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Implementing Digital Innovations for Success: Examples of Knowledge Translation Tools in the Field of e-Mental Health

Knowledge Exchange Collaborative Webinar #4

Mental Health Commission of Canada & Canadian Centre on Substance Use and
Addiction

September 13, 2018

Today's Webinar

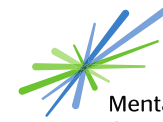
Implementing Digital Innovations for Success: Examples of Knowledge Translation Tools in the Field of e-Mental Health



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e-Mental Health (eMH) – Implementation Toolkit

A toolkit for clinicians

Presented by Danielle Impey
September 13th, 2018

What is e-mental health (eMH)?

- Refers to the use of the internet and other electronic communication technologies to deliver mental health information and care.
- eMH services are an effective and complementary option to traditional face-to-face mental health support.
- eMH technologies are an underused MH care option



eMH Implementation Toolkit

- Joint effort of the Centre for Research in Family Health, IWK Health Centre and the MHCC, in consultation with stakeholders
- Resource for MH professionals to implement e-MH innovations in clinical practice, including:
 - Telehealth, MH apps, messaging services, and any internet-based MH technology
- Important document to help overcome noted barriers in implementing successful e-health programs

Project Overview

Purpose

To accelerate the awareness, uptake and implementation of e-mental health among practitioners





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Project Overview

Format and Layout

- Five Modules
 - ✓ Objectives
 - ✓ Content
 - ✓ Mini-Case Scenarios
 - ✓ Action Activities
 - ✓ Linking Resources



Module I: Exploring the World of eMH

Objectives:

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



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Module I: Exploring the World of eMH

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



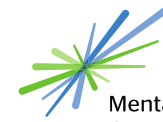
Operating system

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



Module I: Exploring the World of eMH

TABLE 1 | Types of e-mental technologies - cont'



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)



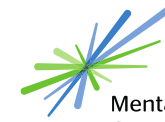
Website

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.)

Module I: Exploring the World of eMH

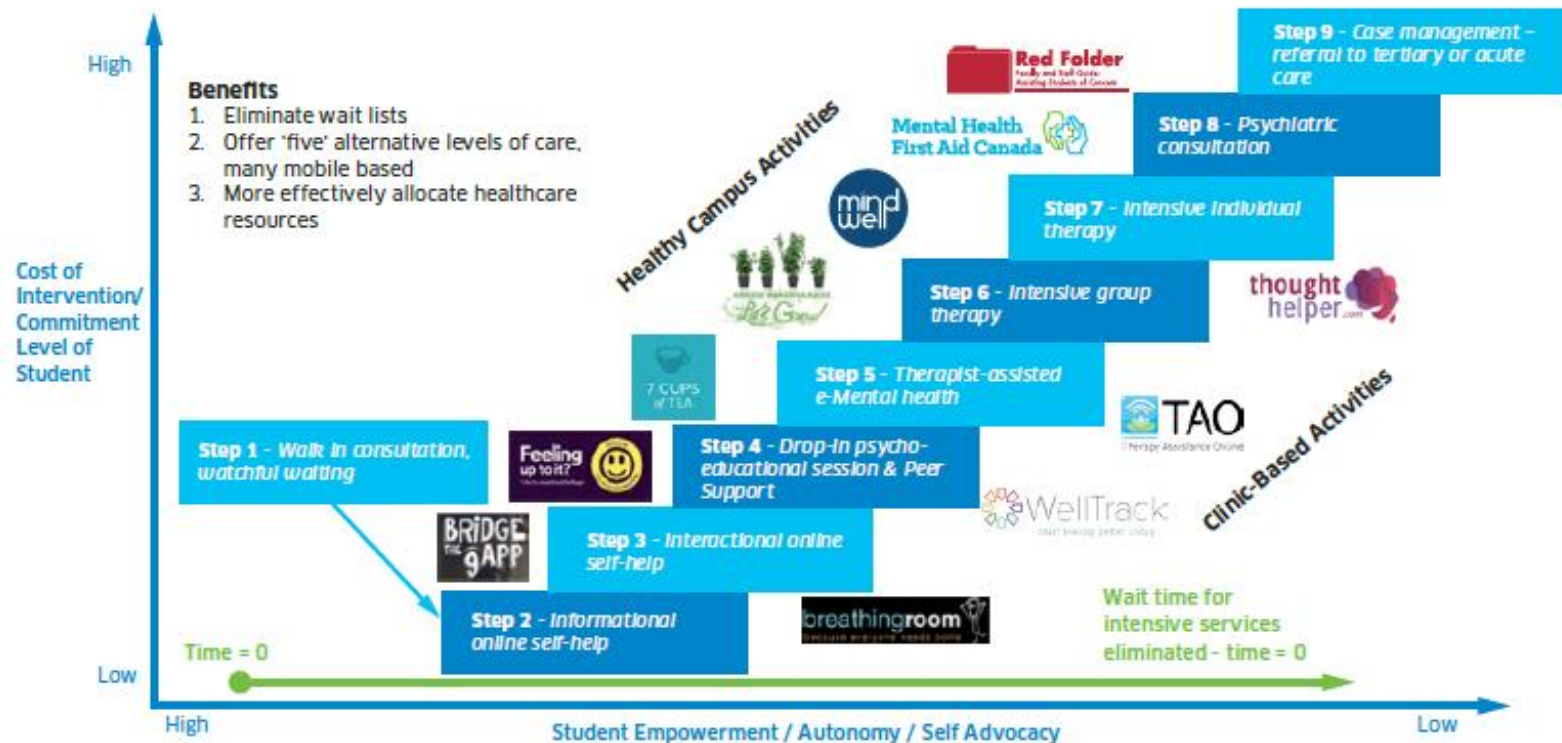
Benefits of e-Mental Health:

