies to improve the practice of technology-enabled mental health service delivery.

This policy paper:

- provides an overview of the understandings and information needs of policy and decision-makers in Ontario regarding the use of technology in child and youth mental health service delivery.
- reviews the key literature in this area.
- reports on a provincial service scan of current use, barriers and challenges.
- presents evidence-informed recommendations for moving forward in this area.

By linking current research and relevant policy implications, this paper also provides a comprehensive picture of the potential role that technology (both existing and emerging) can have in improving child and youth mental health (CYMH) services in Ontario. There are promising implications if technology can be used to:

- provide more accessible mental health services, including reduced wait lists and enhanced access to services in under-served communities.
- reduce barriers related to stigma.
- support service delivery that is cost-effective and clinically effective.

Our focus is on technology being used in a therapeutic capacity, with an intervention component, although workflow, waitlist management and other administrative approaches that address barriers are considered. Technology used for other health topics, mental health literacy, education and training, or for the identification of community resources was outside of the scope of this paper.

Goals and objectives

(1) To engage with policy and decision-makers to identify their perspectives on the use of technology in mental health service provision for children and youth.
(2) To review the literature on the use of technology in mental health service provision for children and youth.
(3) To conduct a scan of child and youth serving mental health organizations in Ontario to identify their use and perceptions of technology in mental health service provision for children and youth.
(4) To provide policy recommendations founded on the best available research evidence and informed by current practice in the field.

---

1 There are a multitude of terms used for delivering mental health services via videoconference (e.g. telemental health, telepsychiatry). The case is similar for services delivered via Internet applications (e-health, e-mental health). Appendix 1 provides definitions of terms.
Policy and decision-maker consultations

Policy dialogues allow research evidence to be considered together with the perspectives, experiences and tacit knowledge of those involved in, or affected by, future decisions about a high-priority issue (Lavis, Boyko, Oxman et al., 2009). We hosted a face-to-face meeting with policy and decision-makers across interested sectors in Ontario to discuss the relevance of proven and promising uses of technology in mental health service provision for children and youth. In addition to this consultation meeting, we offered a variety of options to engage key stakeholders and ensure that they had an opportunity to contribute to the process, including teleconference calls, interviews and e-mail invitations for input and feedback.

Policy and decision-makers in the face-to-face workshop and interviews identified examples of different technologies used in mental health service delivery. They highlighted the use of videoconferencing to provide psychiatric consultations to mental health practitioners in rural communities and to provide direct mental health treatment to young people. The use of telephone support and mobile applications were also identified. Policy and decision-makers felt quite strongly overall that technology has the potential to impact CYMH service delivery, particularly in areas of early identification and intervention. They discussed benefits such as enhanced accessibility and timeliness as well as the youth-friendly, non-intimidating, and cost-saving nature of these technologies. Participants highlighted the lack of research evidence in this area and stressed the opportunity and need to conduct research in this area to determine the effectiveness of service provision via technology. Participants also noted that technology changes very quickly; the research process is slow and policy change takes even longer. In certain cases, decisions must be made in the absence of conclusive research evidence.

Relevant Ministries included the Ministry of Children and Youth Services, Ministry of Education, Ministry of Health and Long-Term Care, Youth Justice, as well as stakeholders from the Ontario Centre of Excellence for Child and Youth Mental Health, Centre for Addiction and Mental Health, and Lawson Research Institute.
Key highlights from conversations with policy and decision-makers

- Technology can enhance access to services, help to reduce the stigma associated with mental health problems and addictions, and reduce barriers to service in terms of geography, culture, time and ability to access expertise.
- Some individuals and communities continue to have difficulties accessing technology and this must be addressed.
- Policy makers are concerned about the impact on relationships with clients, the reliability of technology and added workload for practitioners.
- Education, training and exposure are critical elements to alleviate agency and practitioner fears about negative impacts of technology.
- Privacy and documentation issues will require legislation or regulations to keep up with the emergence of new technology. Government and regulating bodies can provide clarity and direction.
- Policy makers are worried that legal concerns might thwart efforts to provide services and support via new technologies. Insurance coverage was also raised as an area requiring exploration, particularly clinical liability and malpractice.

