

Real world data from policyholders using a clinical validated digital therapeutic for stress resilience

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Specialised in the study of how sensory experienced influence
mental health through brain circuit modulation

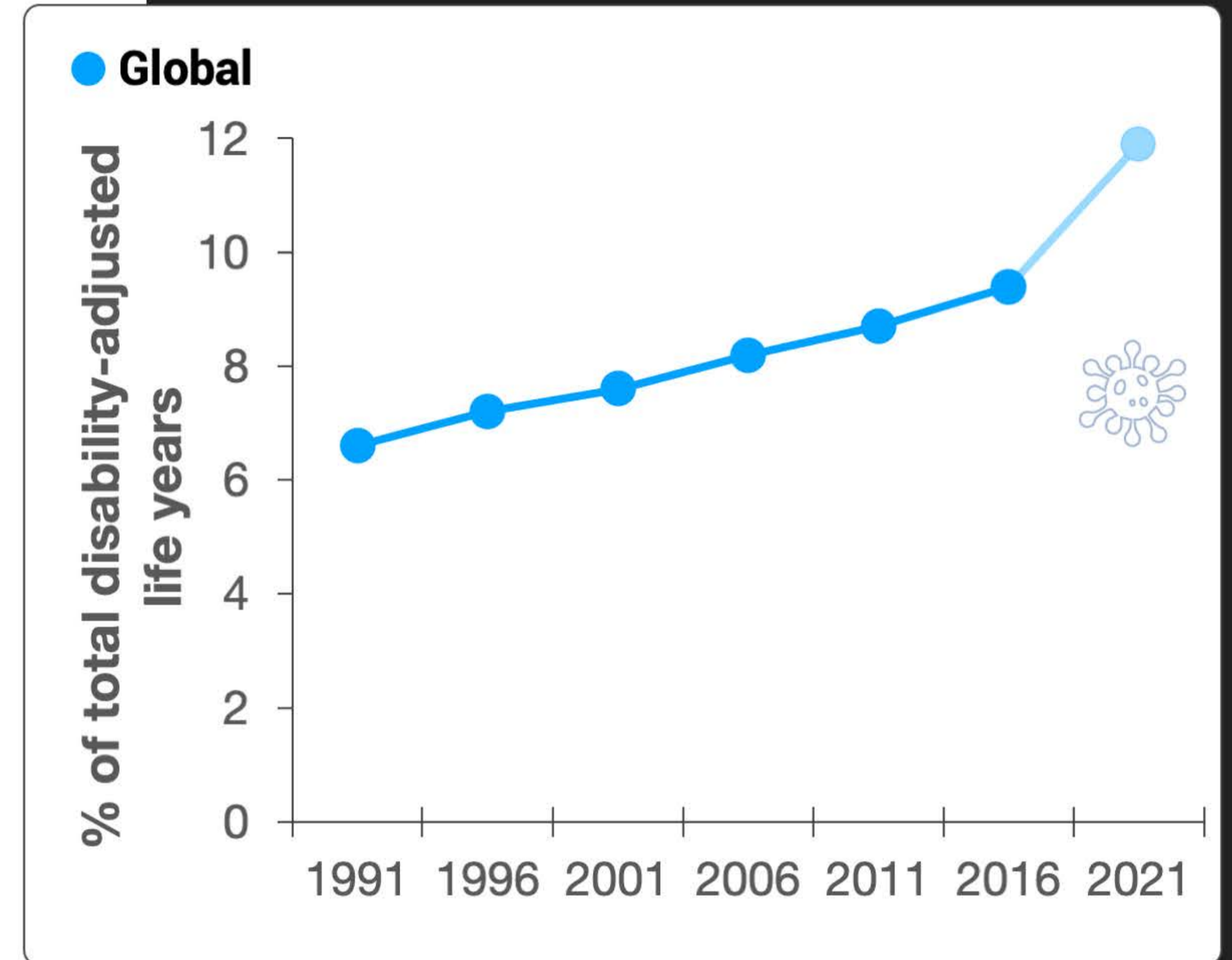
Humanity's greatest crisis

Mental illness is \$16t* crisis in per year treatment cost and lost economic opportunity.