- ✓ Shortens wait times and increases capacity
- ✓ Improves accessibility in rural/remote areas and inner cities
- ✓ Provides rapid access that can reach across time zones
- ✓ Cost-effective service delivery
- ✓ Tailors services to client's needs



Module I: Exploring the World of eMH

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



Module I: Exploring the World of eMH

Challenges in selecting & evaluating eMH tools

- Not all “mental health” apps are evidence-based or helpful for all populations
- **Mental Health Apps: How to Make An Informed Choice** (co-developed by CIHR and MHCC):
https://www.mentalhealthcommission.ca/sites/default/files/2018-01/eMH_app_eng.pdf
- Look for eMH tools that:
 - ✓ Put the client first
 - ✓ Has social and cultural relevance
 - ✓ Has appropriate developmental readiness (i.e. cognitive skills)
 - ✓ Considers patients’ access to electronic products

Module II: Roadmap for Launching eMH

Objectives:

- ✓ Identify the main steps involved in launching a successful eMH 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

Module II: Roadmap for Launching eMH

Launching e- mental health in practice

Stage 1: Map the destination

- ✓ Define what needs to change and why
- ✓ Locate accessible data
- ✓ Consider costs
 - For practitioners and for patients
- ✓ Train and communicate
 - Managing and building teams
 - Establishing clear roles, responsibilities and governance
 - Focusing on what needs to go right



Module II: Roadmap for Launching eMH

Launching e- mental health in practice (cont'd)

Stage 2: Launching new e-mental health programs and services

- ✓ Countdown checklist:
 - Pre-launch (pick a time and date, create pre-launch buzz)
 - Launch (set aside extra time for yourself)
 - Post-launch (track issues and update workflow)

- ✓ Checking in on how it's going

Stage 3: Go: Full-scale integration

- ✓ Determine next steps (evaluate, hold, stop or expand)

Module III: Building Your Digital Skillset

Objectives:

- ✓ Build awareness of core eMH skills and competencies
- ✓ Identify professional eMH learning needs and skill gaps
- ✓ Learn about relevant legislation, regulation and organizational policies
- ✓ Set priorities for your personal eMH professional learning plan

Module III: Building Your Digital Skillset

Technology attitudes and skills

- Assess your own eMH perceptions and competencies
- Includes e-communication skills, awareness of data protection, and other policies and standards
- Set priorities for your eMH professional learning plan

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**)?

Module IV: Engaging Clients in eMH

Objectives:

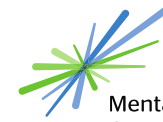
- ✓ Challenge prevailing myths about what clients think about eMH
- ✓ Identify practitioner role and impact on client engagement
- ✓ Understand stages of client engagement and how to support clients in using eMH



Module IV: Engaging Clients in eMH

Challenging myths:

- ❖ People do not want to use digital services for mental health care.
- ❖ Only young people want to use digital services.
- ❖ Patients want the most innovative features and apps.
- ❖ And more...



Module IV: Engaging Clients in eMH

FIG. 3 | Levels of engagement



Module V: Leadership for eMH Innovation

Objectives:

- ✓ Understand how forming a common goal or vision for a team or organization will contribute to the overall aim and success of eMH
- ✓ 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 clients

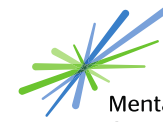
Module V: Leadership for eMH Innovation

Champion disruptive innovation

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





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eMH Toolkit Next Steps

Evaluation

- Feedback survey
- Focus group with IWK Health Centre

Dissemination opportunities

- Conferences & meetings
- Workshop March 2019

Phase II

- More content and implementation
- Train the trainer workshops





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Thank you!

Contact me at:

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Visit our eMH webpage on the MHCC website:

<https://www.mentalhealthcommission.ca/English/what-we-do/e-mental-health>

Financial contribution from



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ORDER OF EXCELLENCE

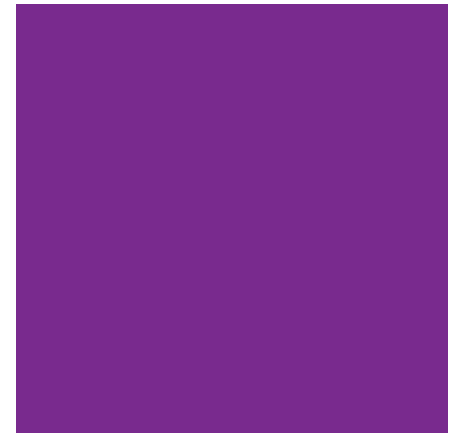


MENTAL HEALTH AT WORK® RECIPIENT

+

Thought Spot 2.0: Optimizing an mHealth Application Through Participatory Design

- David Wiljer, PhD, Executive Director, Education Technology Innovation, UHN; Associate Professor, Dept. of Psychiatry; IHPME, UofT; Collaborating Scientist, CAMH
- david.wiljer@uhn.ca





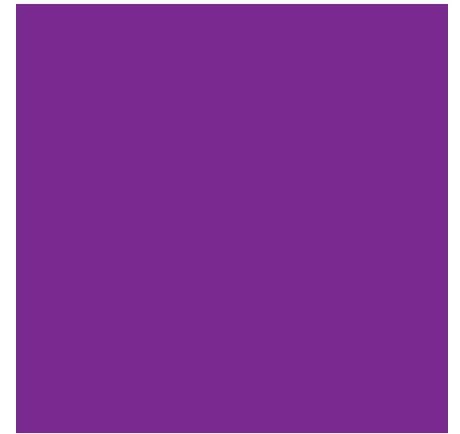
+ Poll Question

- Do you or your organization provide youth mental health services?
 - Yes
 - No
- If yes, do you provide any services using digital tools?
 - Yes
 - No
 - Not sure
- If yes, what types of online or digital tools do you use.



