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https://youtu.be/K4cHovS7bj8

Please scroll down this file to view a copy of the slides from the session.

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Leveraging Technology to Support Population Mental Health:

Strategies to Incorporate Digital Mental Health Tools into Practice

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CAMH Land Acknowledgement

Artwork by **Lisa Boivin**, member of the Deninu Kué First Nation in the Northwest Territories, interdisciplinary artist, bioethicist and health care educator.

Learn more about the artwork:

Acknowledgements

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LEARNING OBJECTIVES

1 Define digital mental health as it relates to/intersects with public health

2 Understand the benefits and challenges in accessing or using digital mental health tools and data from a population intervention perspective

3 Strategize methods that support successful use and adoption of digital mental health tools to support improvements to public health

4 Learn about and apply digital health frameworks, resources and guides into public health practice

1

Digital Mental Health & Public Health

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What is **Digital Health**?

Digital health *refers to the use of information technology, services, and processes to support healthcare delivery and outcomes*

Wearable Devices

Mobile Apps

Electronic Health Records

Virtual Care

Patient Portals

Artificial Intelligence & Big Data

Virtual Reality

Health Surveillance

Remote Patient Monitoring

What is **Digital Mental Health**?

***Digital mental health**, a branch of digital health, delivers timely, effective mental health services by using the internet and other related technologies.*

*Source: https://mentalhealthcommission.ca/what-we-do/e-mental-health/

Examples of Digital Mental Health Tools

Mental Health Apps

Phone or Text Crisis Lines
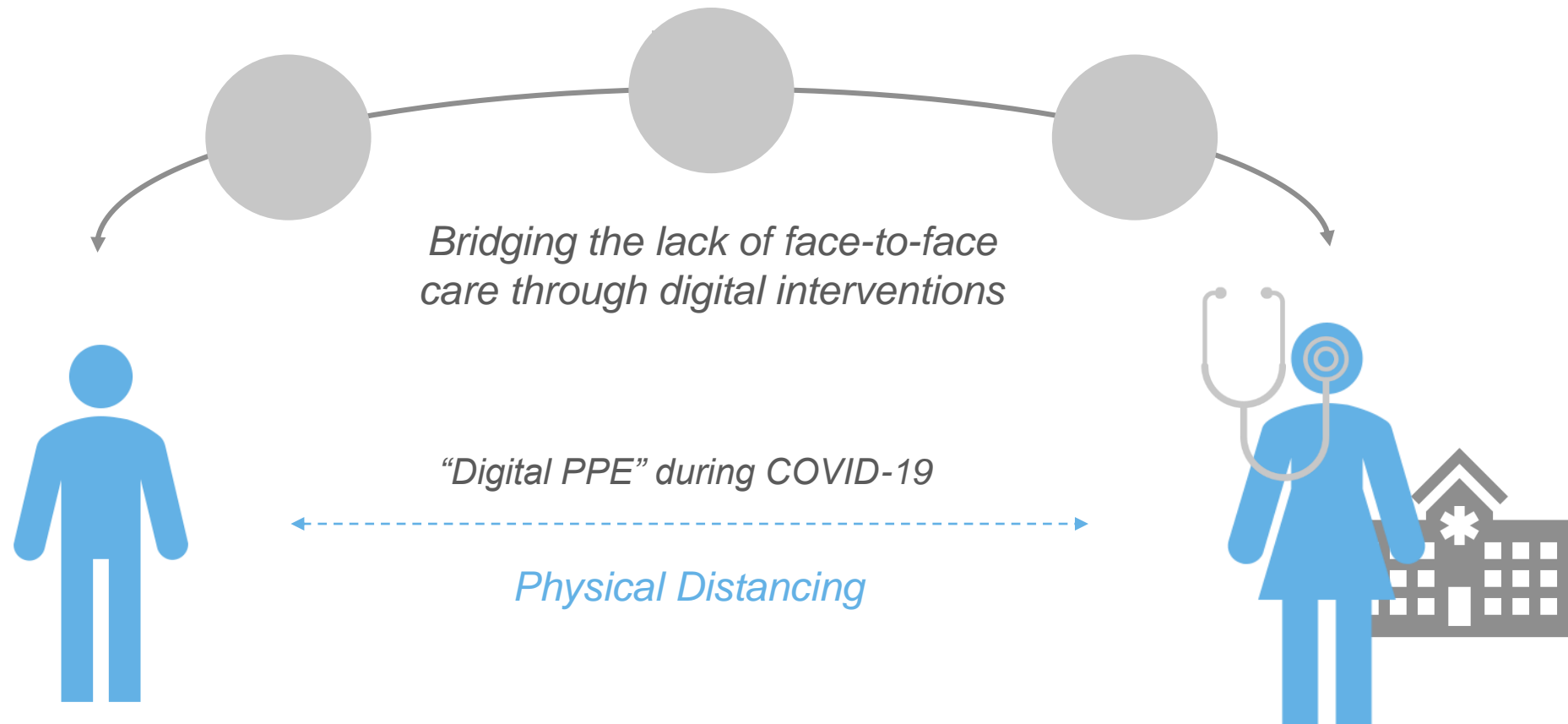
Virtual Courses or Internet Based CBT Programs

Disclaimer: These resources are not sponsored, nor do we have any affiliation with them.