It's contribution to loss of life and life quality continues to grow relative to all other health conditions*.

This is largely unneeded suffering.

*Lancet Commission on Global Mental Health (2016 figure)



Singapore is no exception

 The Straits Times

IMH study points to likely increase in mental health issues in S ...

SINGAPORE - About 13 per cent of over 1,000 participants in a study here reported symptoms of anxiety or depression during the Covid-19...



 CNA

Rising interest in mental health insurance but coverage still ...

The Institute of Mental Health said in its most recent study in 2018 that one in seven people in Singapore had experienced a mental disorder in...



 BRINK News

How Insurers Can Help Improve Mental Health of Societies

A leading insurer in Singapore reported a 36% increase over the past year in claim costs related to mental health. Photo: Ore Huiying/Getty...



What we all already know about mental illness

The problem is very **big**.

Current standards of care are **not enough**.

Ultimately **everyone** is affected.

Everyone is affected in a very **unique** way.

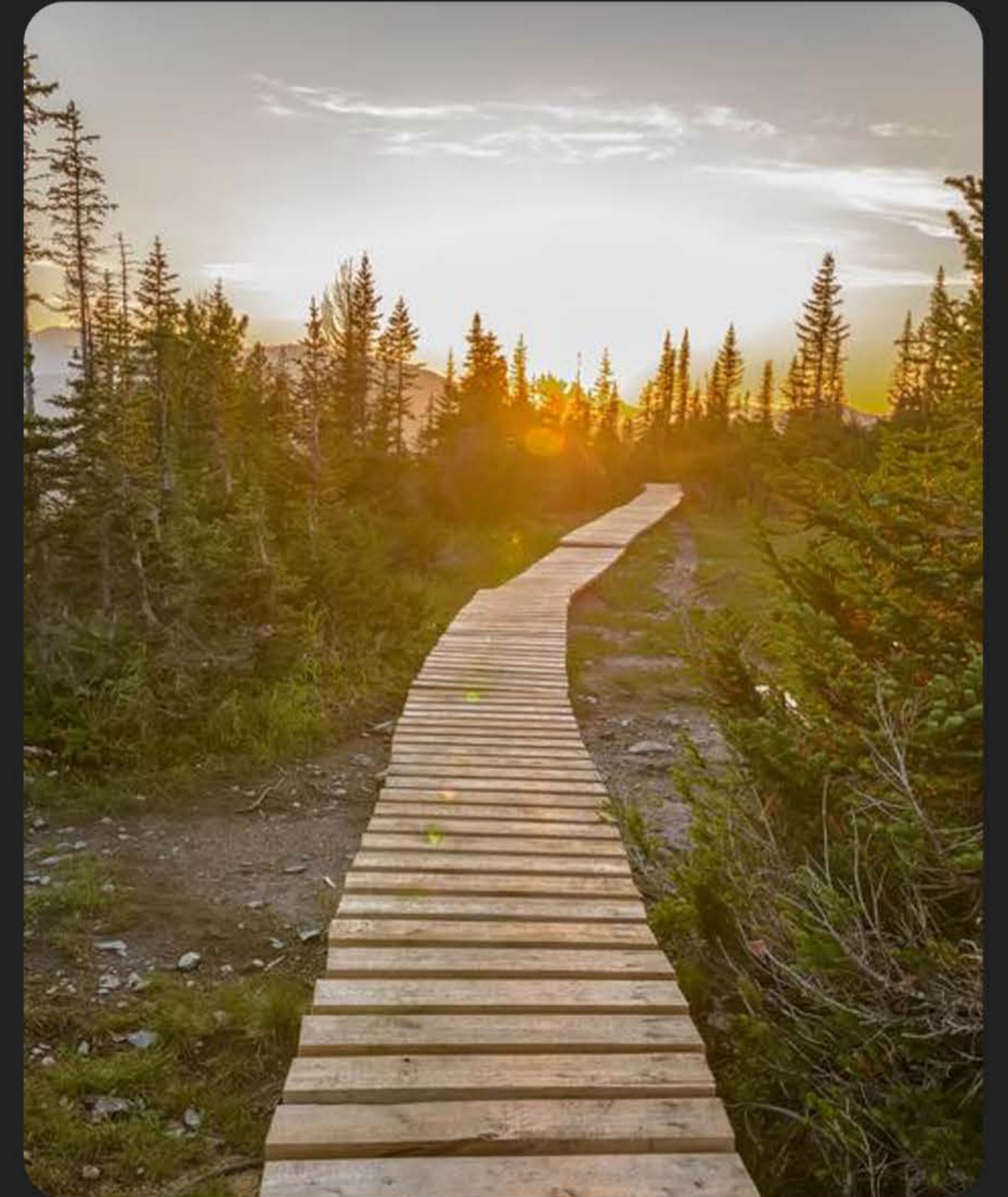
For mental illness, the solution must be **both** scalable and personalised