+ Mental Health & Transition-aged Youth

- 20% of 15 to 24 year olds experience symptoms of mental illness and 8% have substance use concerns.
- Current mental health system is difficult for transition-aged youth to navigate.
- Barriers include:
 - Accessing and navigating the system
 - Stigma
 - Concerns about confidentiality.



+ Online & Mobile Health Interventions

- Can enhance transition-aged youths' “capacity to correctly recognize, identify and receive help for psychological disorders in a manner that is both accessible and non-threatening”.
- Reduce access-to-service barriers and confidentiality concerns.
- Engage youth in promoting their mental well-being.



+ Co-design & Student Engagement

- Participatory approaches can
 - Strengthen youth buy-in
 - Increase efficacy, usability and sustainability of the intervention
 - Generate innovative and creative design concepts
 - Foster youth empowerment, skill and capacity building.



+ Participatory Design Approach

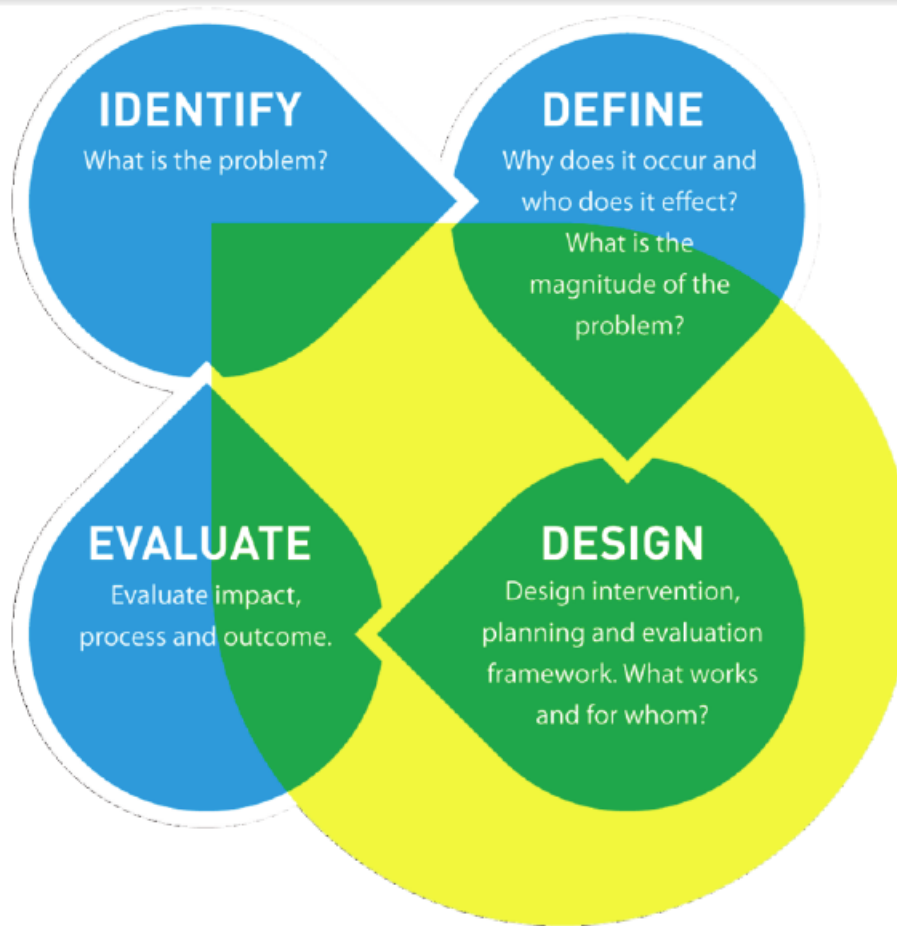


Figure 1 The focus of the guide in relation to the overall research proces

Young and Well Research Centre, 2012



+ Participatory Design Cycle

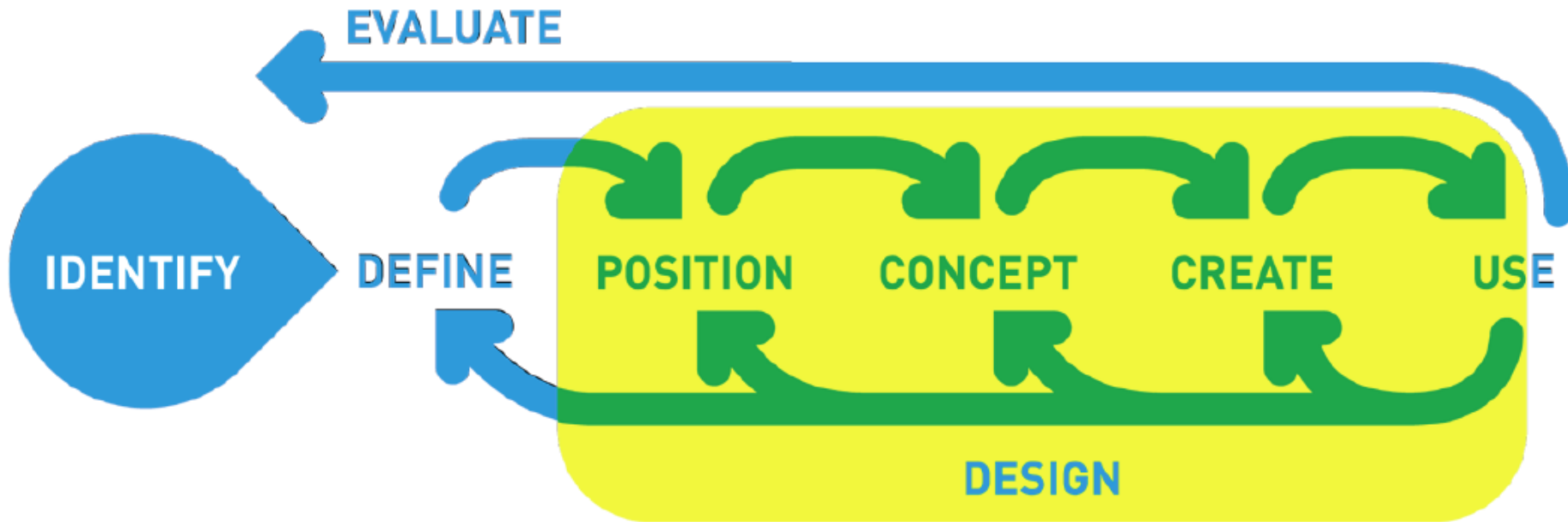


Figure 2 Detailed view of the design phase in the research process

Young and Well Research Centre, 2012



+ Thought Spot

- A co-created, crowd-sourced platform to better enable students to seek mental health and wellness services.
- Students can:
 1. Geo-locate mental health and wellness services (“spots”) in the GTA
