

Mental Health Commission of Canada

Commission de la santé mentale du Canada

Toolkit

for e-Mental Health Implementation



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IWK Health Centre Project Team

- Dr. Patrick McGrath, Department of Psychiatry, Dalhousie University, Halifax, NS, Canada
- Dr. Lori Wozney, Centre for Research in Family Health, IWK Health Centre, Halifax, NS, Canada
- Dr. Andrea Bishop, Strenghening Transitions in Care, IWK Health Centre, Halifax, NS, Canada
- Dr. Janet Curran, School of Nursing, Dalhousie University, Halifax, NS, Canada
- Dr. Jill Chorney, Clinical Psychology, IWK Health Centre, Halifax, NS, Canada
- Swati S Rathore, Centre for Research in Family Health, IWK Health Centre, Halifax, NS, Canada

MHCC Knowledge Exchange Centre

- MaryAnn Notarianni, Manager, e-Mental Health, Knowledge Exchange Centre, Mental Health Commission of Canada
- Meg Schellenberg, Program Manager, e-Mental Health, Knowledge Exchange Centre, Mental Health Commission of Canada

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Introduction to the toolkit

What is e-mental health?

The term e-mental health refers to the use of the internet and other electronic communication technologies to deliver mental health information and care. F-mental health services are an effective and complementary option to traditional face-to-face mental health support. By providing accessible and convenient assistance. e-mental health can play an important role for patients seeking help [1].

Technology is evolving and new innovation comes into the market at a very fast pace. E-mental health can include but are not limted to:

- instant messaging and video-based counselling services (also known as telehealth or telepsychiatry)
- consumer information portals
- online support groups, forums and social networks
- mobile phone applications
- · online assessment or diagnostic tools
- blogs and podcasts
- therapeutic gaming programs, robotic simulation and virtual reality systems.

Why an e-mental health implementation toolkit?

Provincial and territorial jurisdictions have improved e-health resources for health providers. But mental health care practitioners continue to identify common barriers around the provision of e-mental health, including [2]:

- procedural and administrative hurdles
- demanding workloads for clinicians
- patient concerns regarding privacy of personal data
- lack of evidence surrounding cost effectiveness
- lack of leadership
- lack of e-mental health legislation or regulation
- lack of interoperability in connecting with current health system

Overcoming these barriers is a challenge for financially strained mental health care systems that face increasing demand and an aging clinical workforce. However, research shows the likelihood of achieving successful e-health programs increases when [3]:

- leaders at all levels (e.g., government, health authorities, health centres, etc.) support the implementation of e-health initiatives
- implementation guidelines are systematic and participatory
- before implementation, an environmental readiness assessment is conducted
- barriers and facilitators are assessed and addressed
- adequate resources are dedicated to the implementation of e-health

To support the establishment of e-mental health programs, this implementation toolkit was developed. The goal of the toolkit is to provide:

- an introductory resource for practitioners who may not yet have any formal e-health training
- evidence-informed samples and templates for e-mental health planning and implementation
- a useful resource for front-line practitioners, managers and senior mental health leaders with a project implementation / quality / risk focus
- a support to e-mental health champions and leaders who provide training and guidance to other health practitioners
- a map of current internationally recognized e-mental health practices and trends
- a starting point for promoting knowledge sharing, lessons learned, successes and challenges

The toolkit reflects information gathered from the knowledge and experience of the authors and research group, an environmental scan [4] and rapid review of existing literature [5], interviews conducted with key informants across Canada and internationally [6], peer-reviewed research, templates and examples provided by relevant organizations, and insights shared by many on-the-ground practitioners at various meetings, gatherings and forums.



Counsellors/psychotherapists
Community health workers
Community health workers
Social workers
Occupational therapists
Mental health nurses
Peer support workers
Primary health care nurses
Other allied health workers

How to use the toolkit

The toolkit includes a set of strategies to successfully plan and initiate e-mental health innovation in clinical practice. These five modules reflect a process that is dynamic and iterative rather than linear. Each module includes groundwork information, planning and guidance models, self-assessments, mini-case scenarios and links to other resources.



Exploring the world of e-mental health

Understanding trends and current e-health solutions so they can be embedded into practice. Learning to review and select appropriate e-mental health knowledge tools/resources for the right clinical context.



Launching and sustaining progress

Preparing, launching and evaluating new e-mental health uptake. Effectively monitoring and evaluating progress for sustainability.



Building your digital skill set

Assessing e-mental health competencies to map e-mental health training needs. Developing confidence in using e-mental health in clinical practice.



Engaging patients in e-mental health

Learning about perceptions, issues and expectations of patients and colleagues. Reviewing strategies for communicating better with patients.





Leadership for e-mental health innovation

Providing strategic leadership for sustainable e-mental health integration.

Disclaimer

Canadian mental health services exist in many different forms and service models. This toolkit is not an exhaustive list of all actions your practice may need to take before launching an e-mental health program; you should take your own steps to ensure your practice is prepared to deliver safe and effective electronic-based health care.

This toolkit is intended to be generic (i.e., applicable to all e-mental health tools); therefore, as you move forward with your e-mental health implementation, you may need to seek additional information from relevant resources and stakeholders.

Every reasonable effort has been made to ensure the information presented in this toolkit is current and accurate. The toolkit does not replace the advice, guidance and support provided by local health authorities, professional associations or software vendors.



Exploring the world of e-mental health

Objectives

- Recognize opportunities for e-mental health integration in your practice
- Obtain detailed understanding of the range of e-mental health tools and applications currently available
- Be able to evaluate the quality and appropriateness of different e-mental health tools
- Understand the appropriate use of e-mental health



Getting to know existing e-mental health options

Digital resources and services have a significant role to play in promoting and supporting people's mental health. It is convenient, can provide services tailored to the needs and requirements of the patients, and help in avoiding stigma. Thereby, using technology potentially improves the quality and efficiency and brings equity in mental health services in Canada.

There are a few critical realities to keep in mind [7].

E-mental health implementation is a process, not a one-time event.

Do not expect to simply find an e-mental health tool and start using it immediately. Initially, it will be disruptive and will likely introduce inefficiencies. But it can be transformative for patients and clinical workflow. E-mental health will touch all aspects of your practice. After launching a new e-mental health service or integrating a new tool, regular monitoring and updating of the system will keep it useful and relevant.

A good plan is important, but be flexible. The perfect implementation scenario does not exist. The unexpected will arise. Even after thorough planning, last-minute changes will occur. For example, there may be changes in patient needs, policies, or regulations. Plans can, and should, be adjusted throughout the implementation process. Be willing to adapt.

Adapt to your local context. This toolkit provides advice based on others' experiences with e-mental health implementation. But there are no hard and fast rules. Every place is different and every roll-out is unique; you have to adapt the tools to fit your situation and clinical requirements.

There may not be a digital solution for every patient. E-mental health tools will not be appropriate for every patient.

Not all barriers are under your control. Many e-mental health efforts fail. Industry players, funding models, policy directives, technology infrastructure, patient and provider needs and accountability structures all contribute to implementation challenges.

Today's digital patient has broad access to tools that promise to help them self-test, self-diagnose and self-treat mental health conditions and disorders. These tools vary in their intended audience, purpose, mode of delivery, theoretical basis, style, level of complexity, cost, quality and efficacy.

It will be difficult for you to communicate with patients about electronic tools if you do not understand their functionality. In order to explore the potential for e-mental health with your patients, you must understand the digital health landscape.

TABLE 1 | Types of e-mental technologies



App

A software program made to run on a small device, such as a cell phone (apps are downloaded from Apple's App Store or Google Play)



Artificial intelligence

When computer systems that apply algorithms and machine learning techniques perform tasks that normally require human intelligence (e.g., speech recognition, decision making, language translation)



Big data

An extremely large data set that may be analyzed computationally to reveal patterns, trends and associations, especially relating to human behaviour and interactions



Cloud service

External server space available through the internet



Instant messaging

A free or low-cost way to exchange text and media using mobile data or Wi-Fi



Operating system

What controls a device (e.g., Windows on a PC, iOS on an Apple)



Portal/Electronic **Medical Record**

A secure website that gives patients 24-hour access to their personal health information

TABLE 1 | Types of e-mental technologies - con't



Search engine

A tool for searching the internet (Google is the best known search engine)



Telehealth

The use of live video to deliver health services over long distances



Smartphone

A cellular phone that connects to the internet and runs software



Virtual reality

A computer-generated simulation that can be interacted with by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors



Social media

A space on the internet where content is created and shared by users (e.g., blogs, forums, chat rooms, photo diaries)



Wearable

Clothing or an accessory that incorporates computer and electronic technologies, such as sleep trackers and pedometers



Software

A program run by a computer (also called an application, or app)



Website

A space on the internet, usually found by typing a web address into a browser; websites can be viewed on different devices (computer, tablet, television, mobile phone, etc.)

Examples of e-mental health

To date, e-mental health tools have predominantly applied cognitive behavioural therapy (CBT) techniques. But as time goes on, other psychological treatments traditionally delivered face-to-face (e.g., acceptance and commitment therapy, interpersonal psychotherapy, solution-focused therapy, mindfulness-based therapies and motivational interviewing) are being incorporated into e-mental health platforms.

Most programs are arranged into a series of lessons or modules accessed in a particular order, with follow-up activities that assist patients to consolidate learning, practise new skills and monitor changes over time.

Many e-mental health tools use a range of multimedia (text, graphics, audio and video) and interactive elements (reminders and graphing tools). downloadable content, and skill-building exercises that deliver automated feedback to patients. The tools are employed either as self-help resources or guided interventions.

Self-help tools are typically accessed through free publicly-available websites or apps, can be used anonymously and offer users only automated feedback. In many cases, patients log in to view and download psychoeducational material and engage in therapeutic activities. Some self-help tools provide automated emergency or crisis messaging and can direct patients to additional resources. Some examples of self-help tools are:

• **smartphone intervention** provides automated real-time illness management support to facilitate symptom management, mood regulation, medication adherence, social functioning, and improved sleep

- web-based self-management intervention includes education, supports recovery, and provides motivational email support
- personalized monitoring/support for individuals in recovery from substance use disorders; global positioning system to detect when users are nearing high-risk environments; personalized stories of recovery experiences; links to support network [5]
- **virtual online community** for parents of children with emotional and behavioural challenges in which they can do social sharing of different strategies and lastest technology in row

Human-supported interventions are generally accessed through a paid, password-protected platform, occasionally require users to register and complete a screening questionnaire and sometimes request a referral from a health practitioner. These platforms offer individualized feedback and support from a health professional. Some examples of human-supported interventions are:

- delivery of telemedicine-supported services to women at high risk for post-partum depression.
- automated home messaging device which presents disease management content for rating symptoms, providing alerts, and illness information. Responses are monitored remotely by a nurse practitioner each day.
- access to mental health services for children and adults including emergency psychiatry services utilizing two-way audio-video interactive services

Benefits and outcomes linked to e-mental health

For practitioners

- patients for whom e-MH is appropriate can be treated effectively with less in-person clinical time, freeing up resources for more complex cases, thereby reducing waitlists
- can offer health services in concert with patient needs and preferences
- can fill service gaps and help to address concerns due to stigma and other reasons



For patients

- can access services at low or no cost
- can resolve access issues in situations where specialist referral is difficult, such as in rural, remote and low socioeconomic areas
- can provide an introduction to therapy for individuals who are experiencing mental health issues for the first time or who have long-standing problems but have never sought professional assistance
- can play a bigger role in identifying different treatment options available in different sources with their mental health professional by taking a step ahead themselves and initiating towards a change
- can present a convenient and flexible option for patients by empowering them to decide when and where treatment will take place (comparisons between e-mental health interventions and in-person interventions report comparable outcomes [8-13])

Challenges in selecting & evaluating e-mental health tools

- Digital moves faster than research; by the time research is completed and published, digital technology has usually evolved.
- There is less evidence for the use of e-mental health for certain populations, in part because research protocols typically exclude higher-risk groups from clinical trials
- The tools need to focus on the patient-identified needs and concerns that benefits them benefit them in the long run as there are high chances of potential downfalls while adopting any e-mental health tool in any primary healthcare setting.
- Buying smart is the biggest challenge for any organization or consumer. So is the case from patients and clinicians point of view. It is difficult to create demand in the area to use these tools.

- Need to identify the degree to which patients commitment to change their specific health behaviour is matching with their relevant skills or abilities to successfully adapt any new public health intervention while implementing any tool into practice.
- Innovation funded by start-up investors is not always evaluated beyond the user opinion, and programs funded by the public and charitable sectors do not always include funding for rigorous evaluation.
- Few quality control mechanisms exist to ensure e-mental health tools are user-friendly, accurate, evidence-based or efficacious.

The academic research literature has vet to identify precisely who the ideal candidates for e-mental health are. However, there are some digital interventions that have a strong evidence base, and others that are developed using evidence-based principles, meaning they are evidence informed. (Learn more about evaluating e-health tools in modules two and three.)

Deciding how to use e-mental health

Mental health practitioners may integrate e-mental health into their day-to-day practice for prevention or early intervention, first-line care, adjunctive treatment and/or relapse prevention.

When assessing the use of e-mental health, the patient's medical, emotional, social, environmental, spiritual and economic context should remain at the centre of all decisions.

The appropriate application of e-mental health means matching these new tools to the patient, the diagnostic scenario and the provider workflow.

People first - putting patients centre-stage

Depending on comfort, familiarity with technology and/or the provider, individual patients will have varying degrees of receptiveness to specific e-mental health options. Not all technologies are equally available or useful for all clinical areas or target

groups, and practitioners may need to help patients use the 'right' service at the 'right' time.

When assessing the use of e-mental health, the patient's medical, emotional, social, environmental, spiritual and economic context should remain at the centre of all decisions. Practitioners and patients need to weigh the advantages (empowerment, in-time learning, increased self-efficacy) versus liabilities or potentially negative experiences. Keep in mind that each patient's autonomy and right to make care decisions must always be respected.

Through e-mental health tools, it is possible to create a caring presence. Individualized attention can be achieved, but careful forethought is needed so that critical patient-practitioner interchanges are not lost.

Social and cultural relevance

Culture influences an individual's health care. It impacts beliefs, attitudes toward the disclosure of medical information and treatment preferences [14].

Patient decisions regarding the use of e-mental health may have a number of influences [15]:

- rural isolation
- information gaps
- stigma
- electronic literacy and numeracy
- experiences of online bullying or fraud
- excessive, obsessive or inappropriate use of technology
- primary and secondary language use

Many marginalized communities in Canada such as Indigenous populations face circumstances that seem to influence attitudes toward technology; this will have an impact on e-mental health implementation.

For example, traditional knowledge, beliefs, values, language and cultural ways to support healing and wellbeing among Indigenous peoples are often not reflected in Western approaches to mental wellness [16].

Recognizing that patients' use of e-mental health is situated within their cultural and social experiences will help ensure treatment expectations are clear.