Intersection of Digital Health, Mental Health & Public Health

Population Digital Mental Health Interventions: Applying public health approaches to mental health through digital tools[1]

Mental Health & Wellness

Digital Health Interventions

Population & Public Health

Digital Public Health: Integration of digital technologies into public health functions to maximize their health impacts.[2]

Source: 1) https://www.cpha.ca/public-health-approach-population-mental-wellness 2)https://pubmed.ncbi.nlm.nih.gov/34842555/

COVID-19 Amplified the Use of Digital Mental Health Tools

Bridging the lack of face-to-face care through digital interventions

"Digital PPE" during COVID-19

Physical Distancing

Based on your public health / clinical practice, can you reflect on or describe an example in which a digital health tool may be used to support care?

2

Benefits & **Challenges** of Using Digital Health Interventions to Support Population Mental Health

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Case Study 1: Digital Interventions to Support Population Mental Health in Canada During the COVID-19 Pandemic – A Rapid Review

Objectives

Purpose

In June 2020, we conducted a literature review to identify digital interventions to support population mental health during the pandemic.

Identify what is known about the effect of these digital interventions and for whom.

Identify barriers and facilitators to the use of these digital health interventions in practice.
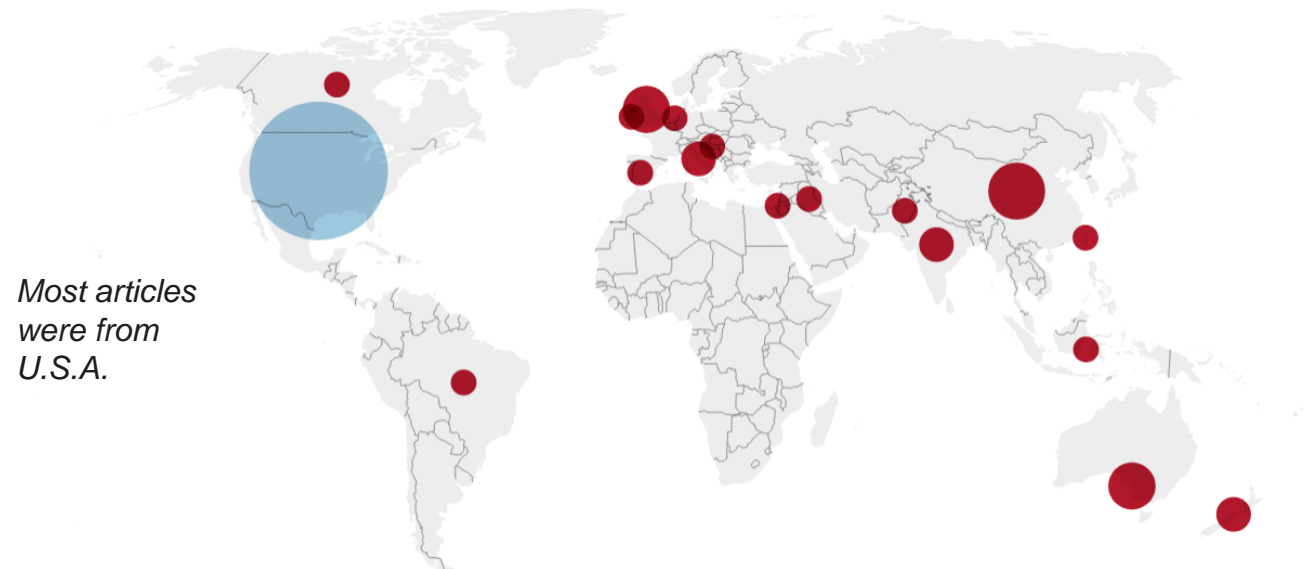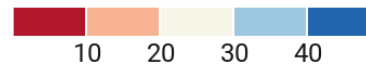
Source: https://mental.jmir.org/2021/3/e26550/

Case Study 1: Digital Interventions to Support Population Mental Health in Canada During the COVID-19 Pandemic – A Rapid Review

70 Articles met inclusion criteria. Many were commentaries & viewpoints.

25 Primary studies that described **digital interventions relevant to COVID-19** (e.g., natural disasters, medical pandemics/epidemics & human disasters/war/conflict)

Most articles were from U.S.A.

Source: https://mental.jmir.org/2021/3/e26550/

Case Study 1: Digital Interventions to Support Population Mental Health in Canada During the COVID-19 Pandemic – A Rapid Review

Facilitators ↑

- Organizational support e.g., help desk
- Access to the technology/devices/software
- Access to training about the digital intervention
- Provides access to a specific type of health care
- Cost (if free or limited cost)
- Ability to be anonymous if desired for some interventions

Barriers ↓

- Difficulty using technology
- Mistrust of technology/security of data
- Legislation that prevents certain forms of care e.g., harm reduction - OAT
- Lack of data sharing/interoperability
- Difficulty establishing a therapeutic alliance between people seeking care and providers due to technology related challenges
- Poor connectivity

Case Study 1: Digital Interventions to Support Population Mental Health in Canada During the COVID-19 Pandemic – A Rapid Review

Digital Health Equity Considerations:

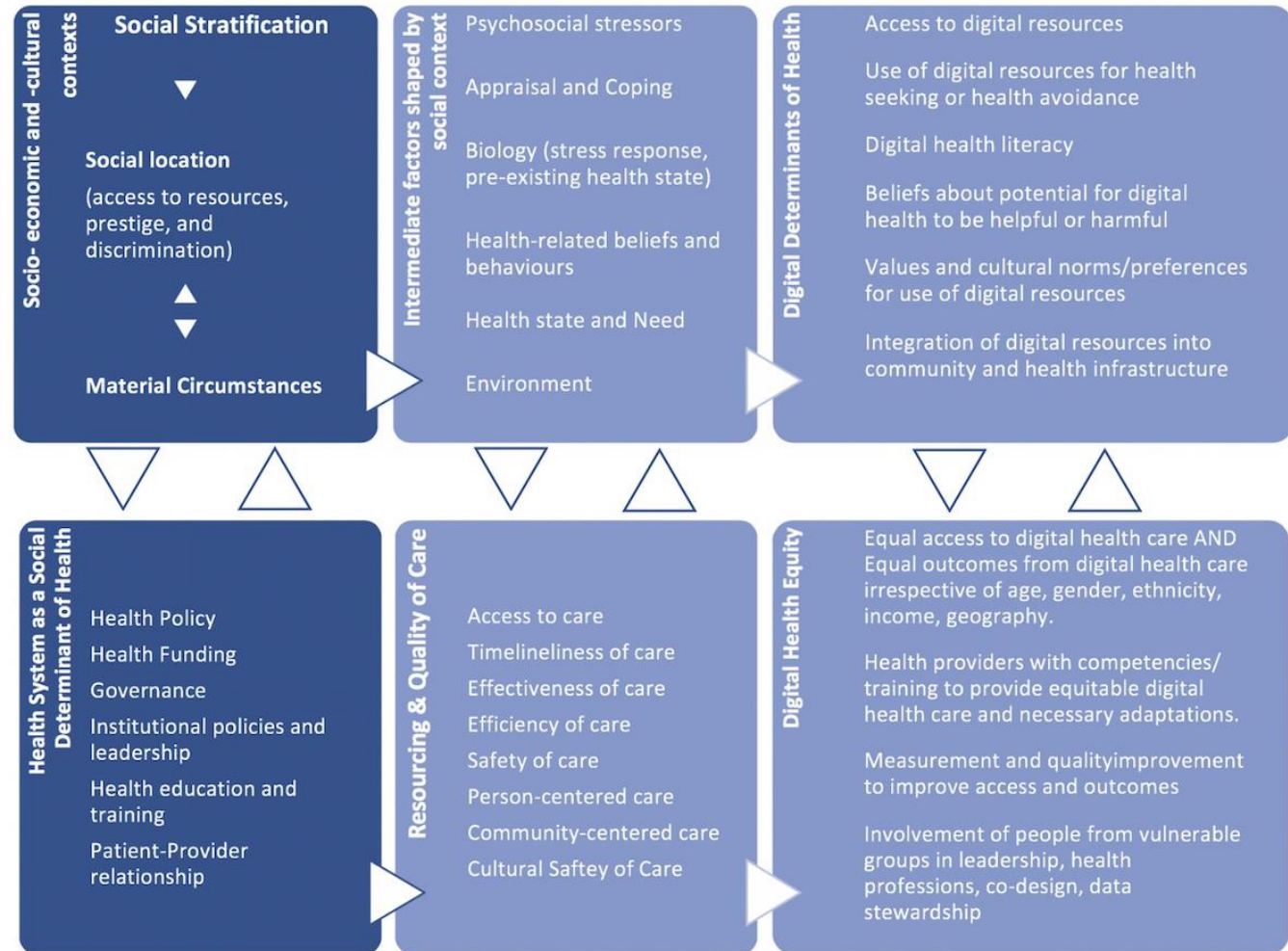| Relevance to Indigenous Peoples	Race, Ethnicity & Culture	Socioeconomic Status	Sex and Gender
N = 1	**N = 3**	**N = 11**	**N = 2**
Belleville et al. (2019) adapted their intervention for diverse populations including members of First Nations, Inuit, and Metis communities	Studies were specifically adapted to fit a non-western population, available in a variety of languages and offered translator services, and targeted at veterans	Provided free interventions to those publicly insured, providing phone calls as an alternative to internet, or tailored to older adults' digital health literacy	Studies recognized that women have more help-seeking behaviours and were more open to sharing instances of sexual abuse

