Research to Advance Digital Mental Health Interventions

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Disclosures

- I have no personal financial relationships with commercial interests relevant to this presentation.

- The views expressed are my own, and do not necessarily represent those of the NIH, NIMH, or the Federal Government.

Where we've been, where we're going

Research has established the efficacy of DMH assessment and interventions.

We've moved beyond simply converting established face-to-face interventions to a technology-based format.

We now expect DMH strategies to capitalize on functionality enabled by technology while overcoming its inherent challenges.
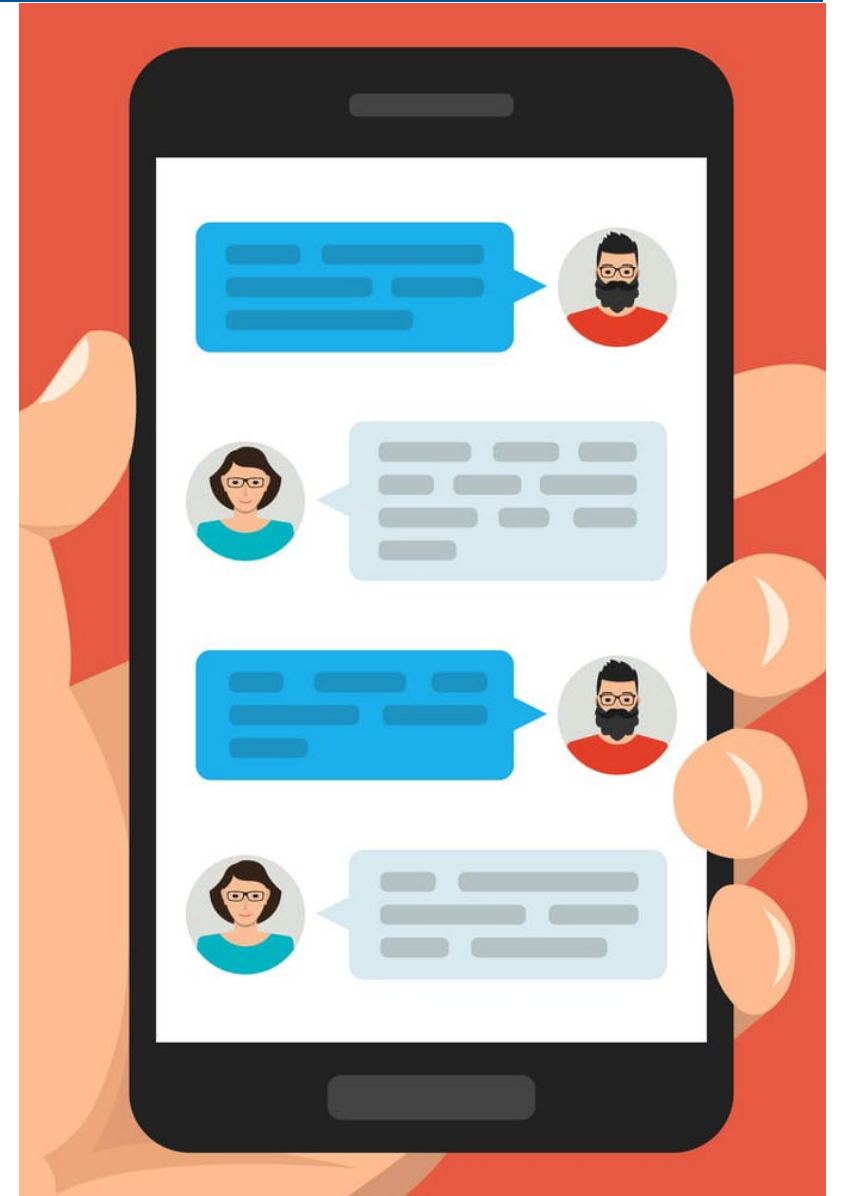
Meanwhile, commercial technology has vastly outpaced DMH research.

Winner-take-all DMH app market

- Handful of highly popular apps attract nearly all DMH users, e.g., Headspace and Calm.

- Most popular apps offer some evidence-based treatment elements, e.g., mindfulness and psychoeducation.

- But other evidence-based treatment elements aren't reaching DMH app users, e.g., cognitive restructuring, behavioral activation, exposure for anxiety, problem-solving therapies.