Familiarity and developmental readiness

E-mental health tools vary in the kinds of cognitive skills required to read, complete activities, self-monitor and navigate the technology. If information is too complex to understand, especially under periods of duress or high cognitive load, patients will not be able to engage with tools optimally [17,18].

Many e-mental health tools are designed for specific audiences (children, young adults, mothers, caregivers, etc.) and incorporate specific strategies, reading levels and motivational supports for those populations. One size does not fit all, so it is important to think critically about which tools you use or recommend.

At the same time, it is unlikely a single tool will be exactly tailored to the unique preferences. prior knowledge and cultural experiences of each patient. Using a 'best fit' approach is to be expected.

While it would be unwise to suggest all young people are active technology users, for many it is a seamless part of the world they operate in. The use of technology in mental health services for this age group has clear opportunity, and practitioners who support young people need to engage within the digital realm.

- NetAware provides a reliable, high validity guide to the social media tools young people use such as Facebook. ASKfm, Google+, Twitter, Tumblr, Omegle. Instagram
- What happens in an internet minute?
- Pew Research Centre: Teens and Technology

Patient access to electronic products

Access to the internet and other digital technologies can vary radically between communities, regions and individuals. Even in places with high rates of mobile phone ownership and internet accessibility, it should not be assumed everyone has reliable access to the net.

While the majority of Canadians still own and use wireline phones, data confirm the steady shift away from this technology in favour of wireless services. More Canadian households have mobile phones (85.6%) than landlines (75.5%) - a big change from only ten years ago, when just over half (62.9%) subscribed to mobile phones and almost all subscribed to landlines (94.0%) [19].

In addition to physical access, patients also need a degree of e-health literacy in order to be able to navigate tools confidently [20]. Some basic technology skills your patient might need to develop in order to fully engage with e-mental health include:

- computer vocabulary (e.g., What's an app? What does 'posting' a comment mean?)
- basic computer skills (e.g., ability to log in, upload a file, navigate a menu bar, send a text message)
- internet skills (e.g., ability to download an app, locate a website through a URL, send/ receive email)
- online resource awareness and ability (e.g., knowledge of online resources related to health)
- information retrieval (e.g., ability to use a search engine, navigate online catalogues or libraries)

An individual's educational background may also correlate to their exposure to technology; this could, in turn, impact their willingness to engage in e-mental health.

Approaching each patient in the context of their individual technological situation will help inform decisions about appropriate use [21].

TABLE 2 | Pros and cons of different technologies for e-mental health

	SOURCE	PROS	CONS
.ca WWW .com	Website	Learn more about a topicProblem-solve	 Quality of information varies Potential for inaccurate self-diagnosis
223	Chat group / "community"	Feel part of a groupLearn what others are doing to cope	Dissimilar experiencesQuality of information varies
	SMS/texting	More 'in-time,' get immediate answers to questionsIncrease feelings of being heard	Often not secure/encryptedPractitioners generally have no time for thisBoundary issues with self-disclosure and privacy
	Self-directed assessment via screening tools	Customize to learning preferenceMake progress outside of a clinicReduced demand on clinician time	Not all problems can be self-assessedSome illnesses affect insight; quality of assessment varies
	Email	Get quick advice on routine matters	Privacy compliance issues if not securePatient may expect ongoing conversation
	Mobile apps	 Improved prompting of patients (i.e., appointments) 	 Privacy issues for compliance may be more complex Patient may expect future response Data integration issues are complex
	Real-time telemedicine	See and hear each other in real-time	 Always has to be scheduled (and paid for)

Diagnostic severity and therapy needs

The technology chosen must also be appropriate and effective for the patient's health condition. As a primary care pathway, e-mental health interventions are likely to be an appropriate option for people who have:

- an increased risk of developing mental illness
- mild-to-moderate symptoms or functional impairment

Web-based technologies for mental health have been investigated for more than 15 years. Evidence shows that coach-facilitated, internet-based treatment is as effective as face-to-face treatment. but far better where coaching practices are done by clinicians. However, technology is radically changing the relationship between therapists and clients—in some cases, the therapist is technology.

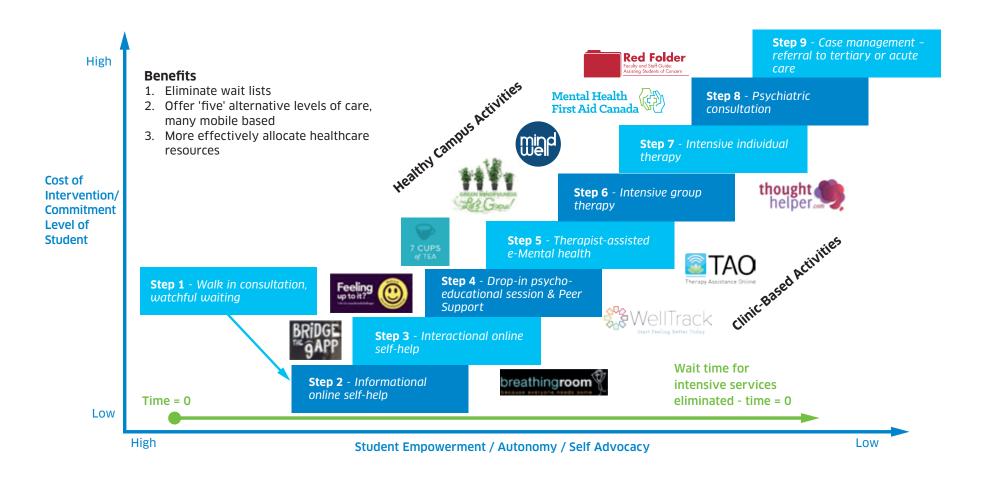
Nowadays, you can work through depression with the help of a chatbot, overcome a phobia using a virtual reality headset or learn how to combat anxiety through a self-guided online program. Although many patients still prefer face to face services there is growing interest in and support for e-mental health interventions, particularly in terms of improving access and convenience [22-27].

The research evidence base is strongest for using e-mental health to treat anxiety, depression and stress [28-31]. The use of e-mental health tools for substance use disorders is not yet well established in the academic literature [32], but preliminary research suggests many tools can still be useful for tracking, resilience building and skill practise.

The following diagram (fig. 1) is an example of how e-mental health might fit into a stepped model of care on a college campus. This model empowers clients to participate actively in care options, decisions and delivery.



FIG. 1 | Stepped Care 2.0 Model for Mental Health (Cornish, 2012) [33]



For more information, please see Cornish, 2012.

Building e-mental health into the clinician workflow

Before offering e-mental health care, providers must ensure they have the time and resources to maintain quality and consistency of care. In partnership with patients, practitioners can determine their level of involvement in each patient's use of e-mental health programs. Some people may only require encouragement and monitoring; others may need explicit coaching and guidance while using the materials.

A group of Australian researchers has proposed five ways in which practitioners can integrate e-health [34]. The first three involve recommending or prescribing e-mental health to patients. Over time, practitioners may wish to embed e-mental health more directly through symptom-focused or comprehensive models.

Deciding on which approach makes sense for your practice and patient population is vital for successful implementation.

TABLE 3 | Five typical approaches to e-mental health integration

	1	2	3
APPROACH	Promotion	Case management	Coaching
DESCRIPTION	 Providing information about self-help resources 	 After initial assessment, practitioner makes a recommendation or referral to a specific intervention or resource 	 Actively supporting the patient to complete a e-mental health intervention and overcome barriers
PRACTITIONER ROLE	The practitioner guides patients toward high-quality resources	• The practitioner is not expected to assist the patient to work through the tool, but does provide additional assessment, support, and alternative referrals if the patient does not improve	 The online program is the primary intervention and provides the content and structure for the treatment. The practitioner supports the self-therapeutic activities and helps the patient engage with and complete the program

Symptom focused

Comprehensive

- Extending or enhancing discrete face-to-face therapy around specific symptoms
- Fully integrating e-mental health resources into care

- The practitioner undertakes an individualized assessment, formulation. and intervention plan that incorporates traditional therapeutic activities as well as e-mental health resources
- Where multiple therapeutic approaches are required, or where first line interventions have been unsuccessful. the practitioner will include both traditional therapeutic activities and activities related to the service users' interaction with multiple e-mental health resources

Evaluating potential e-mental health tools yourself

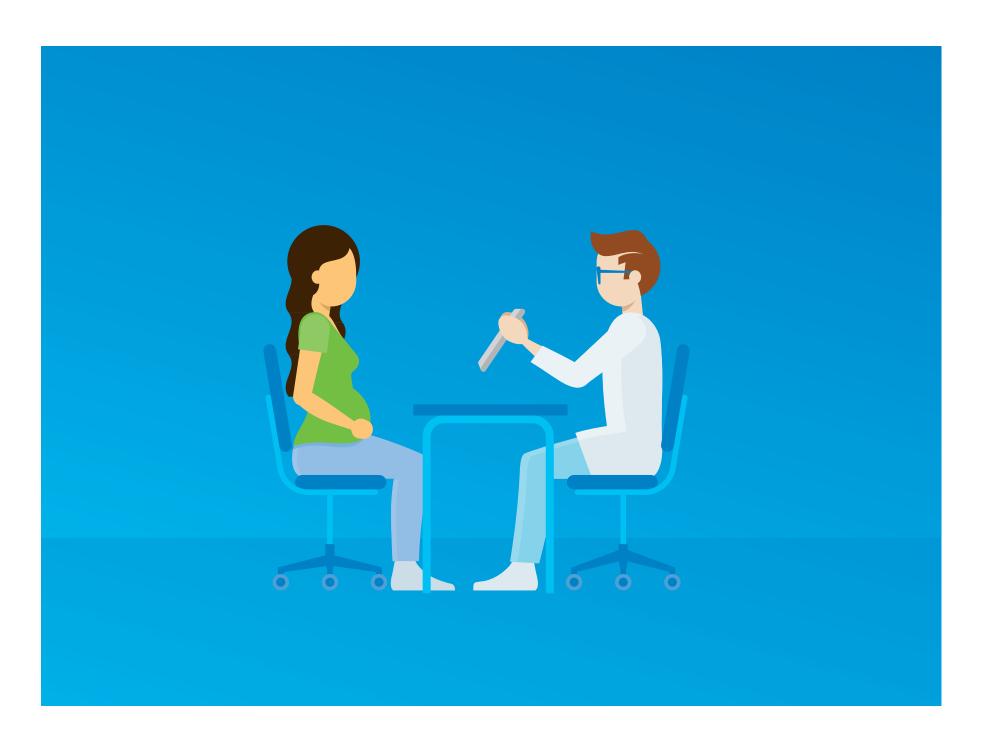
Selecting an e-mental health tool is slightly different from choosing a therapeutic tool in that the information necessary to make the best decision is not what mental health. practitioners are classically taught or used to. A reasonable approach to evaluating e-mental health should be grounded in the belief that any decision between you and a patient is a personal decision based on many factors, for which there is rarely a binary 'yes' or 'no' answer.

Based on these recommendations, and the work of other related organizations, the toolkit provides an evidence-informed checklist to help you make a basic assessment of any e-mental health tool or app. The Canadian Institutes of Health Research and the Mental Health Commission of Canada have co-developed a rating scale specifically for mobile apps [35].

TABLE 4 | Checklist: Five things to think about while assessing e-mental health tools

Does it work? Is there an evidence base (direct or in terms of clinical principles)? Does it work reliably? Will the people the app is designed for actually want (or be able) to use it?	Where did it come from/where is it going? Is it clear who the tool belongs to and how it can be used? Who is funding this and where does its income come from? Is there advertising? How easy is it to contact the owner?	What and who is it for? Is it clear who the tool is for and who should not be using it? Is the app user-friendly and engaging enough to make people want to keep using it? Is it age and culturally appropriate? Does it meet a mental health need?
 What is the app's intended purpose? Which devices does it run on? What are the reviews online and in the app stores? Do you know any other practitioners who are using it? 	Are risks managed and addressed? Are there risks identified by the owners? Is there a posted privacy policy or safeguards described? Does the app clearly state how it will collect, store, use and protect personal health information? How is the data held and used? Do you need to support your patient to mitigate risks?	How do you get it? What are the costs of accessing the tool? If there is a cost to the patient, is it proportionate to expected benefit? Will the tool's cost be an accessibility barrier? Is it accessible in your region/country?







Mini-case scenario

Ms. G is a 25-year-old woman who is 3 months pregnant and beginning her prenatal care with Dr. B. After experiencing post-partum depression following her first pregnancy she is eager to do what she can during this pregnancy to stay mentally well.

At her first visit, Ms. G is given a smart tablet to complete intake information and described her medical history. On the tablet, a computer avatar pops up and asks Ms. G a series of routine questions about her sleep, appetite, concentration, and positive aspects of her day, collecting a 2-minute vocal sample. This vocal sample will be used as a baseline measure of her vocal expression and as a means of screening for depression, anxiety, and mania. The data collected includes the content of her answers, but also data on stress and intonation, fluency, hesitations and clarity.

Ms. G and Dr. B come up with a wellness plan that includes 30 minutes of physical activity a day, suggestions for increasing her social support, and strategies for improving sleep. Additionally, Dr B helps Ms. G download a smartphone wellness-check app. This app collects continuous passive data on physical activity from the phone's accelerometer and GPS, uses the GPS to measure Ms. G's activity space (a measure of social activity), and measures social connectedness gleaned from the information on the number of texts she has sent, calls made, and calls ignored.

Throughout the week, data is collected through her app and health band on her physical activity, social activity, and sleep, and the data is monitored for changes that suggest risk for depression. When risk is detected, the app sends Ms. G automated suggestions for brief therapeutic activities. Once a week, Ms. G is prompted to complete her wellness check by her app. The weekly wellness check gives her a brief self-report-based mood thermometer. Ms. G is asked questions about her week in order to collect vocal data and is asked to send a brief email to her doctor. This data is processed and made available to Ms. G in easy to read graphs and charts within the app. The app sends a report to Dr. B before Ms. G's prenatal visits or alerts Dr. B and her office staff if Ms. G needs to be seen. earlier for aggressive intervention. If more extensive intervention is given (e.g., antidepressants), the data from the app and health band will serve as a means for measuring symptom improvement on a continuous basis.



Reflection

- How do the different e-health tools Ms. G is using support best practice for post-partum depression prevention?
- What concerns you (if anything) about the tools Ms. G and Dr. B are using? What would you need to have in place if you were Dr. B to mitigate or dispel your concerns?
- Were there any e-mental health tools described here that you think were unnecessary? Why or why not?
- On a scale of 1-10 how difficult do you think it would be to integrate this kind of technology from a practitioner's perspective (cost, workflow, regulatory)? What could be done to reduce the obstacles?