Psychotherapy

X Not scalable

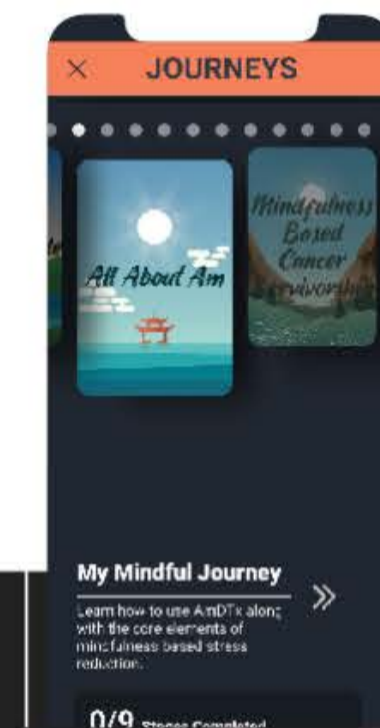
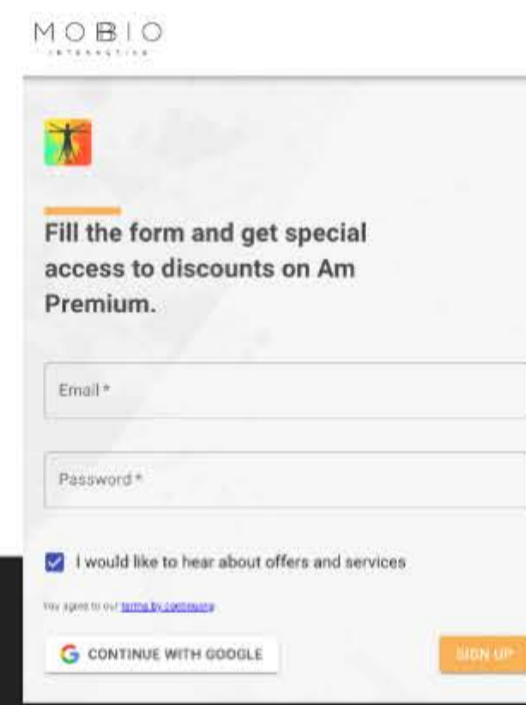
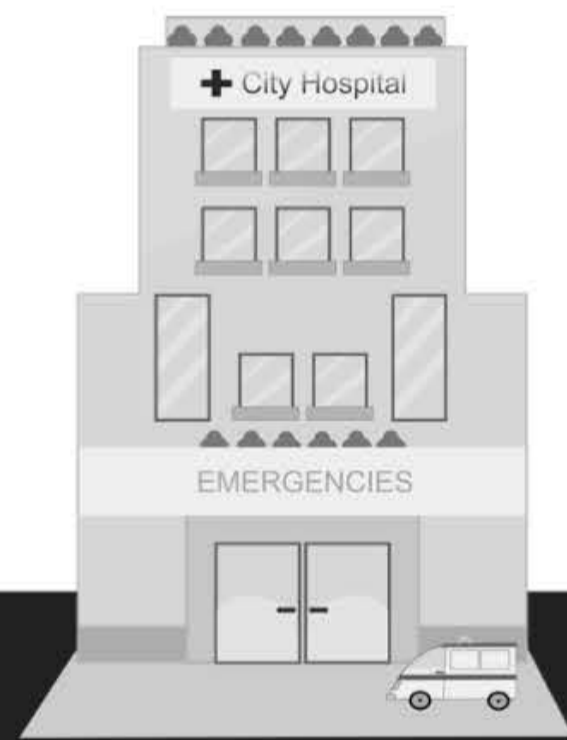
Pharmacotherapy

X Not personalised



Scalability through mobile software

Via a single platform (AmDTx), indication-specific interventional materials and measures are accessible to anyone anywhere.