Key research gaps in DMH strategies

Key DMH research gaps

- Engaging

- Integrating

- Optimizing

- Expanding

- Predicting

Engage

Overcome known challenges with uptake, engagement, and sustained use of DMH approaches

Engage individuals with MH needs in digital spaces they're already using, such as social media platforms

Identify optimum level and type of DMH support, e.g., Digital Navigators[1]

[1]Wisniewski H, Torous J. Digital navigators to implement smartphone and digital tools in care. *Acta Psychiatr Scand.* 2020 Apr;141((4)):350–5.

Integrate

Integrate DMH strategies into existing care systems and routine practice

Support providers in their use of DMH approaches, e.g.,

- clinician-facing dashboards
- improving workflow
- facilitating system-level QI

Optimize

Optimize treatments in established DMH apps that have captured the marketplace

Enhance the benefits of in-person treatment, e.g., to bridge therapy sessions and promote skill acquisition

Couple technology-assisted assessment data with EHRs to improve the quality of MH practice

Expand

Expand the reach and increase the uptake of DMH apps delivering evidence-based treatment elements

Expand 2

Develop, test, and disseminate new apps with evidence-based treatment elements not currently reaching users

E.g., cognitive restructuring, behavioral activation, exposure, and problem-solving therapies

Challenge: These often require substantial effort from DMH app users

Predict

Use predictive analytics to identify individuals at risk for more severe illness or relapse or disengagement from care
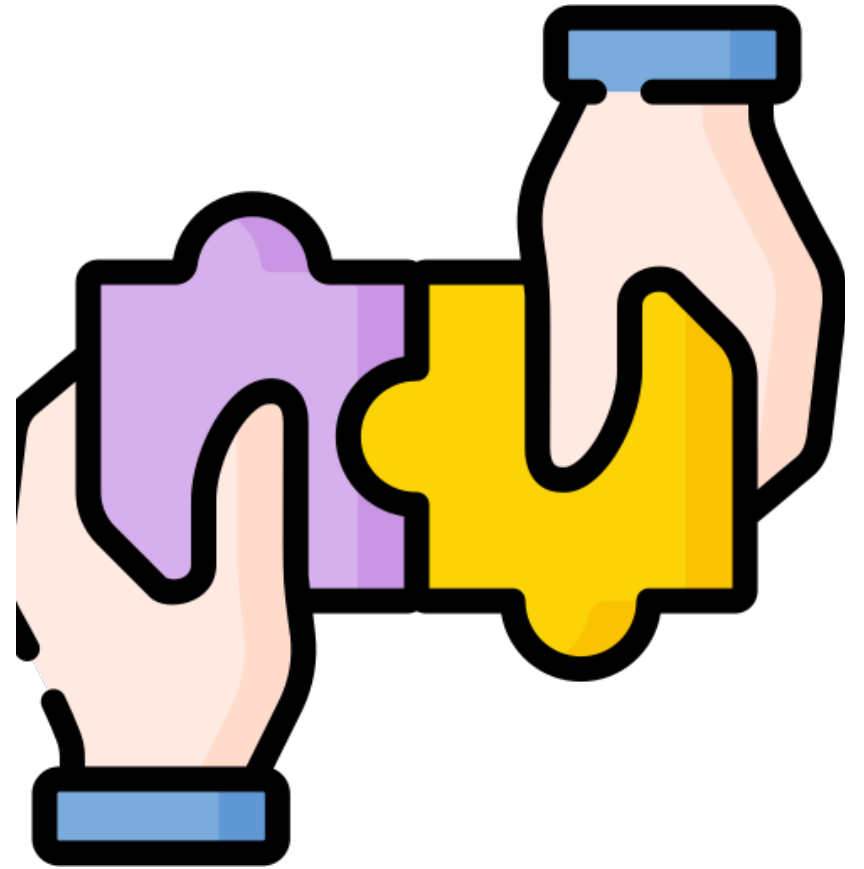
Needed: Well-designed pragmatic DMH research

- Optimize DMH interventions in widespread use

- Increase uptake, engagement, sustainment, and reach of DMH apps delivering evidence-based treatment elements

- Leverage digital spaces already engaging individuals with MH needs

- Integrate effective DMH strategies into existing care systems and support providers in their use