Action activities

1. Explore current trends in how people use digital tools Statistics Canada Canada Health Infoway Ipsos Reid Canada • Pew Internet & American Life Project (American Statistics) 2. Visit one of the many e-mental health websites and mental health clearinghouses and browse selected resources: ementalhealth.ca keltymentalhealth.ca CAMH Beacon Strongest Families **3. Complete a self-assessment** about your own readiness to integrate e-mental health tools (Appendix 1) 4. Set up alerts on Google or PubMed (free, easily searchable archive of health sciences literature) to receive new e-mental health articles and studies when they are published **5. Download an app** and practise conducting the five-question evaluation process recommended above

6. Promote e-mental health self-help resources in your office or clinic

(posters, website, brochures)



Linking resources

 Infoway offers Canadian perspectives on digital health, including level of awareness, understanding and perception of benefits, as well as current access and use 	
Canadian Medical Association Patient Guidelines to Help Select Health Apps	
• RNAO e-health toolkit	
Journal of Medical Internet Research keeps an updated e-collection of research reviews for digital mental health tools	
Provincial e-health offices	
Canadian Mental Health Association policy papers	
 <u>PsyberGuide</u> (endorsed by the Anxiety and Depression Association of America) is a non-profit website that reviews smartphone applications and other digital mental health products 	



Roadmap for launching e-mental health

Objectives

- Identify the main steps involved in launching a successful e-mental health implementation project
- Identify possible sources of feedback and indicators to stop, hold or expand efforts
- Create a process to assess and act on quality of care issues in a meaningful way



Formula for success

Negative or mixed results from an e-mental health tool may be due to poor quality implementation; it does not necessarily mean the tool itself is not working [37].

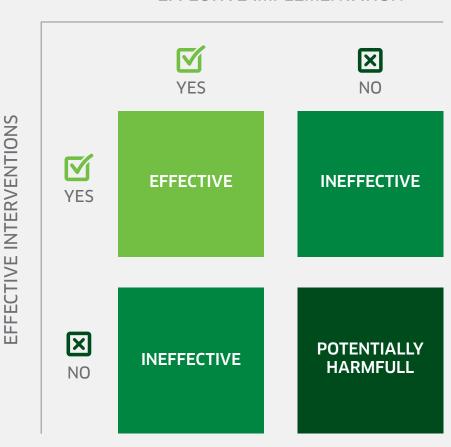
One of the prerequisites of successful e-mental health program implementation lies in its operationalization. The better the tool is explained (e.g., time requirements, activities, etc.), and the more training and technical assistance available, the better equipped patients and/or providers are to use it.

Practitioners whose everyday work is affected by the changes e-mental health bring tend to experience them as a process of learning and experimentation, not simply as a modification in the way tasks are carried out.

When implementing e-mental health, you need effective interventions and effective implementation strategies.

FIG. 2 | Finding the best fit

EFFECTIVE IMPLEMENTATION



Stage 1 Map the destination

Launching e-mental health in practice

This section of the toolkit provides you with e-mental health planning and implementation tips. These elements will also help to identify strengths, weaknesses, opportunities and resource challenges. A modified checklist [38] for implementing evidence-based programs is provided in Appendix 2.



Attention is first given to understanding the scope of what changes are needed in order to integrate e-mental health, reviewing whether or not there is sufficient ability to deliver such a program, obtaining relevant organizational support, establishing an appropriate team and communicating program plans.

Define what needs to change and why

There is growing demand to demonstrate value of e-health investments in ways that are both rigorous and relevant. E-health evaluation is no longer considered only an academic research activity but one that should be patient-oriented and integrated into everyday practice.

Having clear objectives and realistic expectations of your e-mental health program helps ensure its quality. Typically, practitioners have a number of goals:

- **improved clinical outcomes** (e.g., better patient safety, ameliorated functioning, enhanced quality of life)
- **improved clinical processes** (e.g., shared decision making, improved therapeutic alliances, enhanced care to remote regions)

TABLE 5 | Possible data sources

- increased adoption of e-mental health tools by care providers (i.e., to be seen by patients as up-to-date/current; improve confidence with technology among clinical population)
- increased adoption of e-mental health tools by patients (i.e., increasing patients' empowerment, self-management skills and overall satisfaction, and also making health care more convenient)
- improved workflow (e.g., reduced wait and call-back times, improved data management)
- reduced health care costs (i.e., mitigating acute/crisis care)

Locate accessible data

Once desired goals are defined, you need to identify what measures you can use to collect information on progress. The evaluation of e-mental health can occur in many different ways. The level and extent of the evaluation will be largely dependent on you as a practitioner, your organization and what you plan to do with the results.

	OUTCOMES	POSSIBLE DATA SOURCES
1	Individual health benefits	Diagnostic interviews, patient feedback, screening surveys
2	Practitioner/ health service	 System-generated data may be a useful tool for automatically obtaining operational data (# of patient visits per month, number of referrals, etc.). Projects should also develop an early understanding of how data is captured by the tool itself and what reports are possible
3	Health systems	 Wait list metrics (size and length of time to treatment), discharges and utilization rates, public health data

Consider costs

Benefits of an e-health project are often potential rather than real. However, costs are very real - to the individual patient and to the practitioner or organization [39]. This inconsistency and a lack of solid comparable evidence on costs versus benefits is one reason for the slow uptake of e-health interventions.

It is not realistic to conduct economic evaluations of all e-health applications and services in all situations, so you need to be able to generalize costs. Understanding some basic pricing models will give you a good baseline to predict what you or the patient might be expected to pay for, and will allow you to compare apples to apples when having a conversation about which tool to use [39].

Fee-for-service: Perhaps, health care providers are paid through a fee-for-service (FFS) model. Every time you offer a therapy session, a teleconference, an online screening assessment or any other service, you bill for the service provided.

There is often a small fee for accessing apps but most free and inexpensive apps have premium versions; to access the most desirable features, the costs go up. And items such as wearable devices are substantially more money. Asking users to shoulder the costs of these applications could restrict the use of e-mental health tools only to those those willing and able to pay.

Pay for data: Some services provide applications for free if users share data with the developer. This approach, however, raises privacy concerns and other data sharing issues. Patients will have different comfort levels around privacy, so be sure to discuss all options.

Pay per user: Health systems (or the payers within them) pay per-user applications and make them available to groups of relevant patients.

Fixed fee: Some digital service owner provide unlimited access for a given period of time or charge a regular access fee.

Self-pay bundles: Some services and sites have a number of different services that cater to self-pay patients: e-mental health tools can be bundled or sold as single products. Patients and practitioners can decide which service(s) is best. For example, one patient might benefit from access to online materials only, whereas another might need a coach.

In planning how you will integrate e-mental health into your practice, consider the costs for you - and more importantly, for your patients.

Start-up costs for practitioners

E-mental health tools range from really simple applications to those that connect with other digital resources. Depending on the technology you intend to use, one or all of the following cost categories should be considered [40]:

- **technology:** the hardware, the system needed
- **technical staff:** for analysis, design, development, operation, maintenance, support, and upgrades
- clinical staff: for planning, implementing and supporting the use of the e-health system
- training: direct costs plus lost staff time
- operational: ongoing recurrent costs for running the e-health system and for maintaining and upgrading it

Costs for patients

Canadian physicians bill provincial governments \$1-billion a year for counselling and psychotherapy – one third of which goes to family doctors [41]. Psychologists and social workers who do not work in health centres are largely left out of the publicly-funded healthcare system, and often their expertise is available only to Canadians with the private resources to pay for them. In major centres, psychologists in private practice can charge more than \$200 an hour.

Insurers' acceptance of e-mental health varies across tools and providers. Provincially, e-mental health programs are more widely available. However, for access, patients are usually expected to pay unless they have access to private coverage.

Although about 60 per cent of Canadians have some form of private insurance, the amount available for psychological treatment may cover only a handful of face-to-face sessions; coverage for e-mental health services is even less. Recognizing this burden on patients is important and should be openly discussed early on.

Train and communicate

In the complex interplay between technology, infrastructure and process, a significant amount of a program's value can be lost if not operationalized well. E-mental health implementation teams that think about operational readiness from the outset typically identify risks earlier, mitigate design issues when they are less costly to resolve and build highly capable teams that deliver more efficient e-mental health programs.

As you map your e-mental health project, consider:

Managing and building teams

Teamwork and collaboration are very important for change and essential to the implementation process. A team approach while implementing eMH into clinical environments with multiple other actors involved will allow the work to be shared and enrich the change process. Further, it will help to identify challenges and opportunities, and pool resources to promote productive communication.

Establishing clear roles, responsibilities and governance

Defined roles and responsibilities related to operational readiness are worthless unless identified actions, issues and risks are actively discussed and managed.

Everyone involved in launching an e-mental health program should know what they are responsible for, who they need to go to for support and assistance, how quality and fidelity to best practice will be monitored and when they are expected to start using the e-mental health tool in their day-to-day work.

Protecting individuals and groups and assuring oversight and accountability in the various aspects relating to use of information and communication technologies (ICT) for health.

Encourage team members (colleagues, patients, administrative staff) to openly share expectations and concerns, and remember to communicate and celebrate successes.

Focusing on what needs to go right, not just what could go wrong

While it is essential to build responsive e-mental health programs, it will be difficult to launch tools if you require a contingency plan for every conceivable issue. Start planning programs now with whatever resources you have available; know where to go if a concern arises, but do not stall progress to map every potential problem before it happens.

Stage 2 Launching new e-mental health programs and services

The implementation process will be iterative. Work processes will have to be adjusted and patients will need time to become comfortable with any new e-mental health technologies.

To keep new programs manageable from the get-go, roll them out in a controlled environment. Introducing new programs on a small scale will help you identify any unforeseen difficulties or consequences. When only a small group of stakeholders is engaged, you will be better able to resolve issues before a wide, full-scale implementation. Focus on ensuring your small team has the right training:

- foundation training ensure you/team have core competence for e-mental health use
- mission-specific training integrate all of the delivery functions, partners, equipment and systems to develop collective competencies
- mission rehearsal training prepare each person to deliver e-mental health within realistic pressures and challenges, and aim to practise and test skills throughout the entire preparation process (rehearsals require individuals, functions and units to collectively respond using protocols they will be expected to follow during the live, full launch)

In order for e-mental health to achieve the desired benefits, practitioners and organizations must be willing to identify and correct inefficient processes.

Below is a checklist to help keep you steady while you launch a new e-mental health service.

Countdown checklist

3. 2. 1

Pre-launch

Set a date and time. Choose a date when your new e-mental health service will be available to you and your patients.
Prepare promotional material. Let your patients know what is happening through ads, product information and instructions, infographics, videos, testimonials, announcements and entries for various social media platforms.
Create pre-launch buzz. You might want to find influencers or patients who can test drive the new tool and start talking about it.
Confirm that you have what you need to get started and know the protocols if you encounter an issue.

3. 2. 1.

3. 2. 1.

Launch day

- Give yourself a little extra time (book a few extra minutes with patients, have some extra administrative support while you work out the process).
- Send out announcements via different channels.
- Have fun; let your
 excitement about innovating
 be infectious

Post-launch

- Track issues and uptake (How did patients respond? Where there issues? What were the early successes?).
- Respond to both positive and negative comments about the e-health tool.
- Get testimonials or develop case studies.
- Keep the momentum going with continued advertising.

Checking in on how it is going

Once you begin using e-mental health tools, the goal of monitoring during initial implementation is to:

- identify anything that went wrong as a basis for improvement
- help everyone involved in e-mental health implementation and adoption improve upon what they are doing
- help justify capital investment in e-mental health projects by demonstrating project impacts
- share information within the health community, raising awareness of efforts in the e-mental health field on behalf of patient safety and increasing quality of care

As you begin using e-mental health, consider the following recommendations [42] for keeping momentum and being strategic in how you test, refine and retest how things are working:

- Study failures, partial successes and reasons for non-use (Where did things get off track?)
- Do some evaluations to judge the worth of the tool at different time points so you can learn as you go
- Incorporate people, social, organizational, cultural and ethical issues into the evaluation
- Diversify the metrics you use to measure success
- Recognize the risk of harm or the possibility that an e-mental health tool may be less effective



This phase is similar to an athlete running in a race after they have trained - the service is tangible. sizeable and performing, and any issues encountered during preparation are soon forgotten.

Even though the e-mental health service should be stable, there may still be opportunities to enhance effectiveness or efficiency. Large-scale formal research or evaluation projects (e.g., clinical trials, multi-site studies, health authority-level program evaluations) that explore effectiveness and feasibility are outside of the scope of most practitioners' work. However, using the data you've reviewed in Stage 2, combined with your professional knowledge, the following guidelines might be useful in deciding whether to expand. hold or stop [43] the use of e-mental health tools in your practice.

Determine next steps

Expand

The key for growth of e-mental health services in your practice is a culture in which e-mental health will thrive; it will no longer need to be justified, as it will become embedded within the beliefs and norms of all those involved in shaping and receiving e-mental health services.

Hold

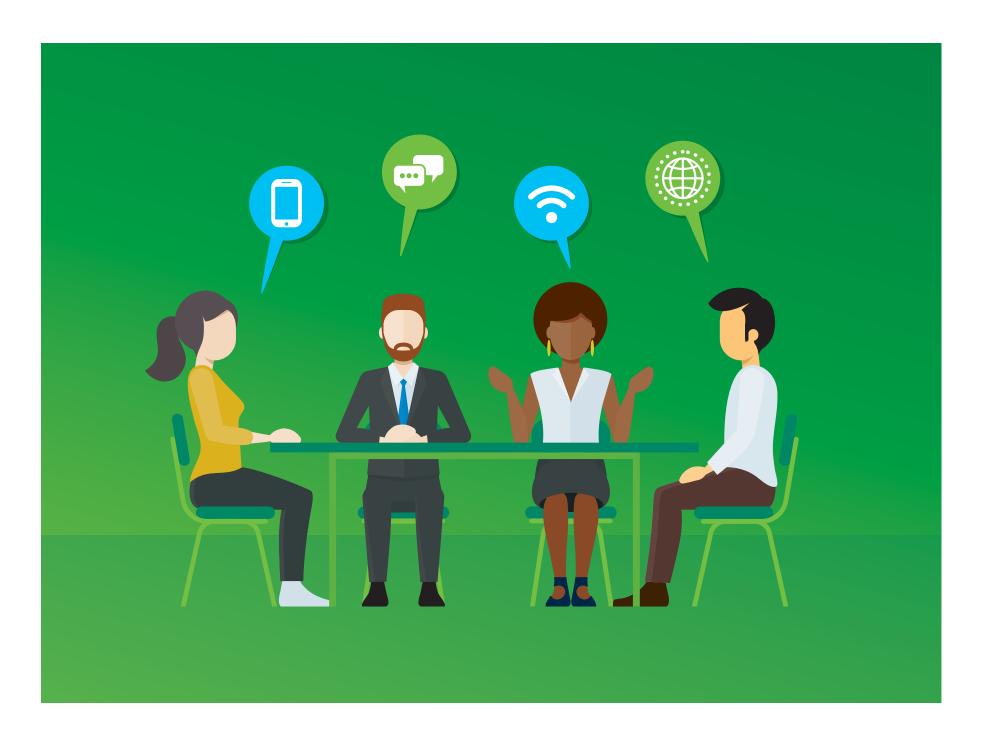
Delayed decision making is often the death of e-mental health projects. Organizations and practitioners often fail to robustly assess the risk of doing nothing. The lost opportunity cost can be significant. There will always be better technology and more robust evidence just around the corner. However, the following events can put e-mental health activity on hold:

- loss of a key individuals who champion or lead innovation
- disruption to operations due to reorganization or loss of access to essential services/assets (e.g., IT infrastructure)
- loss of sponsor or patient confidence, or unfavourable press
- going over budget or taking too long on key tasks
- lack of sufficient funding
- continually awaiting advances in technology developments
- changes in policy and/or incentives

Stop

There are some reasons to stop using an e-mental tool, which always reflects what is best for patients and their families. Typically, you would look to stop using an e-mental health tool when the:

- financial model radically fails (e.g., cost of an app is raised above what a patient can pay)
- tool does not deliver the outcomes expected or patients have negative experiences
- tool has failed in a way that damages the practitioner's reputation
- environment radically changes (e.g., population you are treating changes)
- e-mental health is no longer aligned with the strategy of the organization
- key personnel leave the organization, damaging delivery capability





Mini-case scenario

The helpline at the WeCare rural community clinic was concerned about how to stay relevant in a world where people are going online for almost everything, including helpline services like crisis intervention, suicide prevention, or information and referral. Most of the staff had worked in the clinic for 10 years or more.