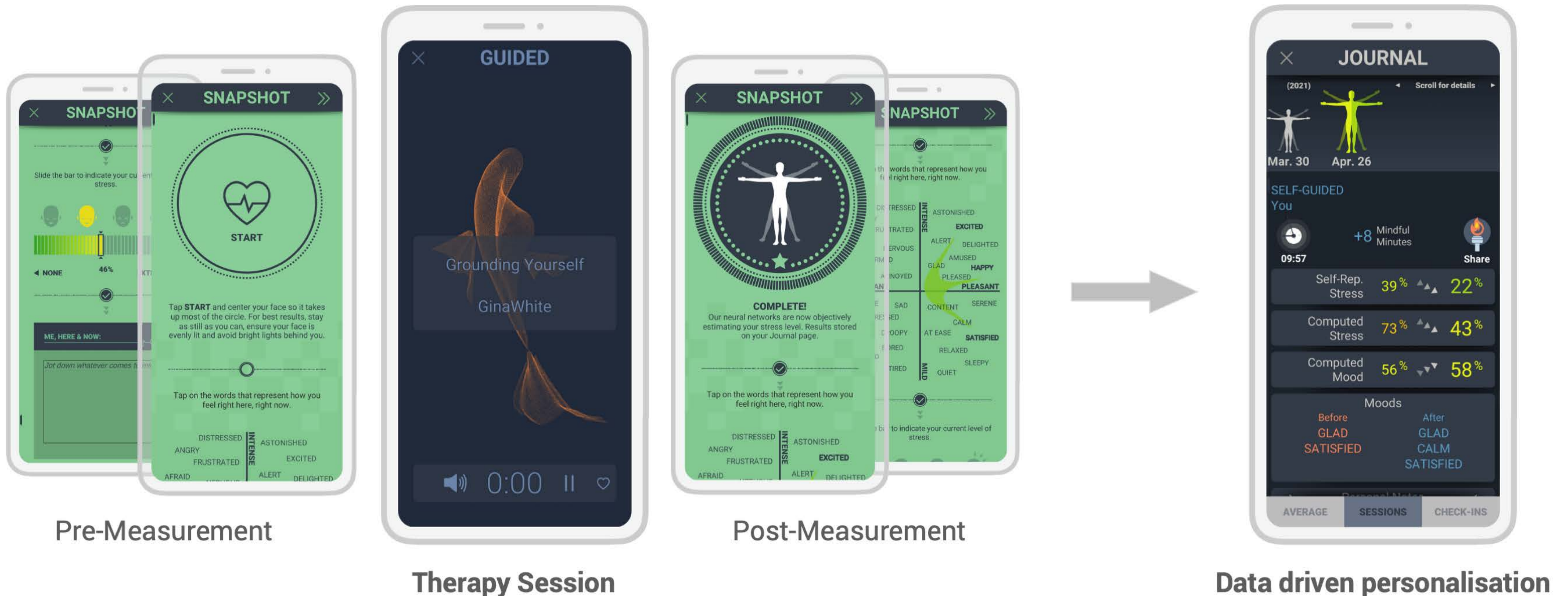
Healthcare providers give patients access to an intervention-specific landing page

Patients create an AmDTx account and use the same credentials to access AmDTx

AmDTx automatically reconfigures to deliver the desired intervention and then adapts with each patient to maximise efficacy