 2. Mobilize other students to share their knowledge of services
 3. Read reviews from peers about services
 4. Add “spots”, bookmarks, consult timeline
 5. Add “thoughts” to track well-being



+ Team members

Leads:

David Wiljer (Principal Investigator)

Andrea Levinson (Clinical Lead)

Aristotle Voineskos (Scientific Lead)

Janine Robb (Policy Lead)

Co Applicants/Collaborators:

Kristin Cleverly

Gloria Chaim

Gunther Eysenbach

Joanna Henderson

Jeffrey Hoch

Wanrudee Isaranuwachai

Sarah Sharpe

Elisa Hollenberg

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Angie Solomon

Nicole VanHeerwaarden

Chelsea Stunden

Mandee Kaur

Shehab Sennah

Jenny Shi

Paulysha De Gannes

Marcus Law

Andrew Johnson

Tim Tripp

Alexxa Abi-Jaoude

Sarah Sharpe

Daryl Boshart

Marcos Sanches

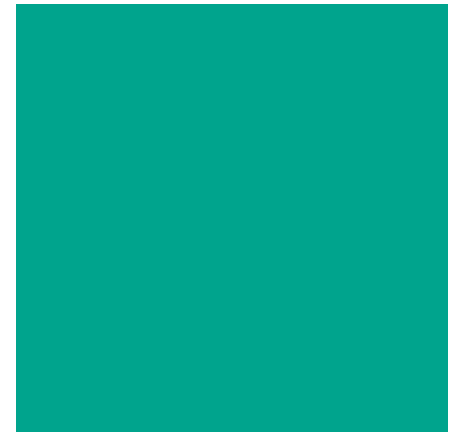
Genevieve Ferguson

Julia Roy



+ Partnerships

- Centre for Addiction and Mental Health
- CIHR
- QoC Health
- University of Toronto
- University Health Network
- Ryerson University
- George Brown College

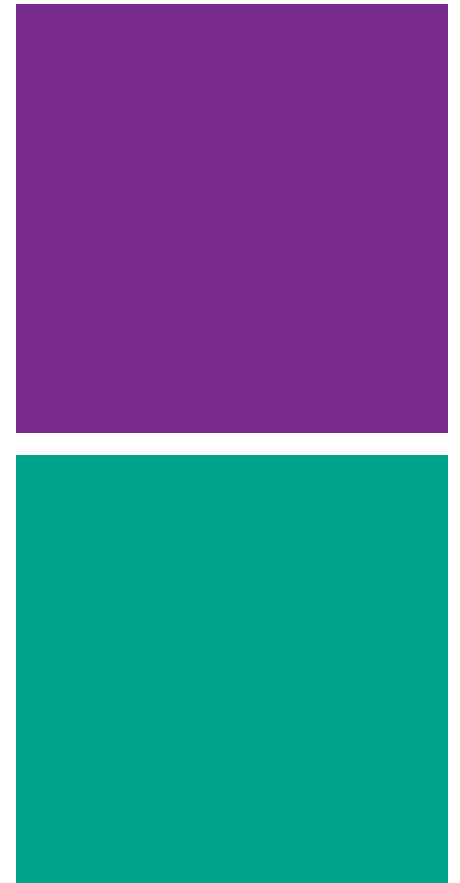


camh
Centre for Addiction and Mental Health



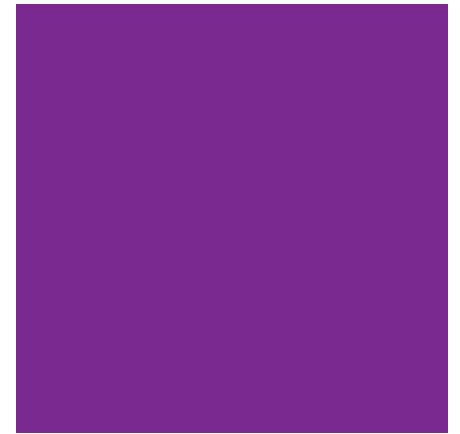
+ Phase 1: Initial Development

- Project team worked with 65 post-secondary students who were responsible for working on all aspects of the project.
- Co-design activities
 - Crowd-sourcing and data workshops
 - Hackathon
 - Knowledge translation and engagement workshops with **Mindyourmind**.