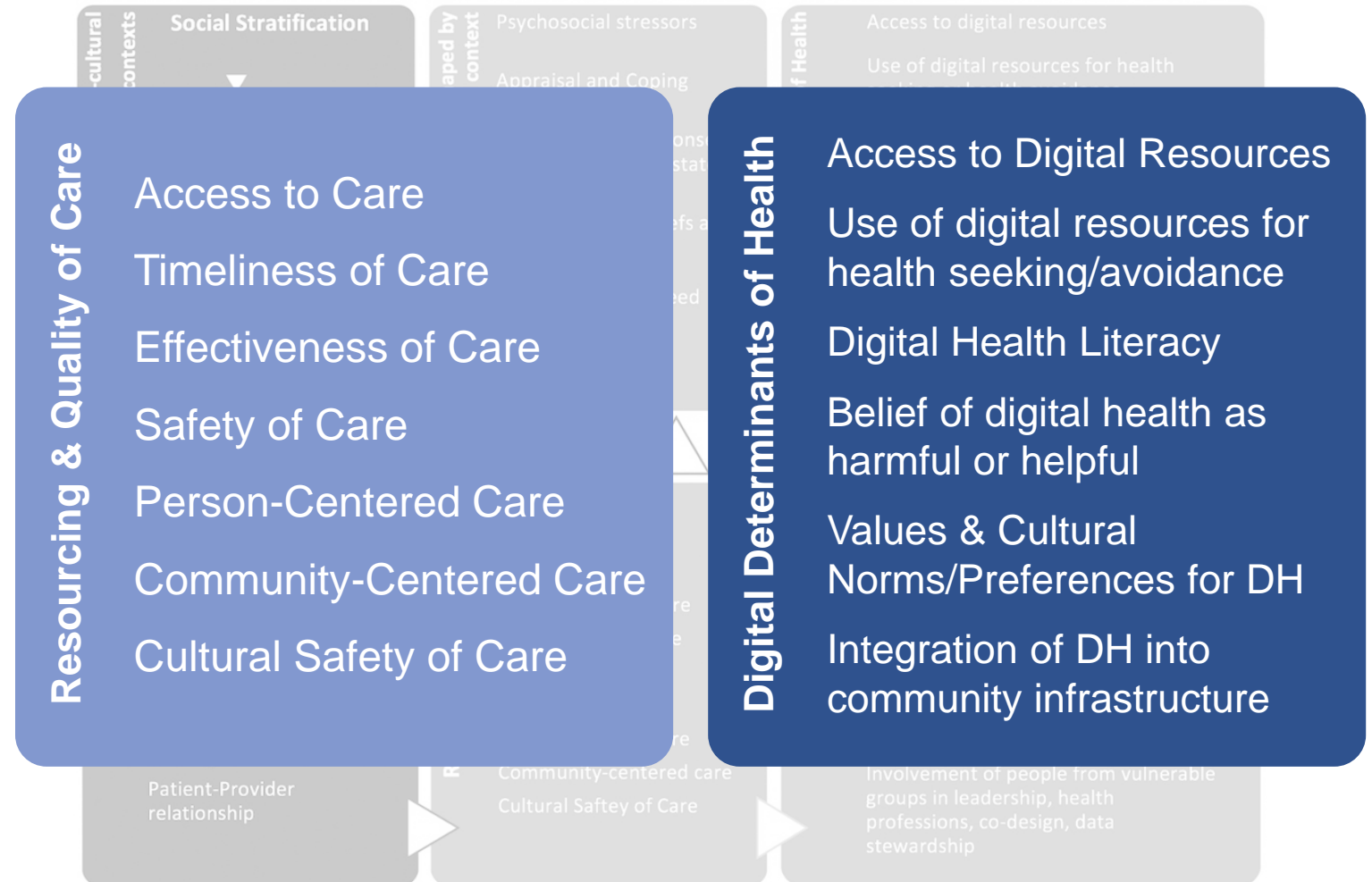**Source**: https://mental.jmir.org/2021/3/e26550/

Equity Considerations When Using DMH Tools

Digital Health Equity Framework

Socio - economic and -cultural contexts

Social Stratification

▼

Social location
(access to resources, prestige, and discrimination)

▲
▼

Material Circumstances

Intermediate factors shaped by social context

Psychosocial stressors

Appraisal and Coping

Biology (stress response, pre-existing health state)

Health-related beliefs and behaviours

Health state and Need

Environment

Digital Determinants of Health

Access to digital resources

Use of digital resources for health seeking or health avoidance

Digital health literacy

Beliefs about potential for digital health to be helpful or harmful

Values and cultural norms/preferences for use of digital resources

Integration of digital resources into community and health infrastructure

Health System as a Social Determinant of Health

Health Policy

Health Funding

Governance

Institutional policies and leadership

Health education and training

Patient-Provider relationship

Resourcing & Quality of Care

Access to care

Timelineliness of care

Effectiveness of care

Efficiency of care

Safety of care

Person-centered care

Community-centered care

Cultural Saftey of Care

Digital Health Equity

Equal access to digital health care AND Equal outcomes from digital health care irrespective of age, gender, ethnicity, income, geography.

Health providers with competencies/ training to provide equitable digital health care and necessary adaptations.

Measurement and qualityimprovement to improve access and outcomes

Involvement of people from vulnerable groups in leadership, health professions, co-design, data stewardship

Source: https://www.jmir.org/2020/6/e19361/

Equity Considerations When Using DMH Tools

Digital Health Equity Framework

Resourcing & Quality of Care

- Access to Care
- Timeliness of Care
- Effectiveness of Care
- Safety of Care
- Person-Centered Care
- Community-Centered Care
- Cultural Safety of Care

Digital Determinants of Health

- Access to Digital Resources
- Use of digital resources for health seeking/avoidance
- Digital Health Literacy
- Belief of digital health as harmful or helpful
- Values & Cultural Norms/Preferences for DH
- Integration of DH into community infrastructure

Source: https://www.jmir.org/2020/6/e19361/

Case Study 2: Implementation of a Text-Based Service to Support Population Mental Health During the COVID-19 Pandemic

Saskatchewan

Coronavirus crisis highlights internet access inequality across Saskatchewan

Rural residents' frustrations over poor internet builds alongside reliance on connectivity during pandemic