Personalisation through brain state quantification

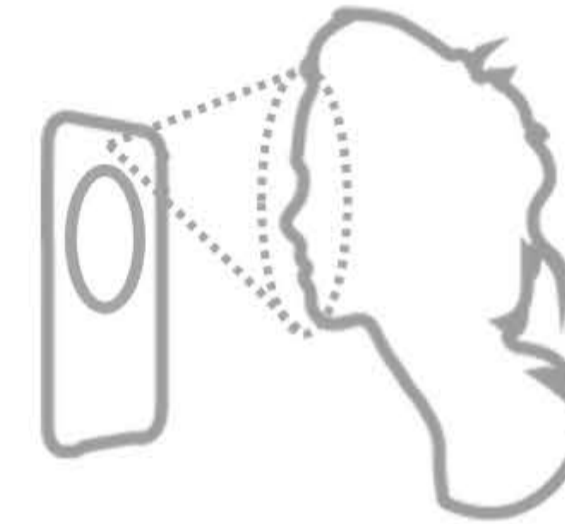
A gamified “measure-treat-measure” system to learn what is objectively most efficacious for every individual patient.



A dataset like no other

Enriched with populations that can produce more accurate self-assessment on stress and emotion (valence + arousal) than the average person.

Captured in tandem with controlled 30 s selfie video.



>2,400,000
Digital biomarkers



>25,000
Unique individuals



175
Nations represented



Accurate neural networks that quantify brain states

Accurate self-assessment + computer vision + AI = Accurate mental health quantification at scale

Stress quantification in 30 seconds with over 80% accuracy, using nothing more than a typical smartphone front-facing camera.

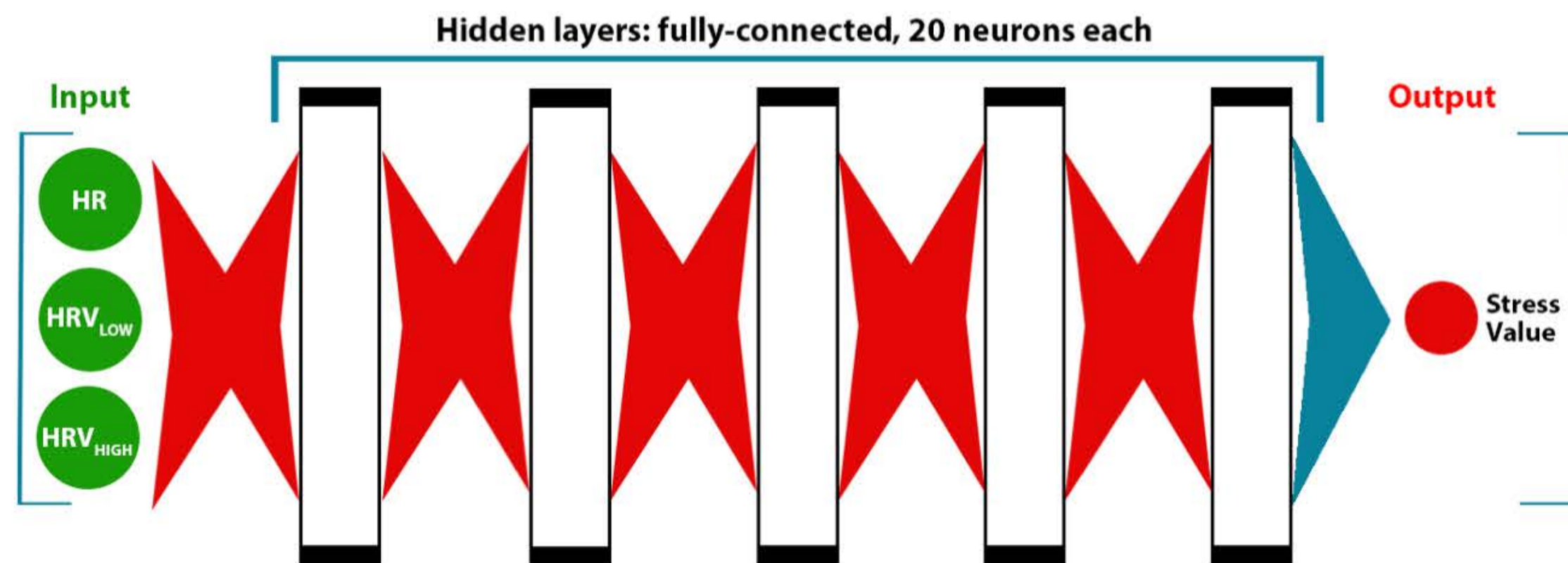


Table 3 Accuracy of stress prediction for classification DNN, chance and other methods