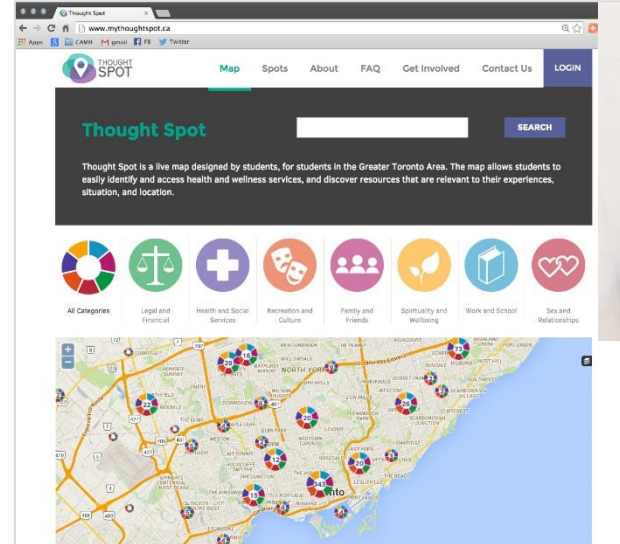


+ Poll Question

- Are you familiar with the idea of a Hackathon
 - Yes
 - No
- Have you ever participated in one?
 - Yes
 - No

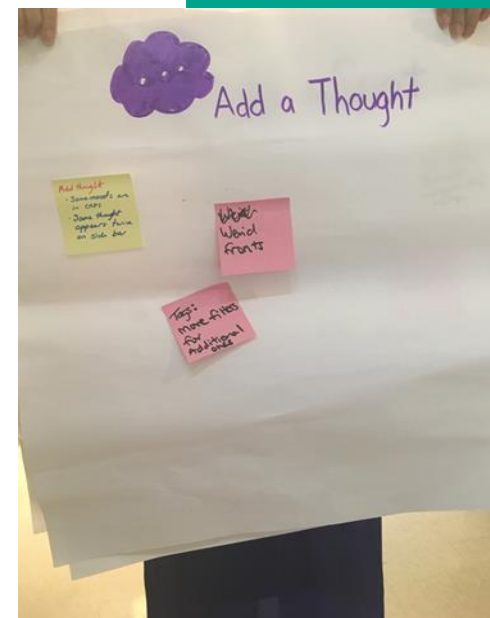
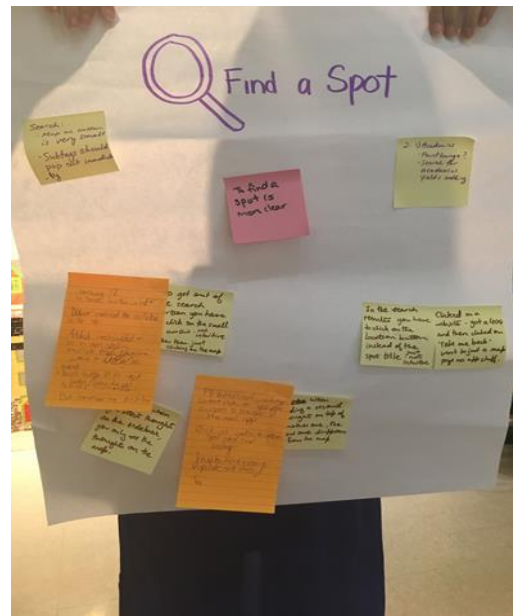
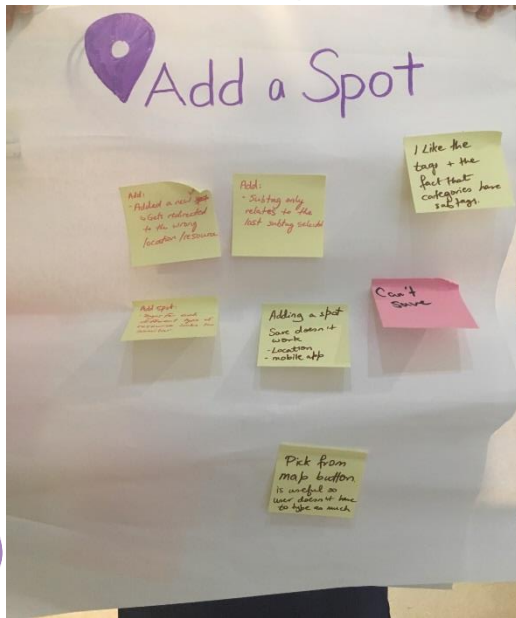