Jenalene Antony · CBC News · Posted: May 12, 2020 5:00 AM CT | Last Updated: May 12, 2020
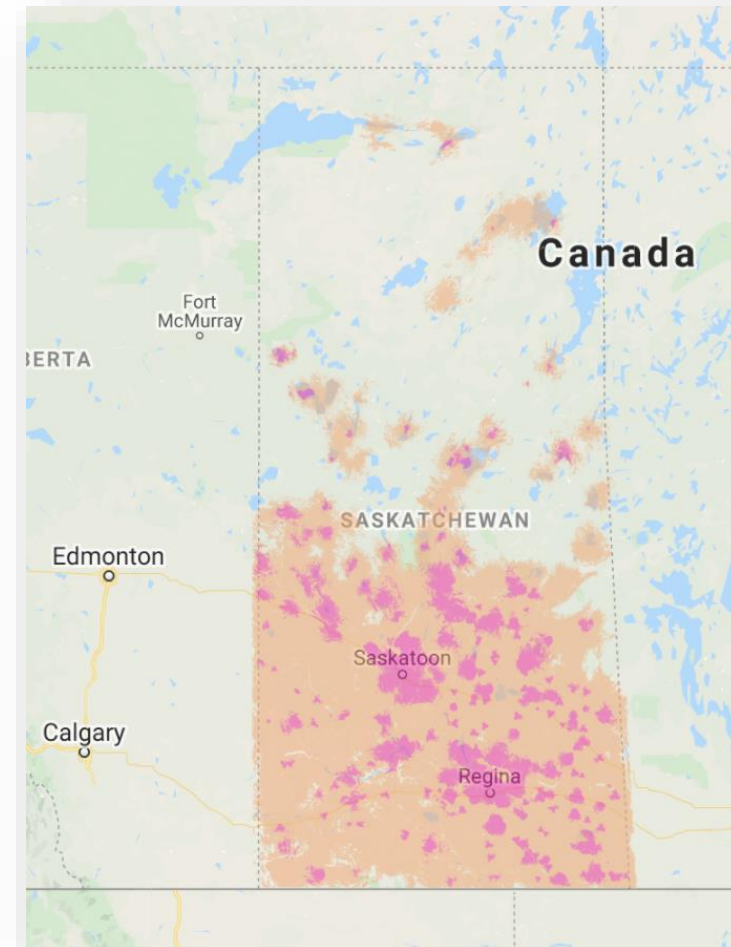
Case Study 2: Implementation of a Text-Based Service to Support Population Mental Health During the COVID-19 Pandemic

Mental Health

COVID-19 Pandemic
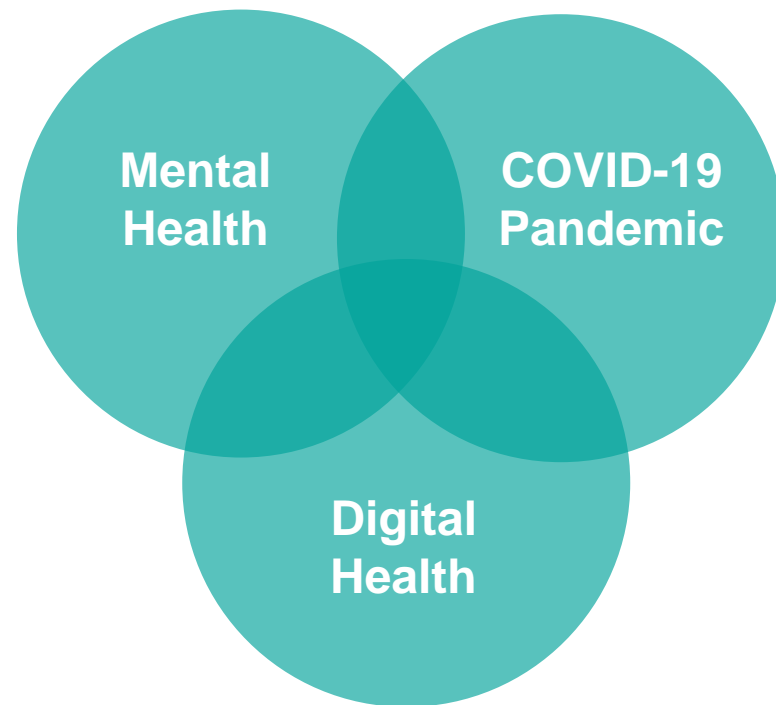
Digital Health

Study Purpose: To develop and measure the adoption of a two-way texting service, SaskWell, to improve individual awareness and connection to existing mental health and wellness supports in Saskatchewan, Canada.

Source: https://bmjopen.bmj.com/content/11/11/e052259.abstract

Case Study 2: Implementation of a Text-Based Service to Support Population Mental Health During the COVID-19 Pandemic

Total of **4 iterations,** where each iteration is **10-weeks** long.