Literature review

The literature review allowed us to identify what is working well that has applicability to the policy context in Ontario and to identify the critical gaps in our knowledge base. More than 100 peer-reviewed articles were included in the review. Most focus on the use of the Internet (n=59) and videoconferencing (n=42) and the remainder focus on the telephone, mobile applications and other technologies.

The literature is permeated by findings that suggest videoconferencing can positively contribute to client outcomes and improved quality of life. A number of critical factors are associated with the success of programs that use tele-video to deliver mental health services to youth. They include the need for groundwork such as routine outreach visits, clear parameters and guidelines, and education and training opportunities. Key personnel such as a central co-ordinator of services, collaborating stakeholders, and a mental health champion are critical to success. Involving schools and local health providers is important to ensure local uptake of recommendations. Service users and service providers both report satisfaction with this technology, and it is an effective way to engage with children and youth.

Articles on online delivery of mental health services with features such as chat rooms, discussion boards, social networking and interactive games suggest some form of moderated support is extremely important when delivering a service online. Much of the literature supports the effectiveness of Internet-based programs for a variety of mental health issues including: treatment and reduction of symptoms for child and adolescent anxiety and depression, treatment of post-traumatic stress, depression prevention, assisting careers of young people with mental health issues and reduction of symptoms for eating disorders. These studies all show that Internet-delivered therapy has equal or greater efficacy when compared to face-to-face therapy.
Service scan

We conducted a service scan to identify existing programs/models with practice-based evidence that use technology to deliver mental health services, with specific reference to practices and programs appropriate in the Ontario context. The service scan included a survey distributed to 98 child- and youth-serving mental health organizations in Ontario, which allowed us to identify enablers and barriers to using technology as well as best and promising practices. More than half responded and results show that agencies are using a wide variety of technologies (e.g. videoconferencing, telephone and Internet) in service delivery and support. Respondents believed that their use of technology allowed for increased accessibility, is often preferred by children and youth and offers a cost savings. In terms of drawbacks, respondents identified confidentiality and privacy issues, technology and equipment challenges, the need to develop a therapeutic relationship that isn’t possible in the same way as in a face-to-face interaction, and cost issues related to acquiring and maintaining equipment.

Conclusion

Moving on Mental Health: a system that makes sense for children and youth lays out an exciting path forward for the child and youth mental health sector, and service options that include technology will be essential for all communities in Ontario. The province’s child and youth telepsychiatry program shows that Ontario is a leader in using technology to provide enhanced access to effective mental health services for children and youth. System transition is an ideal opportunity to take advantage of existing and emerging technologies to provide effective, efficient, engaging, and client-centred interventions for children, youth and families across Ontario.

Based on our review of research literature along with discussions with policy makers and direct service providers, we conclude that there is a critical need to integrate technological delivery of CYMH services and supports into mental health policy planning. There is a strong case for videoconferencing and e-mental health as priority areas given their potential in the delivery of mental health services. The Internet will play a major role in the future delivery of programs aimed at increasing community awareness and in providing prevention, assessment, diagnosis, counselling and treatment programs. Ontario is encouraged to develop leading policies in tele-mental and e-mental health by using and building on positive findings from the field.

The central implications for practice, policy and research are drawn from the three-pronged process used in this project – consultations with decision makers and key informants, a review of the literature, and a service scan of mental health agencies in Ontario. Based on input from stakeholders and key findings from the research literature, we suggest policy and decision-makers:

1. Engage in provincial policy development focused on developing standards of practice and specific guidelines for developing and sustaining the use of technology to deliver CYMH services.
2. Support systematic evaluation and research on the process of delivery as well as relevant outcomes, from both service user and service provider perspectives.
3. Focus on knowledge mobilization to promote the availability and accessibility of CYMH services provided through technology, particularly in under-served communities.
4. Develop educational and training requirements for the provision of services through technological modalities, as well as their use.

5. Facilitate access to new and enhanced technologies as they emerge.