They had some reservations about what a new service would mean for their jobs and responsibilities. After informal conversations with patients and families in the community, the clinic staff decided that having a digital helpline option was important. They felt a decision needed to be made quickly as data was showing young people in the community were increasingly coming to emergency department for acute care and not accessing the traditional hotline as much as in previous years.

Some staff wondered about the use of live chat versus text messaging and researched different options. With a small budget for technology infrastructure they knew they could only afford to choose one model. After several meetings to discuss which one was better for their community, for their target population, for their service requirements, the staff was no closer to having a confident direction.

Some staff were discouraged at how long it was taking to get things moving. They felt their expertise in using technology wasn't strong and so they invited a patient, a local schoolteacher, an IT administrator who worked in the business association office and a self-employed software developer from the community to attend a brainstorming session. The group decided to compare the two options across key issues- it looked like this table on next page.

TABLE 6 | Scenario - Live Chat vs Texting

LIVE CHAT	TEXTING
 On clinic website, a "Chat now" button appears. Software checks the system to see if a chat shift is set up and if someone is assigned to that shift. Patient clicks button, completes registration and placed onto the chat. 	 Can enable for existing helpline number. Advertise new number, along with your hours of availability, on website, flyers, social media. People send a direct text to initiate a conversation.
 If a shift is not set up and staffed, the Chat Now button will automatically display as "offline". The button will display the next time chat is available, so the visitor knows when to return. 	 A patient may still send a text, even if no shift is set up at that time. A polite message (customized) letting them know it is outside available hours.
 Conversation is secure and encrypted end-to-end from patient to staff member, because the entire conversation is traveling over secure servers. 	 There are times that the conversation is flowing over the telephone wireless network. Phone companies do not make promises about data protection.
	 On clinic website, a "Chat now" button appears. Software checks the system to see if a chat shift is set up and if someone is assigned to that shift. Patient clicks button, completes registration and placed onto the chat. If a shift is not set up and staffed, the Chat Now button will automatically display as "offline". The button will display the next time chat is available, so the visitor knows when to return. Conversation is secure and encrypted end-to-end from patient to staff member, because the entire conversation is traveling

KEY ISSUES	LIVE CHAT	TEXTING
Visitor mobility	 Live chat is typically conducted via a computer, and so the patient will likely stay in one place while chatting. Might use their smart phone's web browser to view your website and start a chat, in which case they may be more mobile. 	 Very mobile, since visitors will be using their smartphone to text in to your service. They could text you from the bus, from a library, the park, etc. and may be on the go as they carry on the conversation.
Length of conversation	 The entire conversation takes place during a single session, and there is a clear beginning and end. It's not uncommon to have these sessions last an hour or more. 	 Longer than phone calls, but this conversation may span several days, or even weeks. They can text back and continue where they left off.
Costs	 There are no per-message or per-chat costs for live chat. The software costs for connecting to staff availability would be a few thousand dollars. 	 Text messages cost money but are sold to patients and organizations in bundles at a nominal cost.
Setting a service area	 You can decide what questions, if any, you'd like to ask before they proceed to the chat. Using registration requirements before the chat begins, you can ensure that only visitors who identify as residing within a certain geographic area can enter the chat. 	 If you asked for geographic information you can restrict service to visitors from an area you select. Visitors only have to answer these questions once the system will remember the answers they provided that first time they texted in.

After comparing the options and thinking about what would be best for the clients, for the kinds of situations the helpline is used for, the impact on workflow and cost, the group put forward a recommendation to use text messaging as an alternative to their helpline.



Reflection

- If you were a staff member who would now be responding over text instead of the phone- what kind of training would you want to feel confident delivering the service?
- What kind of communication strategies would you recommend to get the word out and launch the new service for existing patients and other community members?
- What data and information would you collect and how often to inform you about if the text chat was working?
- Where do you think the biggest impact would be on clinic workflow?
- Do you agree with the outcome and would you change anything about the process?



Action activities

	1. After recommending an e-mental health tool, ask patients to complete a satisfaction survey to learn about their experiences (<u>Appendix 10</u>)
	2. Hold a meeting with colleagues and other clinic staff to gauge their engagement and concerns
	3. Explore budget implications or start-up costs for licensing and training staff on e-mental health tools
	4. Practice mapping and predicting workflow change tool (<u>Appendix 3</u>)
	5. Use the e-health planning canvas tool with your team to visualize key issues (Appendix 4)
6. Identify the process of using e-mental health with an example of workflow mapping (<u>Appendix 5</u>)	



- University of Victoria e-Health Observatory workflow analysis
- Project Management Basics: Ontario Association of **Health Centres**
- Cost-benefit analysis primer for community health workers
- Planning an Information System Project: A Toolkit for Public Health Managers



Building your digital skill set

Objectives

- Build awareness of core e-mental health skills and competencies
- Identify professional e-mental health learning needs
- Learn about relevant legislation, regulation and policies
- Set priorities for your personal e-mental health learning plan



E-mental health skills and competencies

Many of the skills required by health care professionals are changing as new technologies come on the market. Generally, health practitioners report confidence in using technology in their personal lives, but express concerns around how e-health can be used in their practices [46].

This suggests, in order to facilitate much wider adoption of e-mental health, that training is required.

If practitioners are not adequately prepared to engage with e-mental health tools, they may rely on ad-hoc, unstructured learning from colleagues or base opinions on trial and error [47]. Such approaches are inefficient, patchy, and unlikely to position health professionals as leaders in e-health adoption and implementation [48].

Studies of effective e-health implementation projects point to several priority skill areas that will help you implement e-mental health successfully [49].

Technology attitudes and skills

With little interest in e-health technology, there will be scant enthusiasm to learn and adapt e-health technologies for work roles or to apply learning obtained through formal training.

Developing competencies in using hardware and software are integral to ensuring the usability and acceptability of e-mental health tools for patients. Without these basic skills and aptitudes, practitioners are likely to continue to rely on traditional mechanisms of observation and monitoring, which they feel are more usable and familiar.

Reflecting on your own beliefs, attitudes and values related to technology for mental health care helps reveal the messages you may be sending to patients and colleagues [50]:

- **1.** Do I think e-mental health can improve mental health care delivery (advantage)?
- **2.** Does e-mental health fit well with the needs and current practises of my practice (**compatibility**)?
- **3.** Do I find e-mental health tools and devices easy to use and understand (**complexity**)?
- **4.** Have I tested or tried e-mental health before making a commitment to use it (**trialability**)?
- **5.** Have I seen/heard compelling evidence about the benefits of using e-mental health in professional practice (**observability**)?



Interpretation and analysis of e-mental health data

It is necessary to ensure that mental health care professionals have the skills to interpret patient information gathered with e-health technology.

The type of data generated through technologies may vary from longitudinal monitoring data to more immediate observations of a patient's condition. Another required skill is translating data and knowledge of the patient's health condition into meaningful information for effective clinical decision making; this is needed to derive the most appropriate, least burdensome, and most cost-effective intervention [51].

Apps, online programs, screening tools and websites are now able to capture and report on data analytics in complex ways. There are three primary data sources that providers interact with when using e-mental health tools with patients:

- (1) Patient-facing feedback that is used to guide self-care (e.g., graphs that plot a patient's change in mood or sleep patterns over time)
- (2) Clinician-directed summary data to guide clinical decision making for individual patients (e.g., report on the number of activities or modules a patient completed in the last month); and
- (3) Research evidence to improve clinical care for groups of patients (e.g., district-level data on number of logins to an online crisis chat line; systematic review on how virtual reality works for first responders with stress injuries).

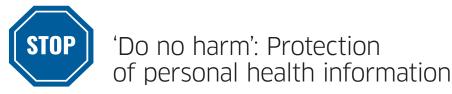
E-communication

Voice intonation, concise communication, and online presence are important when delivering messages via technology because face-to-face prompts and supports are absent.

Emojis and other visual indicators are not universally understood or applied. Opportunities for miscommunication or comments to be taken out of context can be high. However, these tools can also create rich opportunities for helping patients to express themselves in ways they are more comfortable with

Each e-mental health technology requires different communication skills. For example, in videoconferencing, maintaining eye contact with the patient, adopting an engaging facial expression, and having a well-developed ability to recognize changes in patient behaviours or environmental surroundings via the telecommunications link are all important.

While some basic e-health communication concepts can be outlined in a brief document like this toolkit, digital communication is essentially a behavioural aptitude learned best through application, feedback, and practise. The more you engage in it, the more you will refine vour communication skills.



Existing policies and guidelines around best practices in e-communication are largely outdated [52], but here are some general reminders for digital communication:



Ensure your responses are professional and appropriate; use plain language and avoid over-familiarity



End each e-communication with a signature block that includes provider name, contact information, response time and instructions for what to do if the response time is not met



Ensure the communication mechanism sends a message received notification; this is important for both the provider and the patient



Maintain professional boundaries and limit communication to care and treatment-related issues



To reduce the risk of others seeing/reading/hearing the interaction, use discretion when communicating on mobile devices in public areas

As clinical practices differ, it is not possible for this toolkit to cover every possible ethical and legal consideration relevant to the incorporation of e-mental health

If you have not looked at e-mental health tools in a while, chances are today's solutions are much better at meeting data security and privacy concerns. However, practitioners may overestimate their patients' knowledge of technology and how to mitigate associated privacy risks.

Even though there are standards for data and information sharing, e-health care changes the ways in which practitioners and patients observe, view, and share information, leading to unique requirements for how data are retained and kept secure from others.

Traditionally, weak cybersecurity at an institutional level, coupled with poor personal security, means that human error, not criminal behaviour, is the biggest threat to protected health information [53-56].

Continual training in security practices and developing a culture of privacy can go a long way in avoiding accidental disclosures; the importance of comprehensive knowledge around regulation of e-mental health products and services and associated liability for improper use cannot be overstated.

Globally, security and privacy of e-mental health tools have been identified as presenting multiple policy concerns, including:

- confidentiality
- patients' access to their health information
- data protection and security
- malpractice
- intellectual property
- product liability and jurisdictional problems
- risk management
- licensing
- consent and capacity

Federal and provincial privacy policies and standards

A policy for the protection of individuals' personal information is shared across federal and provincial/territorial jurisdictions. Federally, two major acts govern the collection, access, and use of personal details:

- 1. The Privacy Act protects an individual's right to access and correct the personal information the Government of Canada collects, uses and discloses in the provision of federal services (e.g., old age pensions or employment insurance). The Privacy Act only applies to federal government institutions listed in the Privacy Act Schedule of Institutions.
- 2. The Personal Information Protection and Electronic Documents Act (PIPEDA) sets out the ground rules for how private sector organizations collect, use or disclose personal information in the course of commercial activities across Canada. It also applies to personal information of employees of federally-regulated works, undertakings or businesses (e.g., banks, airlines, and telecommunications companies). PIPEDA does not apply to organizations not engaged in commercial activity. As such, it does not generally pertain to not-for-profit and charity associations.

Each province and territory has its own public sector legislation.

Some have specific legislation around health information that must be protected, practices to be followed by those accessing, collecting, or disclosing personal health information, and individuals' rights to access their personal health information. (Contact your provincial ombudsman to learn more.)



Regulation of medical devices

Regulation in health care ensures the safety and effectiveness of health devices. In Canada, issues concerning safety rests with Health Canada, while professional bodies and other organizations determine device effectiveness.

E-mental health interventions – especially apps – can be considered health devices.

In 2017, 325,000 mobile health-related apps were available [57], most marketed directly to patients. This is challenging for regulators; on one hand, they do not want to stifle innovation, but on the other, they have responsibility for ensuring such devices pose no harm.

<u>Medical devices</u>, as defined in The Food and Drugs Act, include a wide range of health instruments used in the treatment, mitigation, diagnosis or prevention of a disease or abnormal physical condition.

Health Canada's Medical Devices Bureau of the Therapeutic Products Directorate (TPD) is the national authority that monitors and evaluates the safety, effectiveness and quality of diagnostic and therapeutic medical devices in Canada [58].

All medical devices are grouped into one of four classes, with Class I devices presenting the lowest potential risk (e.g., a device that monitors weight to encourage healthy living) and Class IV devices presenting the highest potential risk (e.g., pacemakers).

Prior to selling in Canada, manufacturers of Class II, III and IV devices must obtain a medical device licence. Although Class I devices do not require this licence (they are monitored through establishment licences), they are expected to comply with regulations and are subject to enforcement by Health Canada.

If you or a patient have specific questions about the medical device status of a given tool, contact the <u>Medical Devices Bureau</u> (http://www.hc-sc.gc.ca/contact/dhp-mps/hpfb-dgpsa/mdb-bmm-eng.php).

Professional policies and standards

Professional associations and regulatory bodies (e.g., Canadian Counselling and Psychotherapy Association, Registered Nurses Association of Ontario, etc.) are responsible for developing policies that govern the collection, use, and disclosure of personal health information and the use of technology in delivering mental health care.

These policies delineate profession-specific guidelines that the associations' accredited members must adhere to. Practitioners who communicate personal health information electronically need to keep in mind that they are governed by the same legal and professional standards that would apply in other professional settings. And as technology allows us to reach people instantly around the globe, there are important professional considerations that must be made when treating patients in different provinces and time zones.

Contacting your professional association about e-health regulations or practice guidelines will help keep patients and families safe, and will safeguard against liability.



Organizational policies

Although federal, provincial/ territorial and professional policies guide mental health staff in the acceptable use, collection, and dissemination of personal health information, how these policies are enacted vary.

Depending on the organization (community health care centre, private practice, hospital), different policies may govern the use of e-mental health tools and services for different employees. Staff should be informed of the risks associated with each form of electronic communication and be trained to follow the policies and procedures of their organization.

Practitioners working in private practice should establish policies and procedures for using electronic communication and digital tools and make them known to patients and clinic staff.