- Predict who is at most risk for disengaging from treatment and poor outcomes

Features of well-designed pragmatic DMH research with potential for high-impact

Well-designed pragmatic DMH research with potential for high impact

- Tests broadly applicable **DMH principles** that generalize across specific DMH apps or platforms

- Features **partnerships** between MH services researchers and digital health developers to leverage digital platforms already engaging the target population

- Produces **relevant and actionable** findings for decision makers

- Involves **stakeholders** at all phases of the research
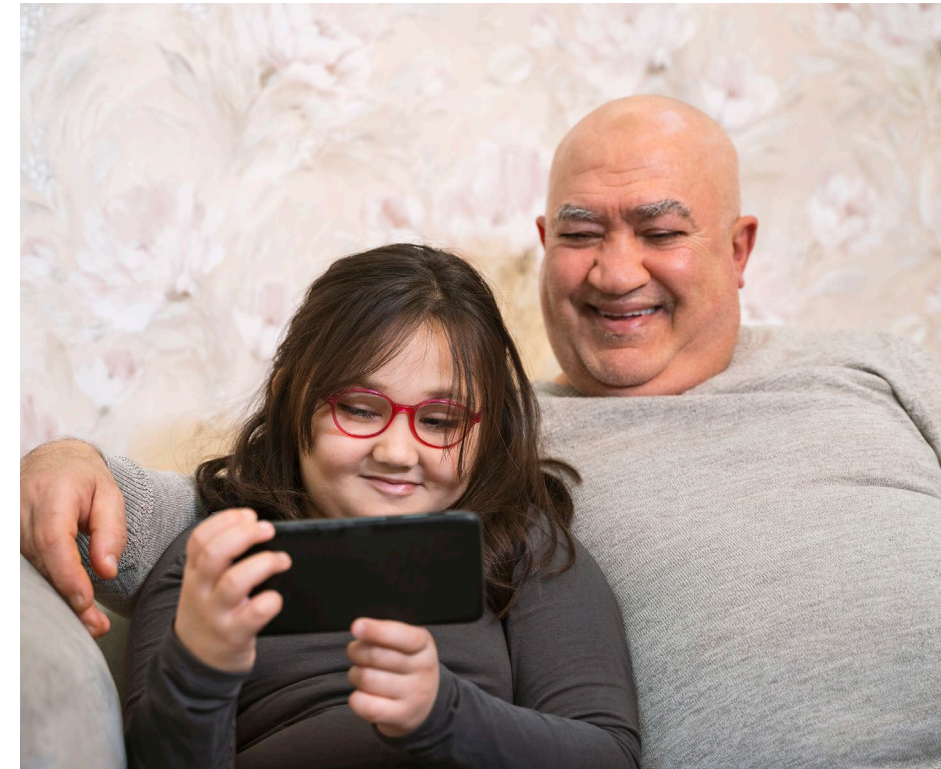
Potential research stakeholders

Service users, families	Commercial health insurers/ funders	Public and commercial disability insurers	Employers and other payers
Service delivery systems	Community organizations	Accrediting and licensing boards	Medical education, other training programs
Clinicians	IT vendors	Federal agencies (CMS, SAMHSA, HRSA, DoD, DVA)	Professional/ trade associations

Exemplar NIMH-funded DMH research projects

Are there different ways to engage, and is there a "best" way to engage?

PIs Patricia Arean, Tim Althoff, Michael Pullmann

- Tests broadly applicable DMH engagement principles on widely used digital platforms, Talkspace and Mental Health America

- Examines data from millions of platform users to understand engagement patterns and barriers for self-guided and guided DMH intervention

- Understand what patterns are optimal and for whom

- Identify and test strategies to enhance optimal engagement

Using digital media advertising to reduce the duration of untreated psychosis

PI Michael Birnbaum
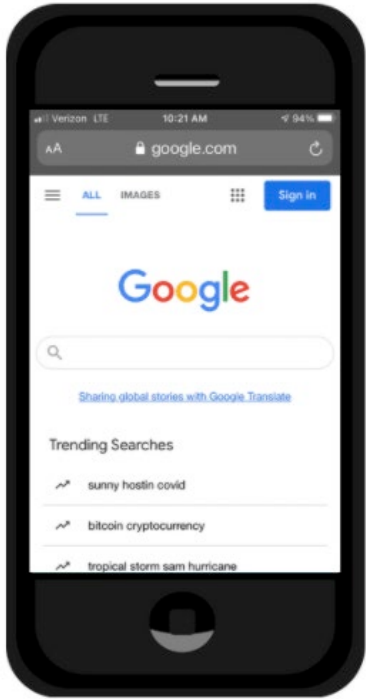
- Digital strategies to accelerate help-seeking for early psychosis

