

eHealth Learning and Intervention Platform

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Outline

- The problem
- The key challenges
- The vision
- Next steps
- Work to date

The Problem

- In Australia, same as in US, 1 in 5 suffer from some form of mental illness or dis-order in any given year.
- By 2050, the percentage of the population above 80 will increase from 3.9% to 9.1% - a large proportion of these people will need significant help
- Increasing demand on mental and physical health intervention programs that exceed government and health professional capacity

Challenges & Opportunities

- Technology-supported health interventions offer a practical solution to these challenges: accessible, reachable, effective and sustainable support to individuals with different sorts of health challenges.
- The past decade has seen many cost-effective alternatives to the traditional face-to-face interventions.
- Many successful digital health intervention studies and virtual rehabilitation programs (vRP) have successfully complemented and, in some cases, mitigated the lack of accessible face-to-face interventions

Challenges with existing platforms

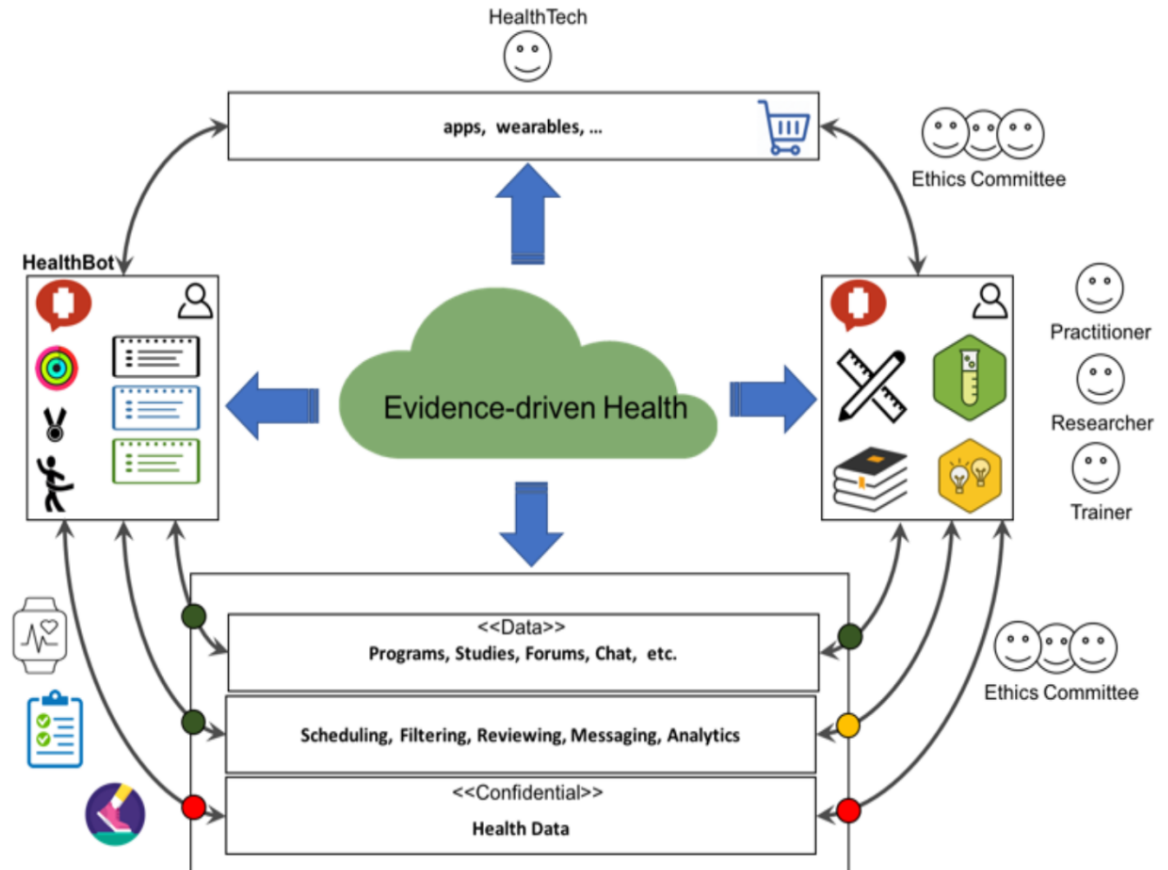
- usually focus on a single mental or physical illness challenge.
- do not allow new approaches and limited tailoring to individuals.
- Hard to find the right technical partner to develop applications and run experiments.
- lack of continued support of existing/developed proof-of-concepts.
- eventually stop at the trial phase though have strong evidence useful.
- as every platform is different, recruitment to run trials challenging - to run a successful trial, usually need a large number of participants

The Vision - eHelp

Cut development time of studies from months to days with a focus on the underlying theories, content and delivery models rather than the development of the technology.

Best practice security and data management, collaboration, care plan reuse, data analytics and visualization approaches will be highly reusable across DHI apps.

Bring all stakeholders to one platform: innovators/researchers, health-tech, ethics/governance, participant and practitioners.



Next Steps...

Task 1- Develop intervention study and care platform to support building and running digital health intervention studies in a researcher-friendly way with low technical expertise.

Task 2- Develop end-user health app to present participants with study content, keep them engaged, track their progress, and provide them with notifications and appropriate.

Task 3 - Develop sensor and user-generated data collection protocols and interfaces.
To investigate what data items need to be collected across multiple studies, different data sources we need to integrate with, data storage and management.

Task 4 - Develop data processing and presentation capabilities to develop a catalog of data analytics techniques that researchers can use as a black-box.

Work to date

01

DHI Program Design
Templates

- Researchers visually fully design a study, modules
- Design surveys
- Run notifications (email, sms, mobile notifications)

02

Recruitment

- Integration with Facebook, to facilitate participants recruitment and also notifications on their mobile

03

Sensor data collection

- Proof-of-concept for sensor data collection and linking to studies for further analysis

Questions?!