Some general policy areas that organizations need to address include:

- compliance with the applicable legislation, regulations, and standards
- outline of information considered to be private
- passwords and other security measures
- systems and processes for handling and protecting health information (e.g. backing up electronic health information in the event of a system error)
- e-mail, texting, and social media use
- special circumstances where breaching of confidentiality is necessary (e.g., involving child protection services)
- access rules
- how inappropriate or unauthorized access will be handled
- off-site access and use of personal devices
- 'go-to' people in case of problem
- penalties for failing to comply with the policies

A patient's informed consent to e-communications should be obtained and documented, either through a notation in the patient's medical record or by a signed consent form or terms of use agreement. And even when consent is signed, practitioners should still document that a discussion took place around electronic communication's risks and limitations.

Practitioners need to keep abreast of advances and be informed about privacy and security issues related to their jurisdiction and practice environment. If you are unsure about the implications of using a particular e-mental health tool, a few practical questions to consider include:

- Is the communication within the circle of care?
- Is explicit (written) consent of the patient required?
- Is the information secure (encrypted)?
- Is your device password-protected?
- What are the relevant regulatory standards?
- Is only essential information being shared?
- Is in-person communication more appropriate?

E-mental health professional development plan

The deployment of e-mental health technology is accelerating, and this has outstripped discussions around the skills and competencies needed to successfully utilize technologies in the context of mental health care practices [46, 59].

To ensure these advances are translated into a service context, health care organizations and individual practitioners must commit to training on the latest tools and methods. This will accelerate the evolution of health care and affirm the acceptance of technology.

Emphasis on professional learning plans that incorporate e-health skills has been growing due to several factors [60]:

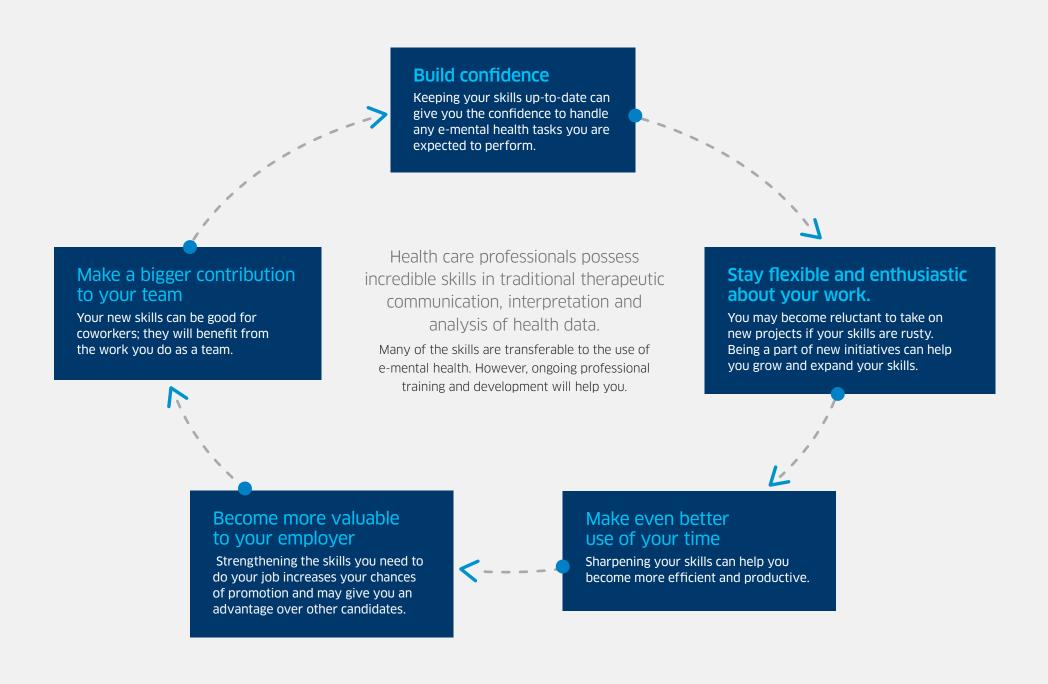
Practitioners are leading longer professional lives and need to update their skills

- The global mobility of patients means adapting to new contexts
- Accelerated proliferation of new knowledge. new technology, and techniques
- Increased expectations of health practitioners and the services they provide
- Funding concerns around the public healthcare system
- Complex health care environments that include multidisciplinary teams
- Increasing requirements for measures of performance



Despite the increased emphasis on ongoing professional learning. a variety of barriers must be overcome [61-63]:

- Practitioners' workloads mean less time is allocated to learning
- Underfunding
- Improperly defined commercial sponsorships
- Noncompliance with best practices to design, develop, implement, and evaluate interventions
- Biased education and conflicts of interest
- Lack of clear responsibility and roles for offering professional learning opportunities
- Effective assessment of e-health learning activities to gauge cost-effectiveness
- Coordination of all stakeholders



Tips for a good e-mental health learning plan

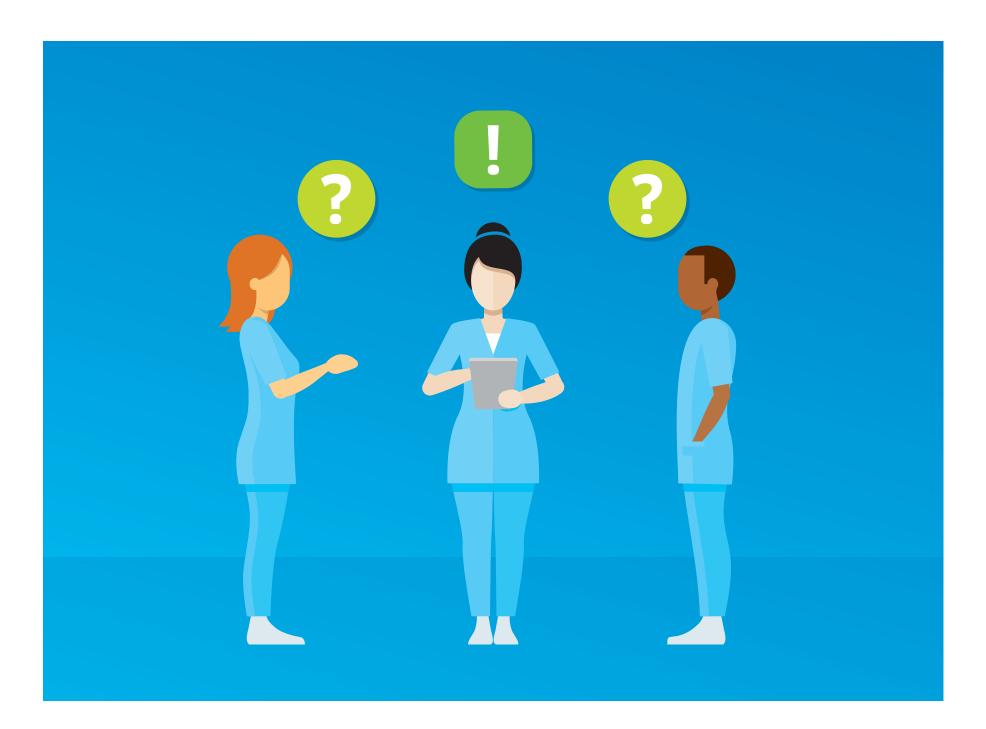
Professional development takes many forms. It can be informal or comprehensive. Whatever the format, think about investing a little time into developing an e-mental health development plan.

- Talk with your manager or supervisor. Describe your goals and ask which skills would help you achieve them. Be frank about any time or financial constraints that you have. You might say, "I'd like to integrate e-mental health tools into my work, but I'm not sure whether it would be best to focus first on the area of depression, anxiety or substance misuse. What would you suggest?"
- Talk with co-workers and colleagues who have strong skills that you lack. Share questions and ideas with them about how they got where they are with e-mental health implementation. Staying in touch with colleagues from previous jobs can also help you determine what skills you should strengthen.
- Seek advice from a mentor outside of health. care. Ask about the skills a person uses regularly and how they acquired those skills. If you do not have a mentor, talk to someone who currently holds the type of position you would like to have in the future.

Where to access e-mental health professional development

- Community-based adult education **programs.** These programs usually allow you to take night or weekend courses at a high school, public library or elsewhere for a modest fee. They are less expensive and less time-consuming than classes at most universities and colleges.
- Online courses and webinars. Online courses range from brief workshops and tutorial videos to programs that let you obtain degrees from accredited institutions. Many teach e-health planning, medical informatics, e-health leadership or data analysis. If you are interested, look for courses on reputable sites, such as those run by respected universities, companies, or professional associations. Open Online University Courses (OOUC's) may be a good starting point.
- Private teachers and tutors. For much less than the cost of a college course. you may be able to hire a student or professional consultant to teach you at your home or office. Your tutor can tailor lessons to your needs so that you are learning exactly what you want to learn.

- Reverse mentoring. One of the most rewarding ways of keeping your skills up-to date is reverse mentoring - developing a strong relationship with a colleague who provides mutual coaching and support. Each of you teaches the other something you know well.
- **Seminars and workshops.** Professional organizations, local colleges and companies often provide one- or two-day workshops geared toward teaching new skills or honing existing ones.
- Publications. Some skills can be learned through self-help resources available online or at bookstores and libraries. You may also be able to stay up-to-date on some standards and new findings in your field by reading magazines, newspapers, and newsletters from professional or trade associations
- National or international conferences for professional associations. Almost every industry has at least one national or international organization that includes information on e-health on its website and conduct conferences or webnairs on this subject to create awareness on lastest updates.





Mini-case scenario

Ms. T is a recently graduated mental health nurse. Ms. T knows that professional development is mandatory for maintenance of registration as a nurse and wants to start her career off on the right foot. During her training Ms. T had been mentored by a nurse who integrated Internet-based cognitive behaviour therapy (iCBT) in her work with young people dealing with anxiety.

Ms. T was keen to bring this and other e-mental health tools into her new role at an urban community-based clinic which serves a lot of young professionals and families.

Knowing that Ms. T. considered herself a bit of a "techy," her supervisor recommended a virtual community of practice (CoP) about e-mental health. Ms. T was excited to connect with other nurses and keep her skills current and bring new innovation to her community.

After a few months in the CoP, Ms. T found she was increasingly being asked to provide opinions on different apps and e-mental health tools, troubleshoot technical issues, direct other members to resources and information. 4 of the group members left the group within the first month. Ms. T became discouraged that she was spending so much time helping colleagues implement new e-mental health tools that she wasn't advancing her own.

She had hit a lot of roadblocks at her new clinic about integrating iCBT and a lot of patients were coming for appointments showing her apps that she knew were not based on good evidence. She had been hoping to get guidance from her CoP members on how to develop a proposal for the clinic and recommendations for clients. Although her group was not that of supportive her as they didn't have much examples to give her and didn't have enough technical knowledge to help her develop the proposal. After being in the CoP for 6 months and not having achieved her goal to roll out iCBT in her clinic, Ms. T went to her supervisor for advice.

This case example was informed by experiences described in Shachak and Borycki (2017) [63].



Reflection

1. If you were Ms. T would you stay in the CoP? Why/why not?	1. Complete a self-assessment on your own computer skills (Appendix 6)
2. How are "techy" and highly computer proficient staff members like Ms. T in your current practice supported? Relied on? What is the best way to deal with varied levels of technical competency?	2. Conduct a rapid SWOT brainstorm about your current e-mental health beliefs (Appendix 7)
3. What e-mental health professional development activities would you decline or likely not participate in? Why? 4. What would be your first step to learning more about using e-mental health?	3. Consider your typical communication role/style in conversations, and how this might impact (positives and negatives) your online communication with patients. What will you need to keep in mind to overcome those challenges?
	4. Practise mapping SMART e-mental health focused goals (Appendix 8)
5. If you were the supervisor, what recommendation would you make to Ms. T about advancing her e-mental health skills and practice objectives?	5. Rely on your professional and/or trade associations to learn the lesson from other settings
	■ 6. Become familiar with the privacy protections, including patient privacy protections and practitioner liability protections, found in your provincial health regulations or your professional association
	7. Talk to a prospective e-mental health vendor about their features to safeguard patient privacy
	8. Sign up for a webinar or course on e-health
	9. Attend an open course or Massive Open Online Course (MOOC)
	10. Use a training checklist to track your skills (Appendix 9)
	11. Review <u>best practices for social media use</u> for professional purposes

Action activities



Linking resources

E-health in Canada Current Trends and Future Challenges	
• Public health use of digital technology to advance health equity	
How to develop digital literacy	
E-health solutions adopted by RNAO	
E-health literacy demand and barriers	



Engaging patients in e-mental health

Objectives

- Challenge prevailing myths about what patients think about e-mental health
- Identify practitioner role and impact on patient engagement with e-mental health
- Understand stages of patient engagement and how to support patients in using e-mental health



What we think we know about e-mental health



People do not want to use digital services for mental health care.

- Digital health offers important opportunities for advancing care for many people, especially youth. The opportunity to introduce online interventions in mental health comes at a time when traditional mental health services are under-resourced and struggling to meet demand in many jurisdictions.
- For its 2016 Connecting Patients for Better Health report, Canada Health Infoway surveyed 6,000 adults. Seventy-seven per cent of respondents said digital health improves knowledge of their health, 69 per cent said it improves their confidence in self-management of their health and 74 per cent said it supports more informed discussions with their doctor [65]. Also, in a 2016 study on the use of telemedicine in Ontario, researchers found that 62 per cent of utilization was for mental health and addictions services [66].

Only young people want to use digital services.

- Canadians are very connected;
 88.5 per cent of Canadian
 households have internet access. As per a 2016 Statistics Canada survey,
 96 per cent of Canadians under the age of 45 use the internet every day.
 And of those aged 45-65, 75-85 per cent use digital services on a daily basis [67].
- The average age of members using Big White Wall, a United Kingdombased digital mental health service that focuses on peer support for adults, was 37 years and eight months. Just 18 per cent of users were aged 16-24 years [69].

Mobile apps are the biggest game changer.

- Eighty per cent of people with two or more chronic conditions track a health indicator. A huge number of tracking apps (sleep, medication, mood, activity) are available on the market to support patients in that process. However, most health apps are downloaded and used only once or twice more [70-71]. They might be available but that doesn't mean they are consistently used.
- Patients' use of apps is influenced by many factors, including comfort with a particular device, level of concern over security and privacy and level of encouragement by trusted individuals (i.e., health providers).
- Don't assume apps are what patients prefer.

Myth

Patients want the most innovative features and apps.

- For adults who track health indicators, 49 per cent keep track in their heads, 34 per cent use paper records and 21 per cent use some form of technology [72].
- The message is clear: knowing your patients is paramount in selecting the appropriate tools to engage them. For many, more bells and whistles, integration with other devices or advanced analytics and reporting may not be value-added [73].

Myth

Providers need a full-range of services to get started with e-mental health.