Phase I: Co-Creation Activities



+ Phase 2: Optimization

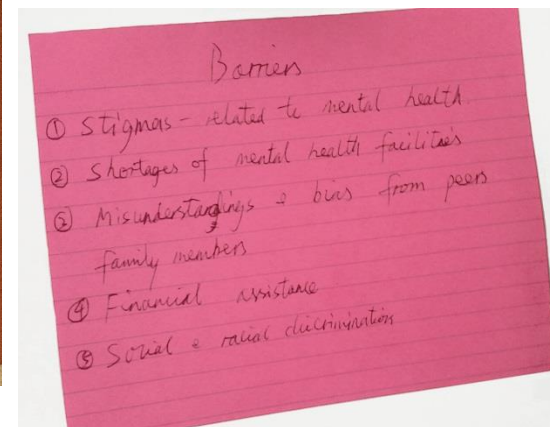
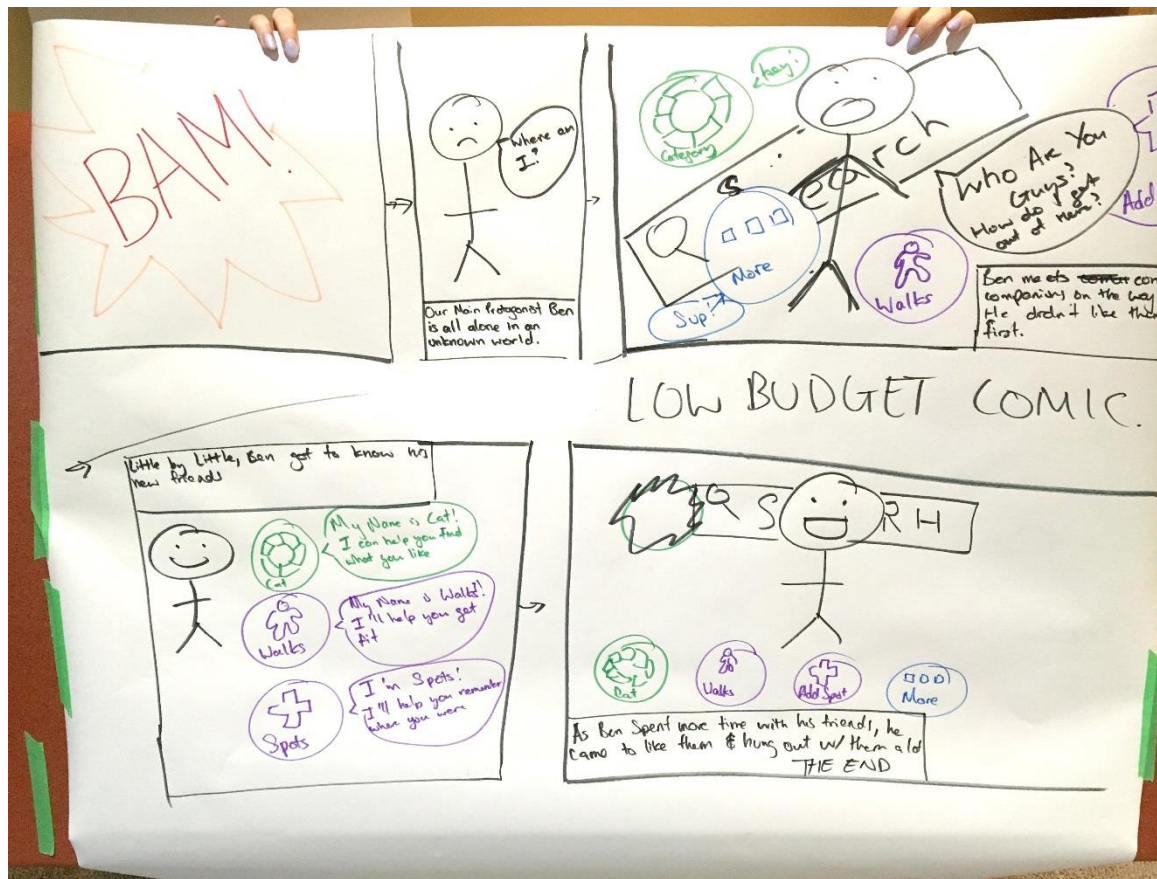
- Student Advisory Group Meetings
- July 2016 – Nov 2017 (11 meetings)
- 6-10 core attendees (24 members in total)
 - User Experience
 - Community Agreement/Guidelines
 - Recruitment Strategies
 - Moderation
 - App Design



+ Phase 2: Optimization

Nine student-led workshops with 70 students

- Semi-structured focus groups, Journey Mapping
- User-shadowing, World-café



+ Phase 2: Findings

- Opportunities for improvement:
 - More responsive discovery, search and navigation functions
 - Customization for users' preferences (timelines, bookmarks and my spots)
 - Recording of thoughts and moods to track well-being in a private way
- Findings used to inform re-design and optimization of Thought Spot.