- Responding to MH help seekers' needs for information, screening and connection to evidence-based care

- Leveraging social media: Google Search Ads, Instagram, Facebook
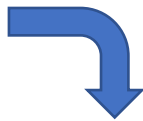
What Do Your Symptoms Mean? | Check Up on Your Healt...
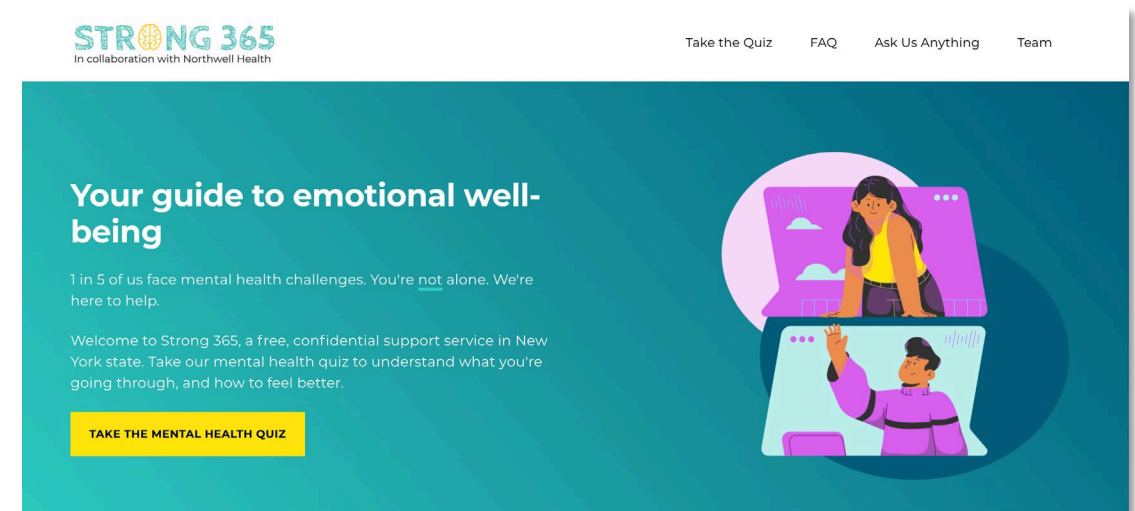Ad nywell.strong365.org (516) 388-8567
Use the Mental Health Quiz to learn about the signs, and when to seek help. We offer free and confidential support.
Connect With Experts · Free Confidential Support · Meet Peers Who Can Relate

Mental Health Quiz   Free Wellness Assessment

Connect With a Peer

STRONG 365
In collaboration with Northwell Health

Take the Quiz   FAQ   Ask Us Anything   Team

Your guide to emotional well-being

1 in 5 of us face mental health challenges. You're not alone. We're here to help.

Welcome to Strong 365, a free, confidential support service in New York state. Take our mental health quiz to understand what you're going through, and how to feel better.

TAKE THE MENTAL HEALTH QUIZ

Can lay peer coaches provide effective DMH support?

PI Arne Beck

- DMH interventions require some level of human support.

- Perpetual MH clinician shortage is particularly acute now.

- Can lay versus clinician DMH coaches provide effective support, and at what cost?

- Mindful Mood Balance for Moms: DMH program for expectant mothers to reduce risk of recurrent depression, tested in large-scale trial within Mental Health Research Network.

Key takeaways

Address DMH research gaps on how to

- Engage
- Integrate
- Optimize
- Expand
- Predict

Conduct high impact DMH research that

- Tests broadly applicable DMH principles
- Features partnerships between researchers and digital health developers
- Leverages existing digital platforms
- Meaningfully involves stakeholders
- Produces relevant and actionable findings

Thank you!