- With so many tools available. it is possible to identify a range of tools for immediate implementation.
- · While creating momentum and committing to change is important, the process should be guided by direct input from patients. Starting out, you do not need to have a full complement of tools that meet the needs of all patients, treatments, conditions [74].

The impact of clear endorsement

Positive patient-clinician communication is essential for patient-centered care.

Patient-centred care has been associated with increased satisfaction, trust, adherence to prescribed therapy and better health outcomes. People who are involved in treatment decisions have improved physical and emotional health, daily activities are easier to perform, the severity of symptoms are reduced and there are enhancements in clinical markers [75-77].

As a result of effective e-mental health communication and engagement, you will succeed in:

- enhancing shared decision making with patients and families
- building trust among staff, patients and the public
- creating better solutions and outcomes for patients
- providing feedback on how engagement has fed into the decision-making process, ensuring legal responsibilities are understood and met

Without a coherent approach to communication and patient engagement around e-mental health, you risk:

- creating mixed messages, particularly from different members of the care team
- reducing clinical support and failing to create a clinically safe and sustainable care model
- missing out on supporting patients who could benefit
- failing to help patients understand the potential clinical benefits of the service change
- not meeting legal or regulatory duties

Research shows that patients need the clear endorsement of e-health tools from the healthcare system but practitioners are not always clear on their role in promoting digital health tools [78, 79].

From the patient's perspective, health care professionals legitimize e-mental health tools and motivate them to adhere to e-mental health treatment. Patients are more likely to use e-mental health if they have positive expectations about the treatment, belief in the credibility of the program and a feeling that the benefits of the treatment outweigh the costs

Strategies for engaging patients in e-mental health

Technology surrounds us. But not all patients will embrace e-mental health. Patients might drop out of e-mental health interventions for the same reasons they drop out of face-to-face therapy. Some people dislike the lack of therapist contact inherent to e-mental health interventions. Getting started with e-mental health requires you to recognize diversity, identify as best you can the potential barriers and plan the process to minimize barriers where possible.

The level of engagement with patients around e-mental health can range considerably. Five increasingly integrated phases of engagement have been proposed [80]: "inform me;" "engage me;" "empower me;" "partner with me;" and "support my e-community."

Tips for each phase are provided in the sections on next page.



FIG. 3 | Levels of engagement

Inform

Attracting patients to e-mental health tools via online information and other media.

Engage

Providing or recommending an e-mental health tool to a patient for a specific purpose.

Empower

Helping patients create efficiencies in their self-management. Supporting patients to track and share their progress.

Partner

practitioners or multiple care environments can communicate via e-health tools.

Support

Promoting a practice environment where "the client defines their e-health community."



[1]

Inform me

- Promote e-mental health via posters, flyers, waiting area television screens, social media, notice boards, email, personal letters, fact sheets, magazines.
- At the end of a clinical encounter with a patient who uses a smart phone, ask, "Do you use health apps, and if so, which ones and why?" Advise those patients not yet using apps about one that might be useful to them.
- Share information about apps with other health professionals and see if they have apps they use themselves or recommend to their patients.
- If your practice has a website or you are active on social media, consider providing information on e-mental health tools.
- Host a community information session. This
 would provide an opportunity for patients to
 interact with people informally on a one-to-one
 basis, allowing a personal connection, detailed
 information and conversation about specific
 e-mental health concerns.

2

Engage me

- Discuss with patients how much you will be involved in the delivery of e-mental health treatment, and outline the support you will provide.
- Outline the schedule for follow-up and present the plan for alternative or additional referral in the event e-mental health is not suitable or effective.
- Periodically ask patients how the tool is working.
- Providing additional support might help people to stay engaged in e-mental health treatment. This might be as simple as providing regular reminders to continue use of the program.
- Provide opportunities for patients to complete some tasks online (e.g., booking appointments, completing screening questions).

Empower me

- Relate the computer or other devices to the patient by using terms such as "your record" or "your chart" as you log on and access patient information.
- Invite the patient to view their electronic data with you (e.g., graphic screens of specific results).
- Use secure messaging to communicate electronically.
- Use online quality, safety and patient experience ratings to give patients opportunities to advocate and express their needs and experiences.



Partner with me

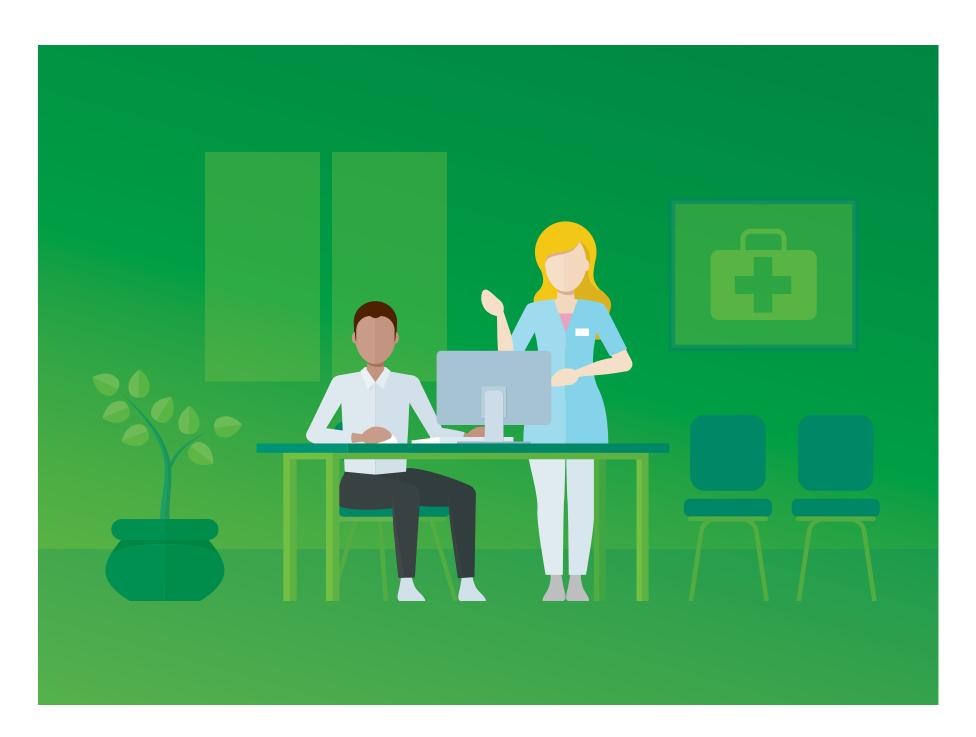
• Connect patient records to public health reporting systems and use electronic solutions to coordinate care across primary, specialty and acute care providers.



Support my e-community

- Share information among providers and non-provider members of the patient's care team, while granting patient access to privacy controls.
- Provide online community support or organize an online peer-support program.
- Provide opportunities for e-visits.







MODULE

Mini-case scenario

The Ustawi is a community meeting place focused on supplying resources and opportunities for all individuals in their diverse community to enhance their quality of life. One aspect of their work is to help visitors navigate the mental health care system and to advocate for better conditions in the community to help people build strong supports for mental wellness.

The Ustawi has two types of clientele; visitors who come of their own accord and visitors who came on referral from primary care providers, local schools, social workers, etc. Unlike a medical clinic, personnel at Ustawi do not have an obligation to document visitors in an electronic patient record, thus all visitors have the right to be anonymous.

The Ustawi leadership team has recently been evaluating the activities and health information they offer in print and electronic media. These resources are often used for individual health counseling on lifestyle related health problems like stress, substance abuse, physical inactivity, chronic diseases. The Ustawi also offers group activities such as: open public lectures, 'mini mental health retreats' and a resilience building after-school program for children. A computer in the centre provides

access to free, trustworthy internet-based health information sites and self-administered lifestyle tests. All activities are open to all community members free of charge. Very few of the visitors have access to private insurance and rely heavily on Ustawi to help them locate and access free or low-cost resources.

The lead team informally circulated a short survey to staff, visitors and referring agencies about the e-mental health resources being used and recommended and how visitors were using them day-to-day. Not all staff filled out the survey. Feedback was collated and everyone met as a group to prioritize next steps.

They came up with 5 "problem areas" they wanted to improve on to better inform, engage and empower visitors via e-mental health.

Evidence-base

It was noted by several staff members that while they were recommending a lot of websites, online screening tools, apps and online programs, they hadn't been applying any kind of evaluation about if they were based on good evidence.

2 Social media

The community centre facebook group was referenced by a lot of visitors in the survey. They saw it as a helpful place for them to get resources and connect with others but mental health wasn't a topic often talked about in the group. Visitors suggested better use of social media for communicating about mental health topics and resources.

3 Self-monitoring

Staff had done a quick count of how many of the resources were informational/educational and how many were helping visitors actually build more helpful behaviors and habits in their daily lives. A really quick tally showed about 80% of the tools they were offering and recommending were informational. Counselling and group programs at the centre often encouraged people to self-monitor, keep a diary, record information but rarely provided specific apps or online programs to help people do that.

4 Access

Many of the visitors were thankful for the computer in the centre as they did not have access to a computer at home. Staff noted that demand for that computer was high especially on the weekends and evenings. With only one computer not everyone could access information when they wanted to. Visitors almost unanimously commented on the survey about needing more computer access.

Culture and Language

Ustawi has a very diverse community membership and almost all of the resources that were recommended were in English and required fairly good reading and numeracy skills. Some of the visitors has written on the survey that the resources didn't reflect the challenges they face to access new technology and often recommended things that were culturally insensitive or inappropriate.

The leadership team was committed to meeting the needs of their visitors and addressing their concerns as quickly as possible. They prioritized actions they could take in the short term and those that would require larger budgets or planning to implement.



Reflection

- For each of the 5 problem areas can you identify one action that could be taken to move Ustawi towards greater engagement with e-mental health?
- Which of the 5 implementation problem areas do you see at the biggest challenge? Why?
- What do you see as the positives and negatives of the centre's strategy to gather information? What would you have done differently?
- What kind of follow up should the Ustawi team do with visitors at this point?



Action activities

1. Look at the media profile of your current practice (website, social media, etc.). How can it be leveraged to increase your professional profile around e-mental health? 2. Check in with patients about their interest, preferences and skill level around e-mental health (Appendix 10) 3. Update or create an e-communication policy for working with your patients (Appendix 11) 4. Create an e-mental health FAO to review with patients. Keep it visible in your meeting space (Appendix 12) **5.** Conduct an inventory of the e-resources you currently recommend or refer patients to. Do they need to be updated? Are all the links still active? **6.** Ask three patients for recommendations on tools, websites, apps or programs they have found useful 7. Ask three colleagues about tools they recommend to patients



- Professional guidelines for electronic communication
- Top 10 tips for using social media in professional practice
- Canadian Foundation for Healthcare Improvement- Patient Engagement Resource Hub
- Patient Engagement Tools and Resources of Health Quality Ontario
- Alberta Health Services
- Canadian Institutes of Health Research
- E-Health Conference
- E-Mental Health Conference
- Ontario Shores Mental Health Conference

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Leadership for e-mental health innovation

Objectives

- Understand how forming a common goal or vision for a team, department or organization will contribute to the overall aim and success of e-mental health
- Understand the need to build and maintain relationships with stakeholder groups and professional colleagues
- Understand how disruptive and experimental policy can promote better care for patients



Develop a compelling but realistic vision

Mental health systems across Canada are undergoing dramatic system transformation. This requires e-leaders capable of initiating and guiding e-mental health innovation at all levels (individual, peer-to-peer, clinic/organizational, regional, provincial, etc.) [81].

E-leaders develop a compelling vision for how to improve e-mental health. E-leaders do not have to hold senior management positions; they are most often practitioners who through trial and error have developed skills and share those lessons with others. E-leaders help others establish e-mental health practices by [82]:

Creating transparency. Sharing information broadly enables faster decision making. E-leaders believe in the transparency of information, and of their own leadership. They are open about their personal limitations and encourage others to be self-aware, and they use this understanding to improve performance.

Fostering resilience. It is difficult to let go of a project you are passionate about or have invested a lot of time in. E-leaders model discipline and encourage others to hold ideas loosely. They respect the evidence, manage negative emotions and find the energy and enthusiasm to move on if something does not work.

Doing the work alongside. E-leaders do not watch from the sidelines. They are purposeful in modelling themselves and constantly find new ways to break through the burdensome layers of oversight, bureaucracy and control mechanisms that can impede innovators who have novel ideas.

Cultivating discipline. Effective e-leaders understand that discipline is as important as creativity in making innovation work. They help keep focus and ensure everyone learns from every experiment before moving on.

The path to great e-mental health leadership is not only a question of best practice, but requires fresh thinking, experimentation and adaptation [83].

Clinical leadership and team working

E-health projects draw staff from a variety of organizational units: clinical, managerial, IT, procurement, etc. Effectively integrating new technology means finding ways for different skill sets, priorities and knowledge bases from these units to work collaboratively, quickly and strategically [84].

If you are part of a team leading e-mental health implementation:

- Recognize and articulate your own values and principles, understanding how these may differ from those of other individuals or groups
- Recognize and respect the roles, responsibilities, interests and concerns of colleagues and stakeholders, and manage these effectively
- Adopt a team approach, acknowledging and appreciating efforts, contributions and compromises
- Recognize your own communication and presentation style and when this needs to be adapted to your audience
- Take responsibility for exploring difficult issues and resolving conflicts
- Recognize the need to respond to requests within shortand long-term timescales
- Adopt a positive attitude to problem solving and decision making
- Consider the resource implications of decisions and the potential impact on other services and responsibilities

Champion disruptive innovation

Agile policies can help practitioners and patients embrace the ever-accelerating digital transformation. Waiting for innovation to trickle down has historically not resulted in smoother or more effective health service delivery. E-mental health innovation requires the motivation to not only change existing services, but to use the improvements to drive future growth and development [85].

How can e-leaders champion disruptive e-mental health innovation?

- Challenge outdated assumptions in your organization even if it means exposing disagreements
- Monitor developments in other e-health markets and anticipate the need for change
- Review existing rules and regulations critically rather than seeking to extend them
- Open a dialogue with innovators (e.g., peers, service providers, industry)
- Recognize the role of industry in advancing what is possible
- Utilize mutual recognition (industry, government, individual) to disrupt silos and hear from different stakeholders

Know your champions

Practitioners don't often get to pick who they work with or what kind of skillset new employees bring to a team. As you work to integrate e-mental health tools and services, look around your professional network to identify individuals who can champion innovation with you.

Who has the authority, decision-making ability and stability within their position(s) to make changes [86]?

Considering these variables may be helpful when thinking about the short- and long-term needs of implementing e-mental health services. Having a backup team or group of champions is one way to limit the potential partnership disruptions due to staff turnover or other changes within the institution.



Policy experimentation

Policy is essential to enabling e-mental health innovation [87].

Although governments and professional associations do not generally create marketable innovation directly, they play a critical role in creating an environment that fosters collaboration among stakeholders. As a result, innovation policy should focus on ensuring the system stimulates advances and uses them to create value.