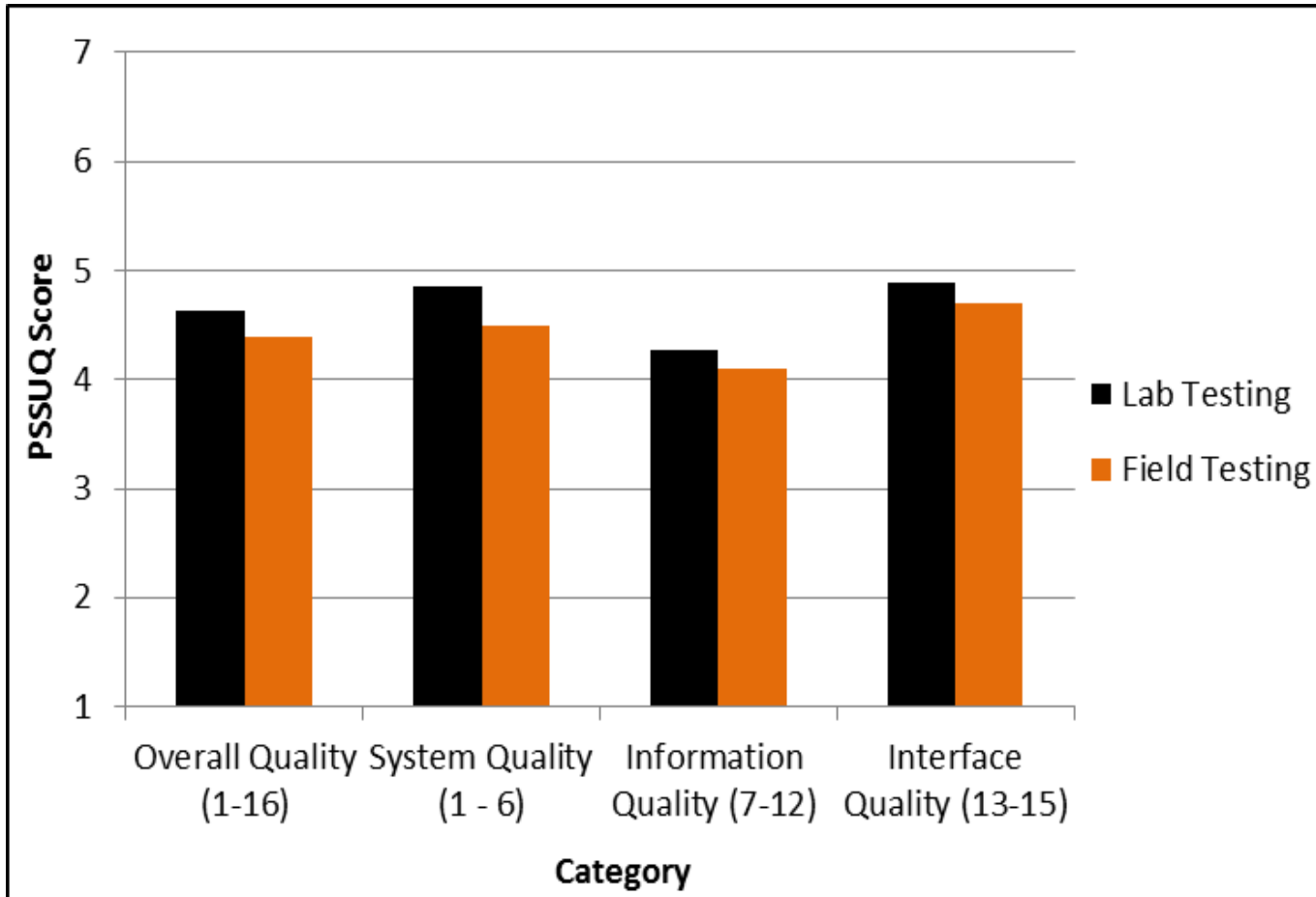


+ Phase 2: Usability Testing

- Sample: 15 students – Aug 2017
- Lab testing: think-aloud exercise
- Field testing: new representative tasks over 7 days
- Qualitative and Quantitative Data:
 - observation
 - semi-structured interviews
 - single ease questions (SEQ)
 - post-study usability questionnaire (PSSUQ)



Phase 2: Usability Testing



Various issues identified:

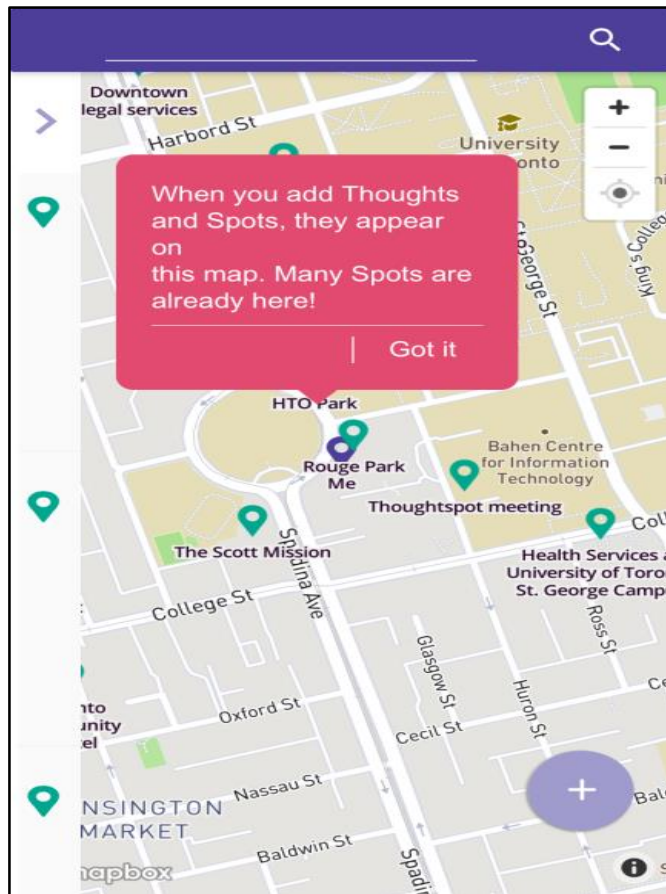
- Login and tour
- Menu and map
- Add a Thought
- Android specific problems
- **Search and Navigation – 4.1/7 SEQ**
- **Adding Spots – 4.4/7 SEQ**