Between March 2021 – April 2022

User's text **'JOIN'** to **759355** to sign-up for the SaskWell Service

Users fill out a sign-up survey (demographic, technology and mental health questions)

Users enrolled into the 10-week service receive wellness tips, tools & resources
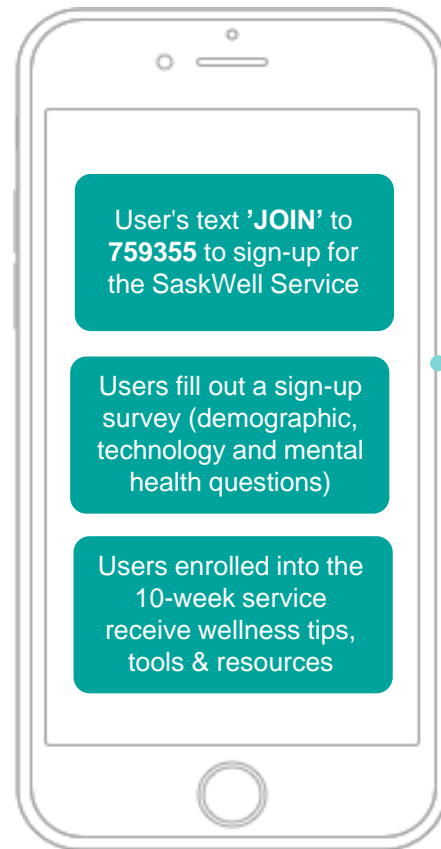
RE-AIM Framework

Eligibility: residents of SK, >16 years old, & have access to a mobile device

Recruitment: snowball sampling, social media, flyers, news articles, etc.

Interviews: Semi-structured interviews with users of the SaskWell service

User Metric Data: Usage data (i.e., click rate, response rate, engagement) and demographic data were collected

Source: https://bmjopen.bmj.com/content/11/11/e052259.abstract

Case Study 2: Implementation of a Text-Based Service to Support Population Mental Health During the COVID-19 Pandemic

Iteration 1

Iteration 2

Iteration 3

Iteration 4

85 Enrolled users

Mar – May 2021

207 Enrolled users*

June – Sept 2021

498 Enrolled users*

Oct – Jan 2021

710 Enrolled users*

Feb – April 2022

New SK COVID Cases:
13,474*

New SK COVID Cases:
13,717*

New SK COVID Cases:
40,807*
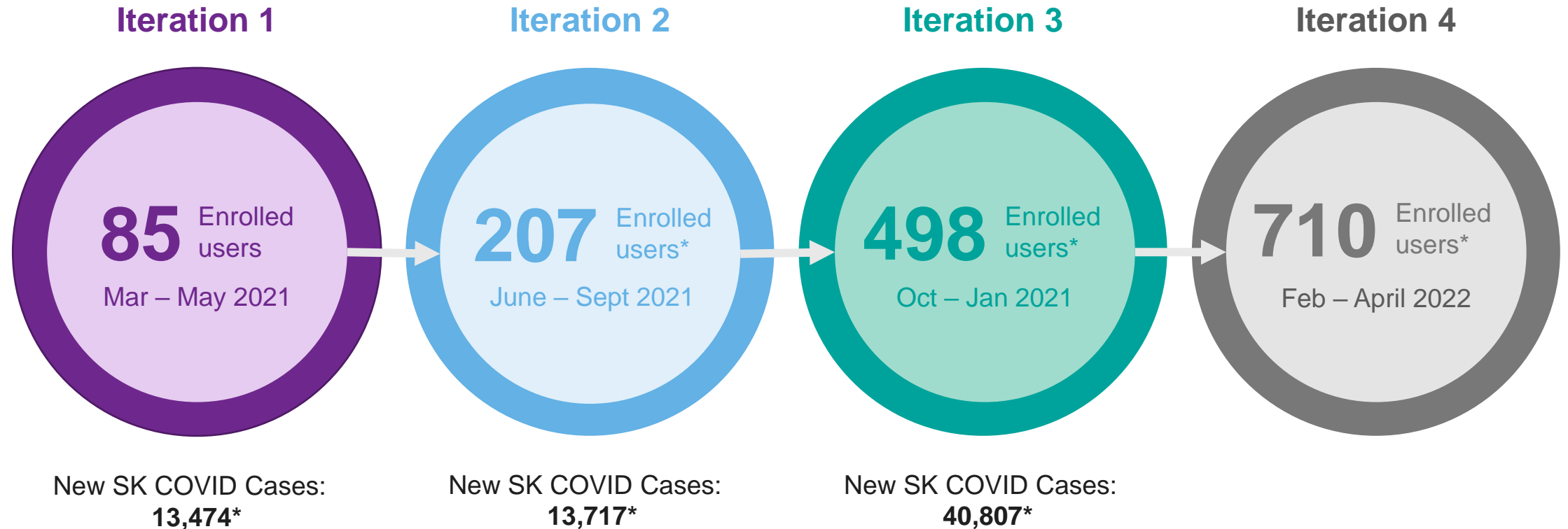
*Cumulative since iteration 1

*Source: https://dashboard.saskatchewan.ca/health-wellness/covid-19/cases?filter=totalCases#new-cases-tab

Case Study 2: Implementation of a Text-Based Service to Support Population Mental Health During the COVID-19 Pandemic

Lessons Learned in Implementing SaskWell

People

- Incorporating insights of community stakeholders into the service was crucial

- Reaching those in remote/rural communities was challenging, especially with COVID-19 related limitations

Process & Technology

- Disseminating mental health resources & tools was challenging given the limited resources available in SK

- Customizing the service to the SK context was a success factor

- Iteratively deploying the service, while time consuming, supported service relevance

Partnerships

- Relying on tech stakeholders for their expertise - success factor

- Expanding reach by partnering with community organizations improved awareness

- Building public trust through partnerships was imperative

Source: https://journals.sagepub.com/doi/abs/10.1177/08404704221092691

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3

Methods to support successful use and adoption of digital mental health tools in public health

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What are some strategies or methods that can be used to support the successful adoption of digital mental health tools for population or public health initiatives?