Engaging in policy experimentation means that policies are developed with input from stakeholders and are based on good practices from within and outside the community. Policy should be flexible, innovative, and based on emergent theory and ideas. This is especially true given how rapidly the information and communications technology (ICT) sector evolves.

Practitioners have a critical role in shaping new policies. As you look to be more involved in shaping them in your workplace, professional associations and provinces, keep in mind that health policies are more actionable when they focus on the following [88]:

Patient needs

Policies should focus on

aiding innovators and early adopters to build and discover improved processes, products and services. At the core of this is patient-oriented implementation. Although politics can never be totally removed from the policy-making process, it should focus on stakeholder needs rather than political priorities.

Private sector partners

The work of entrepreneurs and the private sector should not be excluded from innovation policy within a public healthcare system. Policy-makers should not use policy to control or dismantle emerging innovations to preserve the status quo. but instead use it to create an environment that encourages positive uses of emerging technologies and discourages negative ones.

Efficient resource utilization

Policy-makers have to balance limited resources with a need to deliver systemic impact. As a result, efficient use of resources is paramount; policies should create the most impact for the least investment. For example, public investment can be fully exploited by pairing it with private sector money and strategies to defray costs.

Replicable

Policies should be created and documented in such a way that, if successful, they can be used to develop other policies. These practices can be scaled upward by migrating a national program to the regional level, downward by creating local parallels to national projects, or horizontally by transitioning from one region to another.

Common language

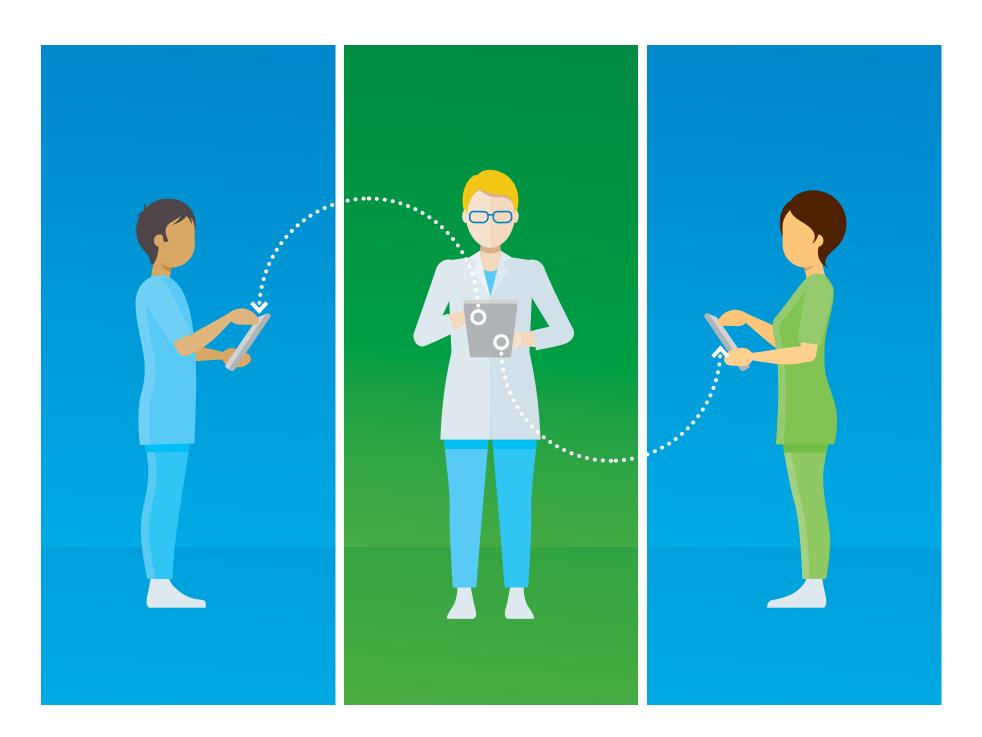
Good policy requires engaging stakeholders who understand one another's views and needs. Dialogue, information sharing and common language are elements in developing this kind of understanding for e-mental health.

Concrete action

In order to be effective, any vision of innovation-supporting policy should be coupled with concrete action. Stakeholder engagement will ensure project leadership remains closely connected to the primary needs it is meant to serve, and that they have a vested interest in ensuring its success.

Focus on good practices

All sources of knowledge and expertise, whether local or global, should be leveraged. Basing work on the experiences of successful projects and policies can help raise the chances of policy success by building on that expertise.





Mini-case scenario

TriWell is an e-mental health intervention designed to support person-centered communication. Once the patient completes a questionnaire (online before they arrive or on a tablet in the office before their appointment), the system creates an assessment summary that displays the patients' selected symptoms and distress, prioritized by needs for care and transfers this to the patient electronic medical record. Frontline mental health workers' can address the problems that matter most for each patient.

TriWell was pilot tested in a regional hospital. Mr. A, the unit manager at the hospital was impressed with the pilot results (reduced wait times, high patient satisfaction, faster clinic visits) and wanted to expand the use of TriWell for 3 satellite clinics. Staff communicated frequently between sites. Mr A's implementation plan included:

- Information folders.
- Kickoff meetings for the staff at each clinic.
- Group training for staff on how to operate the intervention and how to introduce TriWell to the patients, and
- Guidance for the staff and physicians on how to use the assessment summary of patients' symptoms in clinical practice.

Mr. A ensured that new employees at all sites received practical training in use of TriWell from staff who had already been at the workplace for a while. He regularly had TriWell on the agenda for their management meetings and spent considerable time reminding frontline staff to use it. The company that developed the software was local but didn't routinely provide training and support unless an issue came up.

Many staff at the hospital had concrete examples of how the program, had helped them reach their overarching goals of providing high-quality care for the patients by improving the patient-provider communication and improving the efficiency of care. However, a few of the staff and the physicians viewed TriWell only as a supplement to the existing follow-up and believed that the patients obtained what they needed anyway through regular care.

Fitting TriWell into the work practices at the clinics was more challenging than Mr. A thought. The staff willingness to change their way of working had varied. Frontline physicians wanted to be assured that TriWell was evidence-based. and many wanted to see the background publications supporting the program. One of the units decided to put off implementation as there was staff turnover and the biggest champion of the intervention had taken an emergency sick leave. This is the first major e-mental health implementation project Mr. A has managed and he is committed to seeing it through what he sees as "initial disruption".

This case example was modified from Varsi et al (2015) [89].

Reflection
 From your perspective, what 3 concrete steps could Mr. A take immediately to improve the implementation process at this stage? What 3 long term actions should he be thinking about?
 What are the biggest threats derailing this e-mental health implementation project? Could they have been avoided?
 What external resources and internal resources has Mr. A not fully utilized?
 What did Mr. A not consider in adapting the program from a hospital setting to a community clinic? How might that have impacted staff engagement?



Action activities

1. Establish and propagate best practice in the certification of e-leadership skills
2. Ensure e-mental health leaders represent diversity
3. Be willing to take on responsibility for governance roles on e-mental health
4. Be transparent about ethics, privacy and security issues; try not to contribute to digital distrust
5. Set high standards around technological skills when hiring staff and recruiting practitioners
6. Advocate for e-mental health expertise and human resource capacity in your professional organization
7. Attend local and national e-health events, conferences and meetings. Present, lead a panel discussion, organize a symposium or workshop
8. Do not forget to highlight e-mental health in your professional profile (e.g., LinkedIn, professional sites) so interested others can connect with you



Linking resources

Digital Health Week
Infoway: Managing e-Health Change
Digital health events and news
Digital communities
Broaden your knowledge about the large health innovation landscape
• E-health Ontario
Canadian Foundation of Healthcare Improvement

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Appendices

Readiness for e-Mental Health Self-Assessment

This is a self-check questionnaire to help practitioners assess their own readiness for e-mental health.



Implementation Project Checklist

This checklist aims to help you through launching the use of a new tool or service in your practice. Use it as a guide to keep your project moving forward.

Pre-launch

Assess needs and capacities

- Conduct a needs assessment identifying areas of greatest need (target groups and areas), and identifying existing initiatives, resources and services that address these needs
- Conduct an assessment of your organization's capacity to implement a new program with fidelity: assessing financial resources, organizational commitment, staffing, administrative system and community engagement

Select a program and make a final decision

- Search registries/databases to identify services with characteristics (key components) that match the needs of the community, target groups and areas, as well as the organization's capacities and resources
- Identify the factors or issues that might help or hinder effective implementation
- Choose the tool or service to implement or recommend for final selection

Establish an implementation team

- Establish a team leader with a clear role and responsibilities (ensure this person has sufficient time and resources to effectively oversee the process)
- Include individuals from different content areas with different skills
- Consider the inclusion of community members or other external persons (e.g., business leaders, other agencies) as team members
- Agree upon structure(s) for the team (e.g., steering committees, advisory committees, working groups)

Develop a communication strategy

- Describe the exploration process to key stakeholder groups
- Develop methods to promote exploration and assess engagement from several stakeholders/partners

Obtain and secure all resources

- Acquire needed materials (e.g., manuals, guides, tools, etc.)
- Plan for extra costs (e.g., equipment, external expertise, additional training, translation, etc.)



Identify and engage champions

Look for people within the organization and the community who are influential, respected, and committed to using e-mental health; these people must have the ability to identify problems that arise and to propose solutions to support and ensure success

Make structural and functional changes to the organization (as needed)

- Revise policies, schedules, space, materials, etc.
- Create procedures for dealing with fear and resistance

Determine the referral process and initial participant recruitment

- Establish a referral process and criteria for identifying the appropriate tool for a patient's condition or needs
- Train staff to use any new systems or equipment needed to implement the service
- Develop coaching and supervision plans for staff (i.e., professional development strategies)

Launch

Establish initial service implementation

- Implement key components and activities
- Encourage practical application of new skills and competencies, gradually incorporate new routines, adjust roles and responsibilities in connection with the new service

Manage the organization's culture and climate

- Set realistic goals and expectations regarding implementation progress, timelines, and the collection and use of the right data at the right time
- Develop a feedback process for identifying barriers and strategies to mitigate them (e.g., weekly meeting to identify issues, create plans, review results of past problem-solving efforts)
- Ensure maintenance of technical assistance

Maintain a data system to collect information and measure effects

- Ensure data systems are functioning for measuring and reporting outcomes and fidelity (monitoring fidelity implementation of the service)
- Ensure quality assurance mechanisms are functioning to evaluate use of data (assessing effectiveness and quality of service)

Review initial implementation challenges and facilitators

Examine the following areas: recruitment and selection, staffing and training, key components and activities of the service, coaching and supervision processes, data system, fidelity measures and reporting processes, outcome data measures and reporting process and communication strategies

Maintain a communication strategy

- Inform stakeholders of launch dates and activities (continue to build engagement)
- Ensure a feedback process is in place and functional

Post-launch

Continue to monitor and improve systems already in place

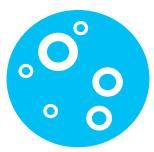
- Referral and recruitment of participants
- Staffing, training and booster training, technical assistance
- Service delivery key components and activities
- Organizational culture and climate
- Coaching plan and staff supervision
- Fidelity measures and reporting processes
- Outcome data measures and reporting process
- Quality assurance mechanisms
- Partnerships, collaboration and resources
- Communication strategies

Employ improvement processes

Address issues through the use of data to identify challenges and develop recovery plans, monitor them and assess results until improvement occurs

Address organizational response to drift

Adopt mechanisms/procedures to indicate when the service moves away from the original service, and ensure that corrective measures will be implemented as appropriate



Address service modification/adaptation

- Adjust the service to fit the specific needs of the organization or its recipients (without affecting key service components)
- Carry out adaptations carefully and systematically with the help of the developer(s) and with attention to both process and outcome evaluations
- Consider modifications/adaptations to help produce better outcomes only after the service has been implemented with fidelity
- Describe and monitor adaptations (performances measures and evaluations)



Workflow Checkup

The checklist below helps the clinicians to question themselves and make the necessary changes in the workflow by analysing all the major indicators which are required to implement e-mental health tools and further solve the issues and concerns, if any, from the provider or patients side. What problems or frustrations do people experience What happens if the process breaks down? in the current workflow? What complaints do you hear? Do you need a fail-safe mechanism? Where are the bottlenecks or time delays? Can some steps be done simultaneously? Where in the process are the opportunities to reduce Is there a more logical way to sequence the steps? costs or to achieve a higher return on investment from What skills are necessary to perform each step? e-prescribing? If more skills are required, can current staff be trained. Where are quality and safety problems (or potential or do duties need to be shifted to more qualified staff? problems) likely to occur in the current process, and how do you create changes improving quality and safety? Could someone with fewer skills perform this step? Would they need training or support? Have you been skipping any critical steps? Could this step be outsourced? Are all steps necessary? Are there areas of unnecessary duplication or redundancy? Is there any technology that would make this process more efficient or easier to do? Are you thinking outside How often do you have the to do above mentionned steps? the box? Is there an entirely different way to get this done? Are there areas that rely on an individual to remember Who do you know that handles this task very well to do something? Any process that relies on memory (an exemplar)? Can you study their workflow? is prone to error.

E-Mental Health Planning Canvas

This planning canvas tool can be used by clinicians and their teams to visualize key issues diagrammatically. It will help teams plan the implementation of e-mental health programs by identifying the resources required to build them.

Who will help you? PARTNERS	What do you need? RESOURCES	What do you do? VALUE
	How do you do it? ACTIVITIES	
What will it cost? COSTS		How do you interact? RELATIONSHIPS
Who do you help? PATIENT POPULATION	How will you keep it going? SUSTAINABILITY	How do you reach them? DISTRIBUTION CHANNELS

Workflow Mapping

Many industries use workflow diagrams as a helpful way to map new processes. By describing the set of tasks and their sequences, you can identify more easily where decisions need to be made. An overly simple example might be:

• conducting a follow-up appointment with a patient who has been using an online service with homework Start using a wearable fitness tracker • having a client use a virtual game to teach coping skills Go to online store Leave In your price range? Set-up **Purchase** preferences and settings

With a start point of "patient visiting your office", try mapping some typical e-mental health workflow scenarios, the tasks you and the patient would take and the decision-points along that

• prescribing a mobile app to track medication use

• having a patient complete an online screener or

assessment tool before their appointment

path. For example:

and symptoms

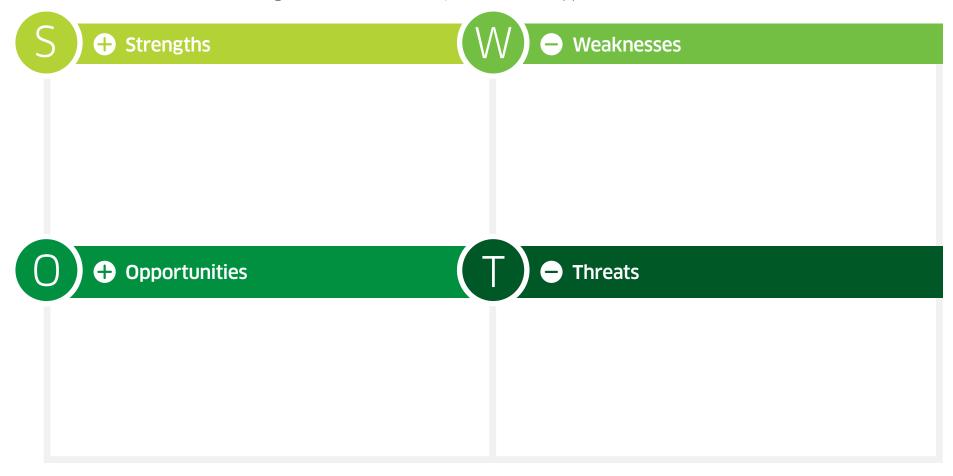
Computer Skills Self-Assessment

Here is a quick self-assessment of your own computer skills. 1 means not at all confident and 5 means very confident.