Lab and Field PSSUQ scores categorized by different components of quality

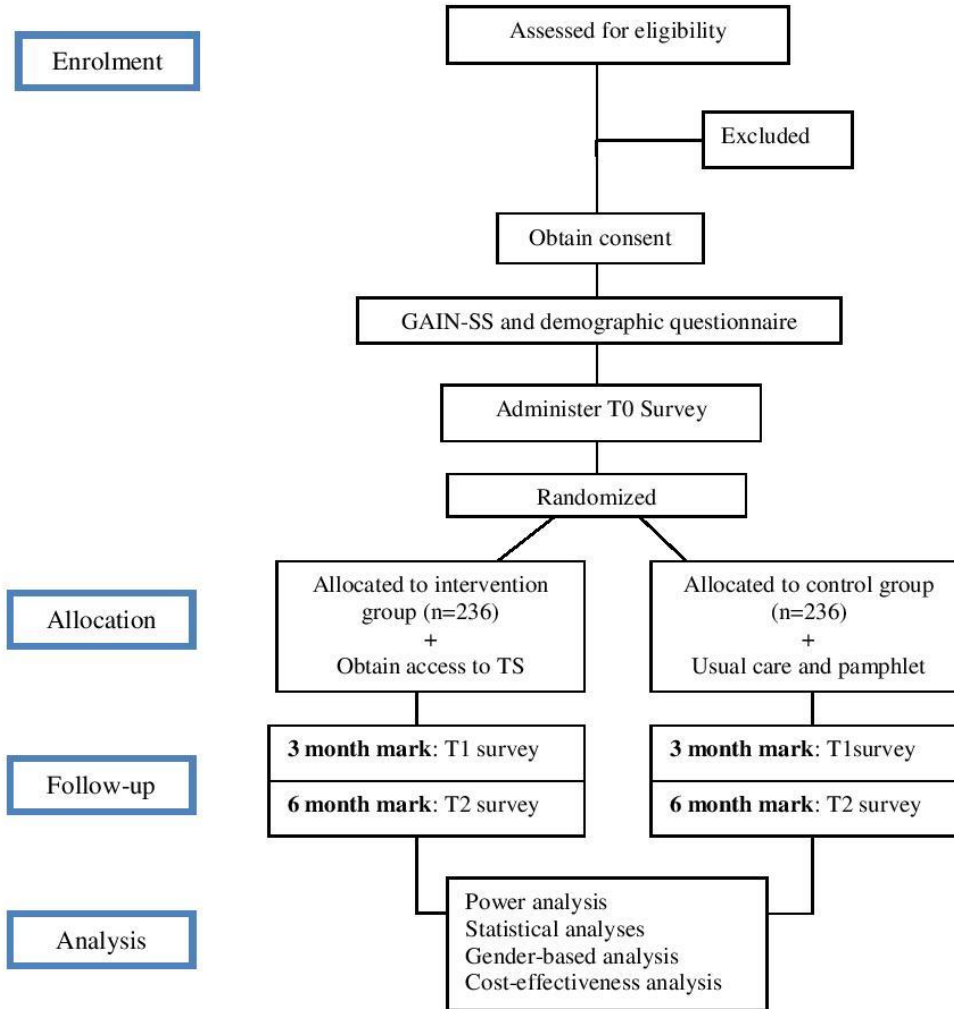
+ Phase 2: Thought Spot 2.0

Tour the App video:

<https://vimeo.com/261476561/43c1723f81>



+ Phase 3: RCT Research Plan



+ Economic Evaluation

JMIR RESEARCH PROTOCOLS

Kaur et al

Proposal

Economic Evaluation Protocol of Thought Spot: A Web- and Mobile-Based Map of Mental Health Resources for Transition-Aged Youth

Amandeep Kaur¹, MPH; Wanrudee Isaranuwatthai^{2,3}, M.Sc., PhD; Aliya Jaffer³, MPharm; Genevieve Ferguson⁴, MEd; Alexxa Abi-Jaoude⁴, MPH; Andrew Johnson⁴, BA; Elisa Hollenberg⁴, MSW; David Wiljer^{4,5,6}, PhD

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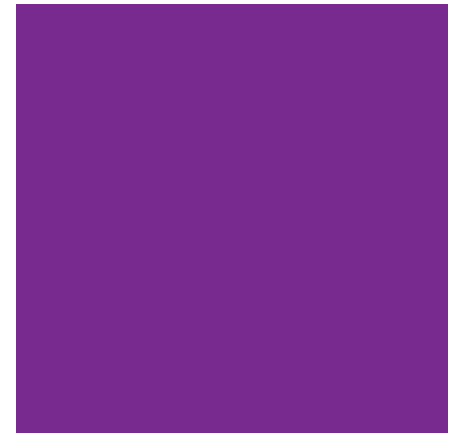
+ Challenges and barriers

- Staff changes at both organizations (CAMH and QoC)
- Managing expectations and goals
- Communication between both organizations
- Meeting deadlines and commitments
- Balancing the research and operational aspects of the project



+ Lessons Learned

- Students must be included at every phase of the project and in every aspect of development.
- Need for sustainable engagement strategies throughout the project.
- Identify clear roles and accountabilities for all stakeholders.
- Project development is optimal when there is clear communication and cooperation between all stakeholders



+ Funding

Ministry of Training Colleges and Universities

- Health Innovation Fund

Canadian Institutes of Health Research (CIHR)

- eHealth Innovations
Partnership Program (eHIPP)



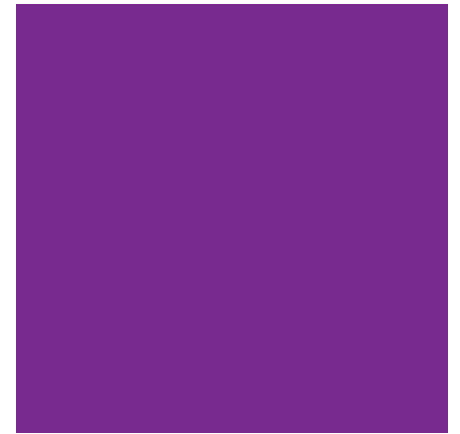


Questions?

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that will be emailed to you.





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Thank you!

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