

## Planning for the Future of Digital Mental Health in Canada: Priorities of Canadians Affected by Mental Health Conditions

Nelson Shen, PhD<sup>a,b</sup>, Iman Kassam, MHI<sup>a</sup>, Navi Boparai, MHA<sup>a</sup>, Clement Ma, PhD<sup>a,b</sup>, Sheng Chen, PhD<sup>a,b</sup>, Damian Jankowicz, PhD<sup>a</sup>, Gillian Strudwick, PhD<sup>a,b</sup>

<sup>a</sup> Centre for Addiction and Mental Health, Toronto, Ontario, Canada

<sup>b</sup> Dalla Lana School of Public Health, University of Toronto, Toronto, Canada

### Abstract

Digital mental health tools have the potential to support people affected by mental health conditions. A pan-Canadian survey was conducted to understand the current and future digital health needs. The results show that Canadians prioritized tools that support them in navigating the physical and digital mental healthcare systems and that are integrated into their care.

### Keywords:

Mental Health; Health Services Needs and Demand; Patient Navigation

### Introduction

The COVID-19 pandemic has acted as an accelerator for much needed innovation and scaling of digital mental health; however, it is critical to engage people affected by mental illness to understand their experiences and perspectives, ensuring that current and future digital mental health initiatives will provide care that is accessible and aligned with their needs [1]. As such, a pan-Canadian survey was conducted as a part of multi-pronged stakeholder engagement approach to help inform the development of digital mental health services. This poster presents the priority areas in which digital mental health tools can support the needs of Canadians affected by mental health problems (i.e., people who are seeking care, currently receiving care, or care partners).

### Methods

An online survey was administered in February 2021 by a research technology and data collection company to their national patient pool. A proportional quota sampling based on age, sex, and geographic region was used, such that the sample was proportional to the Canadian population. Eligible participants were required to be 18 years of age or older, a Canadian resident, and self-identify as an individual affected by mental health conditions (i.e., seeker, patient, or care partner). Surveys were made available in both English and French. Electronic-informed consent was obtained prior to participation. This study was conducted with approval from the Centre for Addiction and Mental Health Research Ethics Board.

The survey consisted of discrete-choice and open-ended questions and consisted of five sections: demographics; internet access and privacy; current use of digital mental health tools; and priorities for digital mental health. For the priority question, participants were provided with a list of 13 potential applications of digital mental health and were asked: "From your perspective, which of the following are most important to improving

support for Canadians with mental health conditions?" Weighted average rankings were calculated for the overall results and for the three subgroups (i.e., seeker, patients, and partners).

### Results

The online survey had a response rate of 26.7% and was completed by 1003 Canadians which consisted of 410 seekers, 271 patients, and 322 partners. Based on the weighted average rankings, the top five priorities included initiatives that:

1. help individuals choose the digital mental health tools best suited for them (i.e., curation tools);
2. support navigation through the mental health care system (i.e., navigation tools);
3. provide access and control of health records throughout the care journey (i.e., mental health passport);
4. provide access to health care providers via text message or email (i.e., secure messaging); and
5. facilitate the integration of digital mental health tools and interventions into my care journey and with my health care team (i.e., integrated care).

There were variations in priorities across the three sub-groups. *Curation and navigation tools* were the top choices across the three groups, while *mental health passport*, and *secure messaging* were in the top 5. *Consent management for research, chatbots*, and *interactive voice response* were the initiatives not included in the top-ten of any group. A visualization of the top ten ranked initiatives can be found in Figure 1.

Figure 1 – Top-ten digital mental health priorities based on average rankings and sorted by service user type.

Rank	Overall (n=1003)	Seeker (n=410)	Patient (n=271)	Care Partners (n=322)
1	Curation Tool (1.69)	Curation Tool (1.73)	Curation Tool (1.79)	Navigation Tools (1.71)
2	Navigation Tools (1.66)	Navigation Tools (1.55)	Navigation Tools (1.77)	Curation Tools (1.54)
3	Mental Health Passport (1.38)	Secure Messaging (1.29)	Mental Health Passport (1.5)	Mental Health Passport (1.39)
4	Secure Messaging (1.32)	Mental Health Passport (1.29)	Digital Mental Health Tool Library (1.35)	Institutional Collaborations (1.34)
5	Integrated Care (1.24)	Institutional Collaborations (1.2)	Secure Messaging (1.32)	Secure Messaging (1.34)
6	Institutional Collaboration (1.24)	Virtual Care (1.2)	Integrated Care (1.31)	Integrated Care (1.26)
7	Digital Mental Health Tool Library (1.18)	Integrated Care (1.18)	Virtual Care (1.28)	Digital Mental Health Tool Library (1.19)
8	Virtual Care (1.18)	Digital Mental Health Tool Library (1.06)	Institutional Collaborations (1.17)	Virtual Care (1.06)
9	Social Media (0.95)	Artificial Intelligence / Machine Learning (0.99)	Social Media (0.86)	Social Media (1.00)
10	Artificial Intelligence / Machine Learning (0.91)	Social Media (0.96)	Artificial Intelligence / Machine Learning (0.73)	Artificial Intelligence / Machine Learning (0.96)

## Conclusion

People affected by mental health conditions are burdened with having to navigate the complexities of the healthcare system and digital mental health landscape [1,2]. Our preliminary analysis found that digital tools to help navigate these spaces was viewed as most beneficial. Moreover, tools used in their care such as digital mental health passport, secure messaging, or integrated care were also valued. A recent meta-review found that digital mental health interventions embedded in a therapeutic context increased its effectiveness, acceptability, feasibility, and user satisfaction [3].

While the preliminary results presented here provide some insights to the future direction of digital mental health, the use of a web-panel limits the generalizability of the findings; however, 94% of Canadians currently have home internet access, which may reduce potential biases [4]. This study also relied on self-identification of being affected by mental health conditions with no way to verify status. Future patient, family, and community engagement will be used to cross-validate and bring greater depth and diversity of perspectives to these findings. For this study, future statistical analysis will further the understanding of the digital health needs of Canadians affected by mental health conditions.

## Acknowledgements

Nelson Shen is funded by Canada Health Institute for Research as a Health System Impact Post-Doctoral Fellow. The authors also extend their gratitude to the CAMH staff and patient advisors on the Digital Health Steering Committee for their feedback and support.

## References

- [1] J. Torous, K. Jän Myrick, N. Rauseo-Ricupero, and J. Firth, Digital Mental Health and COVID-19: Using Technology Today to Accelerate the Curve on Access and Quality Tomorrow, *JMIR Ment Health*. 7 (2020) e18848.
- [2] V. Stergiopoulos, D. Saab, K.F. Pridham, A. Aery, and A. Nakhost, Building flexibility and managing complexity in community mental health: lessons learned in a large urban centre, *BMC Psychiatry*. 18 (2018). doi:10.1186/s12888-018-1597-y.
- [3] C. Rauschenberg, A. Schick, D. Hirjak, A. Seidler, I. Paetzold, C. Apfelbacher, S.G. Riedel-Heller, and U. Reininghaus, Evidence Synthesis of Digital Interventions to Mitigate the Negative Impact of the COVID-19 Pandemic on Public Mental Health: Rapid Meta-review, *J. Med. Internet Res.* 23 (2021) e23365.
- [4] Statistics Canada, Canadian Internet Use Survey. The Daily, Tuesday, October 29, 2019. Statistics Canada catalogue no. 11–001-X, 2019

## Address for correspondence

Nelson Shen, PhD  
1001 Queen St W, Toronto ON, M6J 1H4  
nelson.shen@camh.ca