4

Application of Digital Health Libraries, Frameworks, Resources, and Guides

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Digital Health: How & When?

How do you select a digital health tool?

How do you know if it is credible, effective, evidence based?

Finding & Selecting DMH Tools: Curated App Libraries

ONE MIND
PsyberGuide

- Library/Database Apps

- Non-profit US organization

- Apps are reviewed by based on their credibility, UX, privacy practices

App Name	Credibility	User Experience	Transparency	Professional Review
	Ranges from 0 to 5.00	Ranges from 1.00 to 5.00		
Beating the Blues	5.00	Not Yet Available	Not Yet Available	**Read the Professional Review**
Cognitive Enhancement Therapy	5.00	Not Yet Available	Not Yet Available	Not Yet Available
Dartmouth PATH	5.00	Not Yet Available	Not Yet Available	Not Yet Available
ePST	5.00	Not Yet Available	Not Yet Available	Not Yet Available
Happify: For Stress & Worry	5.00	4.59	Acceptable	**Read the Professional Review**

View As: Cards | Table   Order: Highest to Lowest | Lowest to Highest

Showing 255 Apps

Sort By: Credibility
Filter By Platform: All
Filter By Audience: All
Filter By Cost: All

App Database: https://onemindpsyberguide.org/

Finding & Selecting DMH Tools: Curated App Libraries

M-HEALTH INDEX & NAVIGATION DATABASE

- MindApps Database of Mental Health Apps

- Developed by researchers at Harvard University

- Apps are evaluated using the APA App Evaluation Framework

App Database: https://apps.digitalpsych.org/

Evaluating DMH Tools: APA App Evaluation Framework
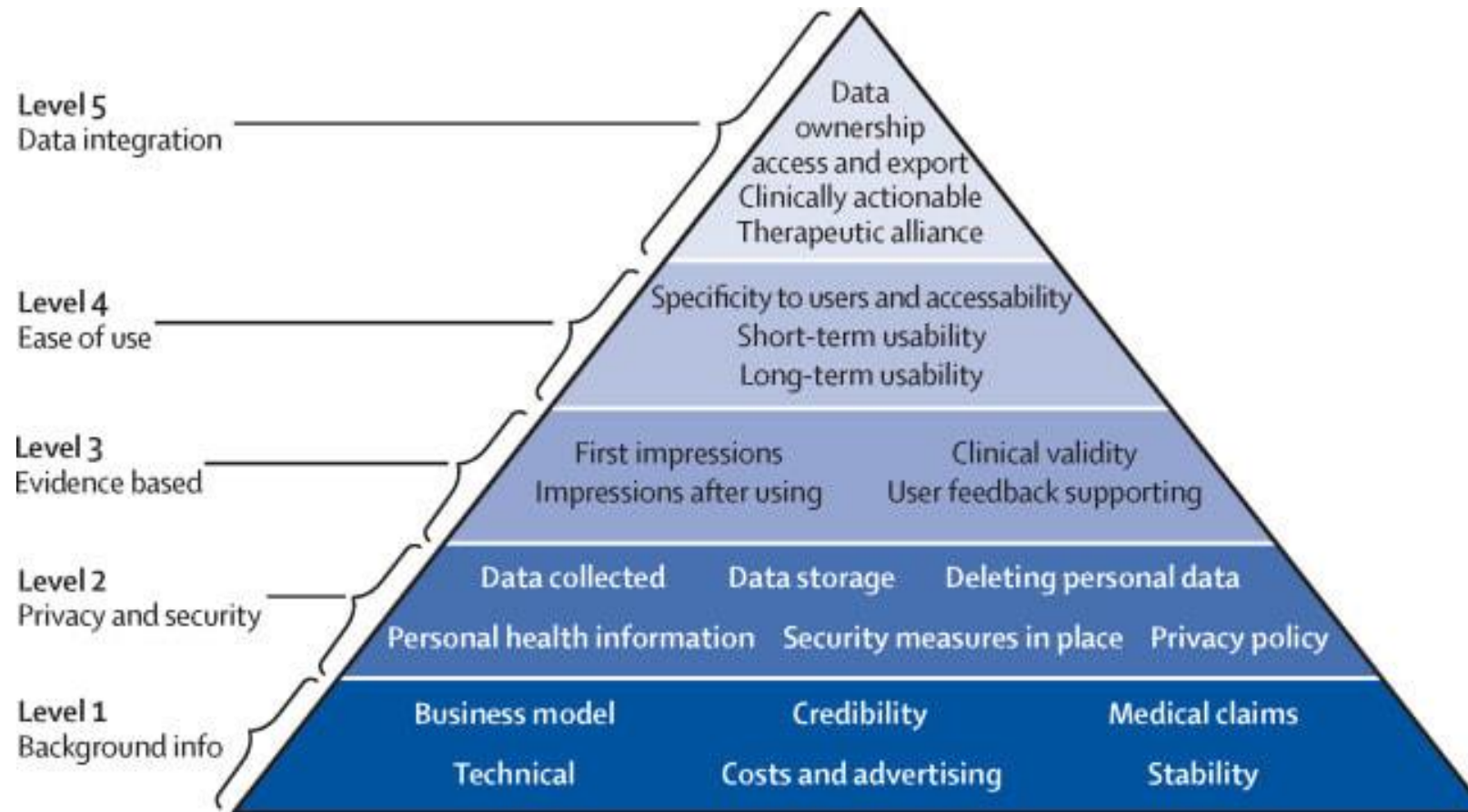
App Database: https://apps.digitalpsych.org/

Evaluating Digital Health Tools: MHCC App Checklist

1 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?
- 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?