Computer Skills Assessment Questions	Con	fidence	Level		
1. Can identify basic parts of the computer system	1	2	3	4	5
2. Make selection from an on-screen menu	1	2	3	4	5
3. Use the computer to write a letter or essay	1	2	3	4	5
4. Able to edit, save, print or retrieve any Word document	1	2	3	4	5
5. Escape or exit from a program or software	1	2	3	4	5
6. Copy or paste any individual file or document	1	2	3	4	5
7. Able to use web browsers like Google Chrome, Firefox or Internet Explorer	1	2	3	4	5
8. Able to complete any online forms	1	2	3	4	5
9. Recognize a URL (i.e., web address)	1	2	3	4	5
10. Use back and forward buttons to move through webpages	1	2	3	4	5
11. Create bookmark or save a favourite website	1	2	3	4	5
12. Locate and click on links in webpage	1	2	3	4	5
13. Use a search engine to locate information on the internet	1	2	3	4	5
14. Download or save a file	1	2	3	4	5
15. Save an image to a file	1	2	3	4	5
16. Print or able to take a screenshot of a webpage	1	2	3	4	5

SWOT Brainstorm

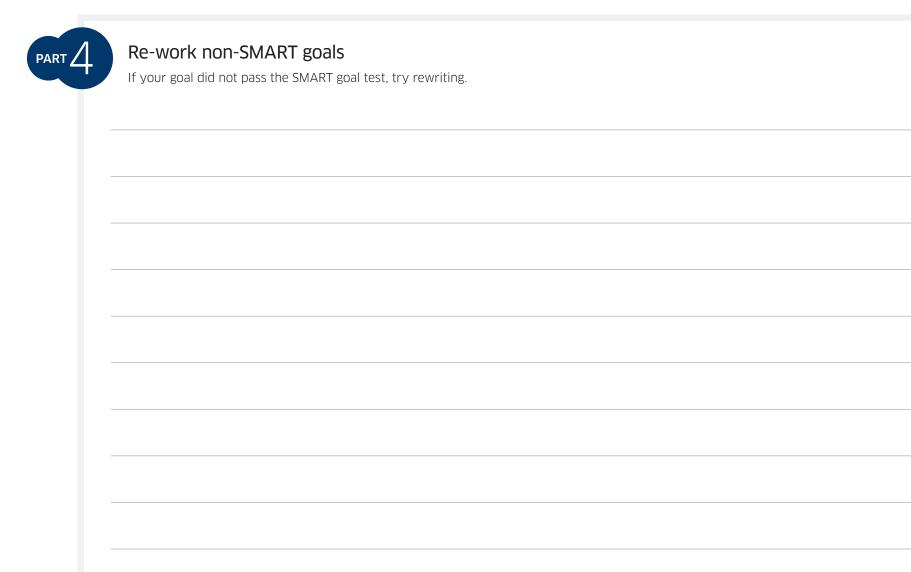
SWOT is an acronym for **S**trengths, **W**eaknesses, **O**pportunities and **T**hreats. Many health practitioners use these diagrams to help them plan strategically for new projects and initiatives. When you think about implementing a new e-mental health tool or program into your practice, what are your strengths and weakness in accomplishing it? And when it comes to launching a successful initiative, what are the opportunities or threats?



SMART Goals Worksheet for Clinical Staff

The secret to alleviating common project challenges is to set specific goals. S.M.A.R.T. goals are designed to provide structure and guidance throughout a project, and to better identify what you want to accomplish.

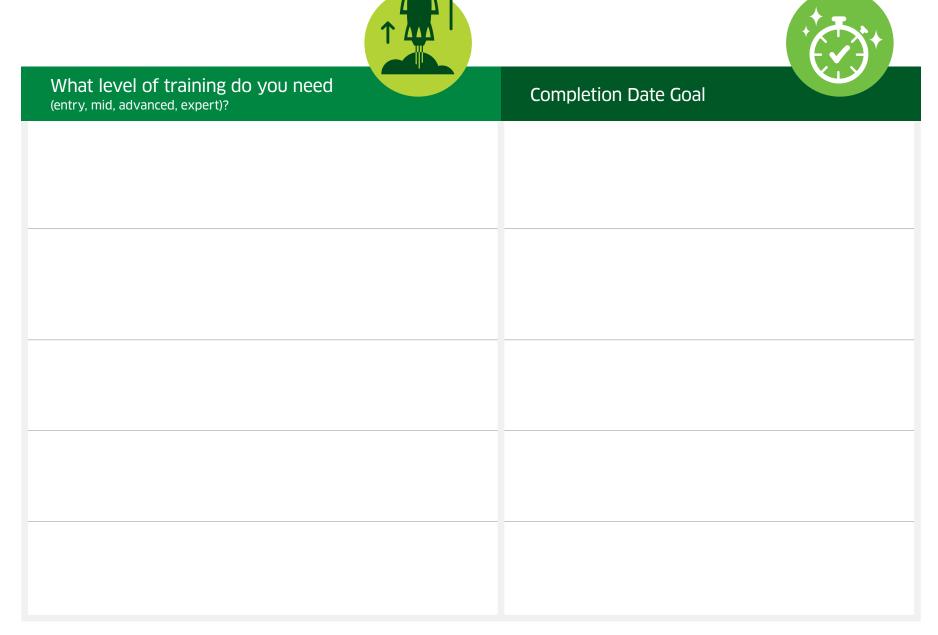
PART 1	List current e-mental health projects or initiatives	SMART goal test Confirm that your goal meets the SMART goal test below. Only by answering "YES" to all questions confirms that your goal is SMART.		×
		Is your goal	YES	NO
		Specific can details be identified?		
PART 2	Identify the goal	Measurable can it be measured (quantitative or qualitative)?		
		Achievable is it attainable?		
		Realistic can it be attained with correct resources/constraints?		
-		<u>T</u> ime-bound does it have a deadline?		



Training Planner

The sample list below can be used as a starting point to plan and track ehealth rolated training and skill dovolonment

related training and skill d		evelopment.		
Training Topics		Where could you access this training?		
 Compliance/Risk Management Privacy legislation Patient safety best-practices Professional licence requirements 	Copyright knowledgeData storage/patient records			
Communication • Electronic presentations • Email management • Videoconferencing skills • Patient engagement	Using icons and visuals (emoticons, rating scales)Professional social media use			
Informatics/Data Analysis • Website-navigation • Smartphone navigation • Creating graphs/charts	Interpreting research resultsCoding and billing processes			
IT infrasctructure Installing software Storage devices (USB drives, zip files, cloud)	Devices (wearbles/health sensors)Portals/EMRs			
Operations/Record Keeping • File management • Writing care protocols • Database skills	SpreadsheetsCoding and billing processes			



Patient Satisfaction Survey

The following questions can help you get high-quality feedback from patients about the e-mental health tools they are using. You can ask these questions or create a written survey that patients can complete quickly.

 What do you think about the quality of the e-mental health tool? What do you think about content of the tool - was it understandable? Were you able to get the support you needed on a timely basis through this tool? 	
of the tool - was it understandable? 3. Were you able to get the support you	
4. What major changes have you seen in your day-to-day work/life with the addition of this tool?	
5. What have been the biggest challenges using this e-mental health tool?	
On the scale of 1-5 (with 5 being strongly positive), how would you rank your overall experience?	2 3 4 5
Why?	

Informed Consent for **Electronic Communication**

This template is intended as a basis for an informed discussion. If used, practitioners should adapt it to meet the particular circumstances in which electronic communications are expected to be used with a patient. Consideration of jurisdictional legislation and regulation is strongly encouraged.

	Practitioners information
The Practitioners has offered to communicate using the following means of electronic communication ("the Services") [check all that apply]:	Name:
Email	
Video conferencing (including Skype,® FaceTime®)	
Text messaging (including instant messaging)	Address:
Website/Portal	
Social media (specify):	
	Email (if applicable):
Other (specify):	Phone (as required for Service(s)):
	Website (if applicable):
	Website (if applicable):

Patient acknowledgment and agreement:

I acknowledge that I have read and fully understand the risks, limitations, conditions of use, and instructions for use of the selected electronic communication Services more fully described in the Appendix to this consent form. I understand and accept the risks outlined in the Appendix to this consent form, associated with the use of the Services in communications with the Practitioner and the Practitioner's staff. I consent to the conditions and will follow the instructions outlined in the Appendix, as well as any other conditions that the Practitioner may impose on communications with patients using the Services. I acknowledge and understand that despite recommendations that encryption software be used as a security mechanism for electronic communications, it is possible that communications with the Practitioner or the Practitioner's staff using the Services may not be encrypted. Despite this, I agree to communicate with the Practitioner or the Practitioner's staff using these Services with a full understanding of the risk.

I acknowledge that either I or the Practitioner may, at any time, withdraw the option of communicating electronically through the Services upon providing written notice. Any questions I had have been answered.

Patient name:			
Patient address:			
Patient home phone:	Patient mobile phone:		
Patient email (if applicable):			
Other account information required to communicate via the Services ((if applicable):		
Patient signature:	Witness signature:		
Date:	Date:		

Patient FAQ Sheet



An e-mental health FAQ can be helpful for reviewing common concerns or questions from patients. It should be kept visible in the meeting or waiting space so that patients can read highlights about the e-mental health tool you are using in your practice. Some basic information to share:

What is e-mental health?

E-mental health is the use of technology to provide mental health care. These technologies can help you assess your mental well-being, track and monitor your mood or quality of life, or provide you with new knowledge and skills training to help you manage and cope.

Benefits of e-mental health?

E-mental health can be a convenient and flexible option for patients. You can access the support when and where you need it. Many of these tools are built on reliable and credible principles and have been shown to improve patients' lives. If you are curious about what tools might be a good fit for you, ask your health provider.

What personal information do I have to provide?

Most e-mental health tools are anonymous. Some programs require an email address so that materials can be sent to you. You should know that not all electronic communication is secure (text messages and emails are often not encrypted). You should never provide your personal information if you do not feel comfortable.

Do I need a referral to access e-mental health tools?

Most e-mental health tools do not need a referral. Many are available online at no cost (or accessed for a small fee). For some services, a referral is needed.

Can I use an e-mental health tool instead of visiting a mental health professional?

Many tools can support you in self-managing your symptoms and challenges, but your practitioner can help you decide which tools are appropriate and what level of professional support will ensure you are receiving the best care. You can share your e-mental health tool information with your provider so that you can work together to meet your mental health goals.

Who are the target patients for using e-mental health tools?

E-mental health tools can be used by anyone. Most people with mild-to-moderate symptoms or difficulties can benefit from them.

What computer skills will I need?

The people developing these tools are getting better and better at making them accessible and easy to use. Most require basic computer skills. Often a few practice runs are all you need to feel comfortable.

Glossary

Apps

Applications

CAMH

Centre for Addiction and Mental Health

CBT

Cognitive behavioural therapy

E-communication

Electronic communication

E-community

Electronic community

E-health

Electronic health

E-leadership

Electronic leadership

Email

Electronic mail

E-mental health

Electronic mental health

EMRs

Electronic medical records

E-visits

Electronic visits

FAO

Frequently asked questions

FFS

Fee-for-service

ICTs

Internet and communication technologies

IM

Instant messaging

iOS

iPhone operating system

Information technology

MH

Mental health

MOOC

Massive open online course

PC

Personal computer

PIPEDA

Personal Information Protection and Electronic **Documents Act**

Psych

Psychological

PTSD

Post-traumatic stress disorder

RNAO

Registered Nurses Association of Ontario

SM

Short messages

SMART

(S)pecific, (M)easurable, (A)ttainable, (R)ealistic, (T)ime-bound

SMS

Short message service

SWOT

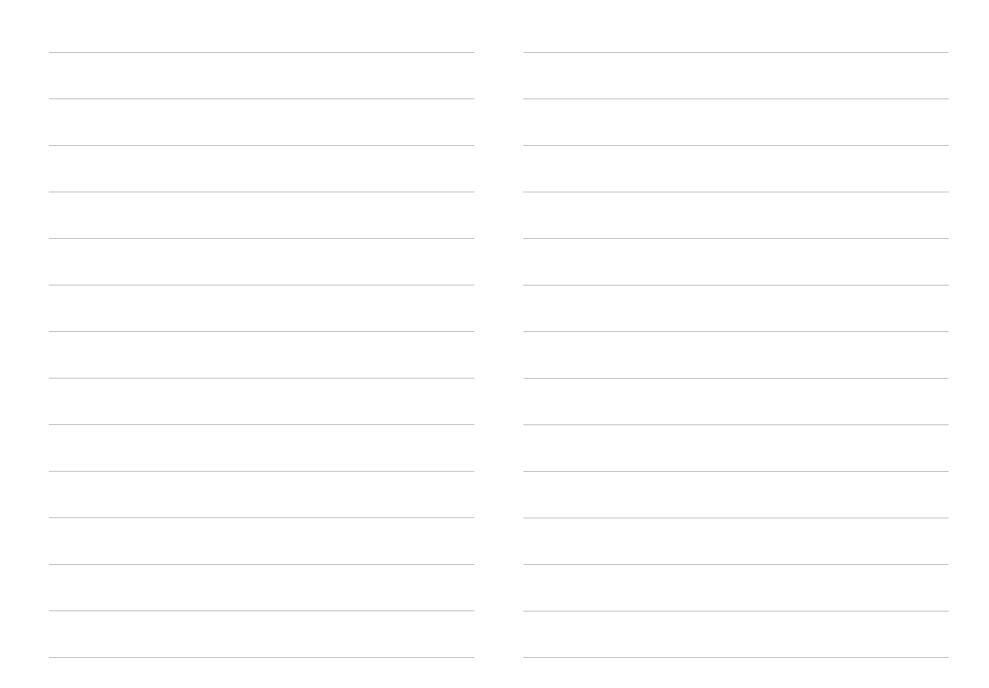
(S)trengths, (W)eaknesses, (O)pportunities, (T)hreats

TPD

Therapeutic Products Directorate

URL

Uniform Resource Locator





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Health Canada

Santé Canada



Mental Health Commission of Canada

Suite 1210, 350 Albert Street Ottawa, ON K1R 1A4

Tel: 613.683.3755 Fax: 613.798.2989

info@mentalhealthcommission.ca www.mentalhealthcommission.ca