2 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?

3 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?

4 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?

5 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?

Mental Health Commission of Canada · Commission de la santé mentale du Canada

https://www.mentalhealthcommission.ca/English/media/4137

Implementing: DMH Tools In Practice

In collaboration with Canada Health Infoway, a ***Resource Hub*** was developed to support clinicians and clients in using or implementing digital mental health tools into practice:

V2. Web-Based (https://digitalmentalhealthtools.pory.app/)
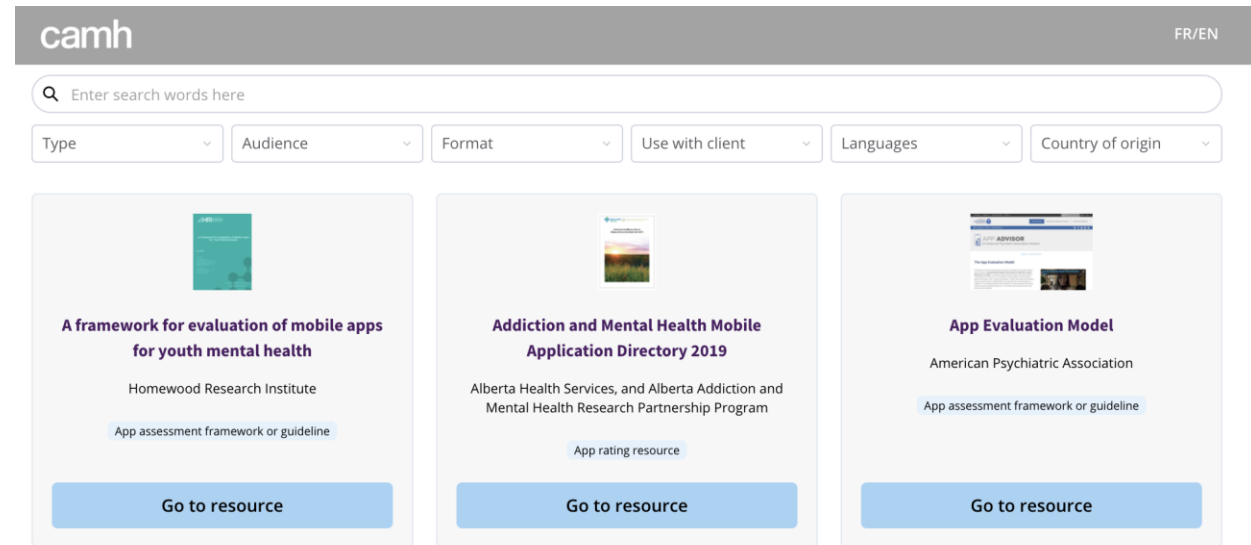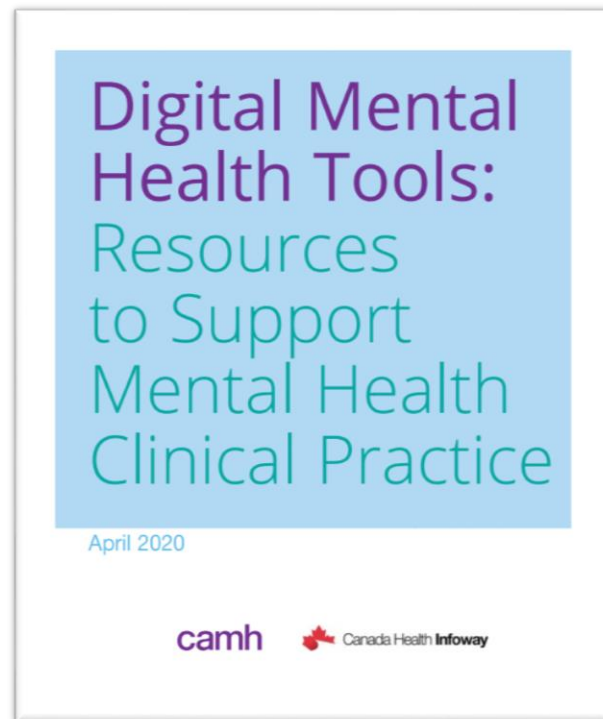
Implementing: Other Helpful Implementation & Training Resources

Digital and AI Mental Health Certificate

Preparing you to incorporate technology and innovation in your health care practice

Evaluating and using mobile applications in mental health care: The foundations

Mobile apps can support diagnosis, psychoeducation and other mental health interventions. They may help clinicians and researchers to understand mental illness. But what makes a good app? There are risks as well as benefits to consider before you and your patients decide to use an app as part of a care plan.

Enrol now

Available at https://digital.camhx.ca/

Bringing Digital Health to Public Health Practice

- Numerous digital mental health interventions exist that may be relevant to public health practice

- Digital mental health interventions are just **one method** to support public health practice and should be used as a **compliment to practice, not a replacement**

Thank You

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www.digitalmentalhealthlab.ca