Method	Accuracy	MSE
Classification DNN	86%	-
Prediction DNN	-	0.02
Chance	32%	-
Logistic Regression	77%	0.31
SVM	43%	-
HRV _{HIGH} /HRV _{LOW}	32%	1.45

Validated & Published:

Self-assessment of stress benchmarked to medical standards: Walsh et al., *JMIR Mental Health* 2019

Scalable digital biomarkers through a camera: Chwyl et al. *IEEE* 2016

Accurate stress quantification using a deep neural network: Al-Jebrni et al. *Biomedical Signal Processing and Control* 2020

Clinically Validated Interventions for:

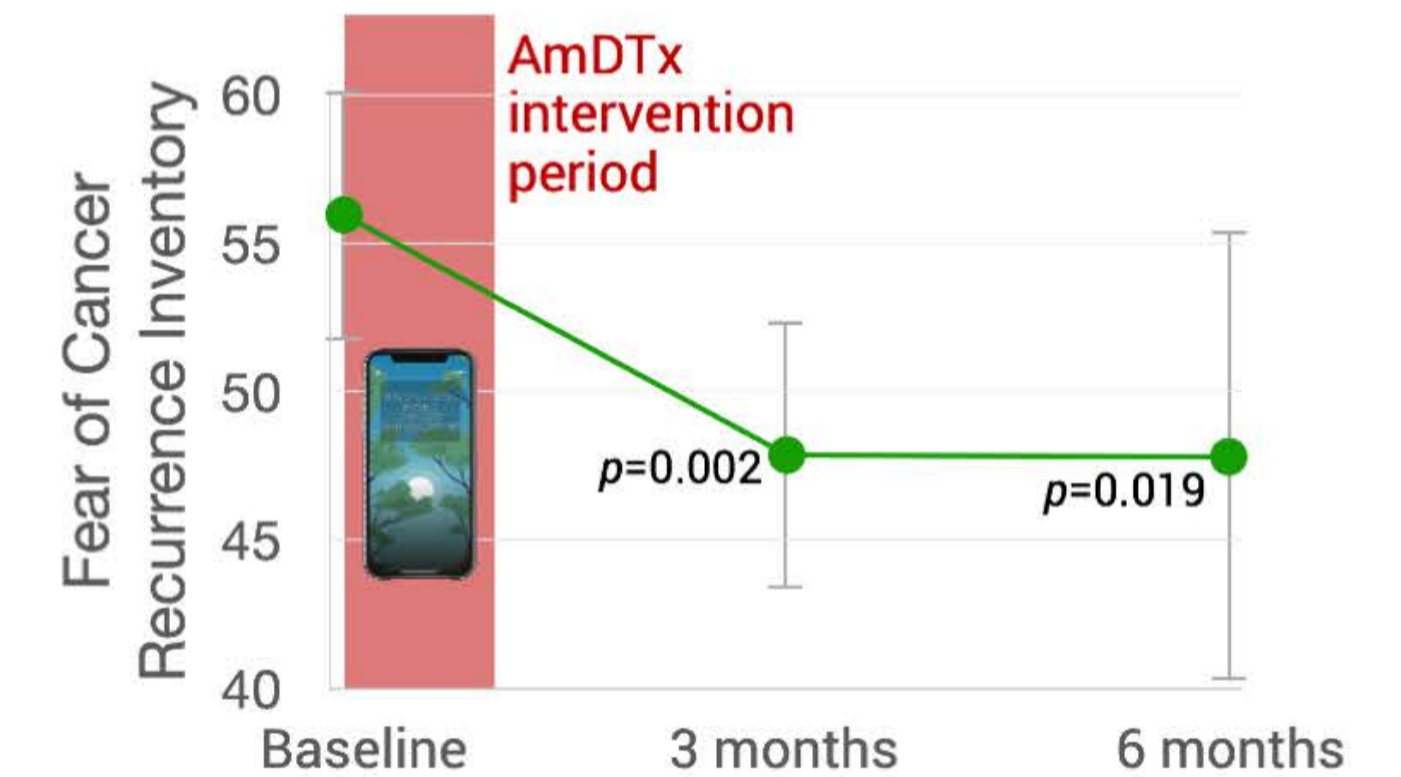
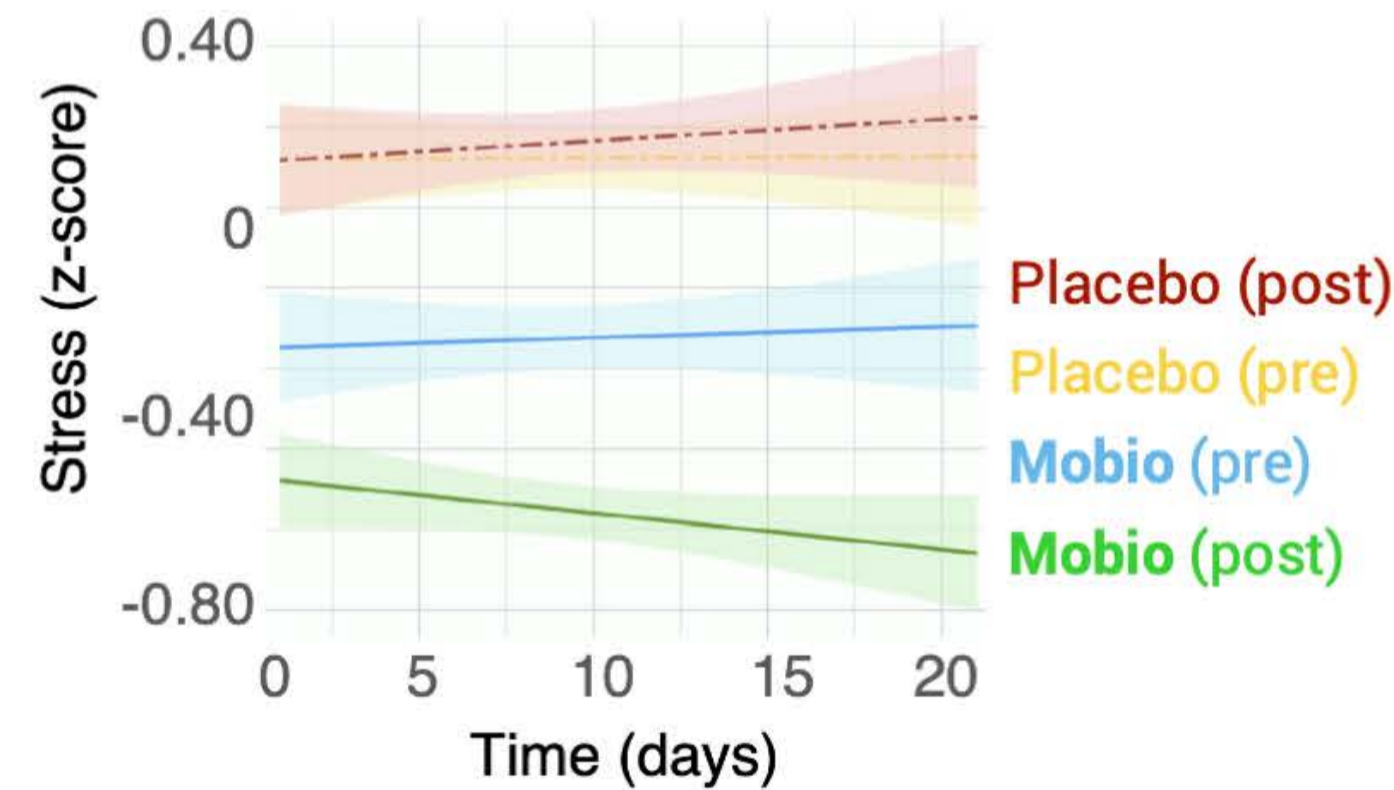
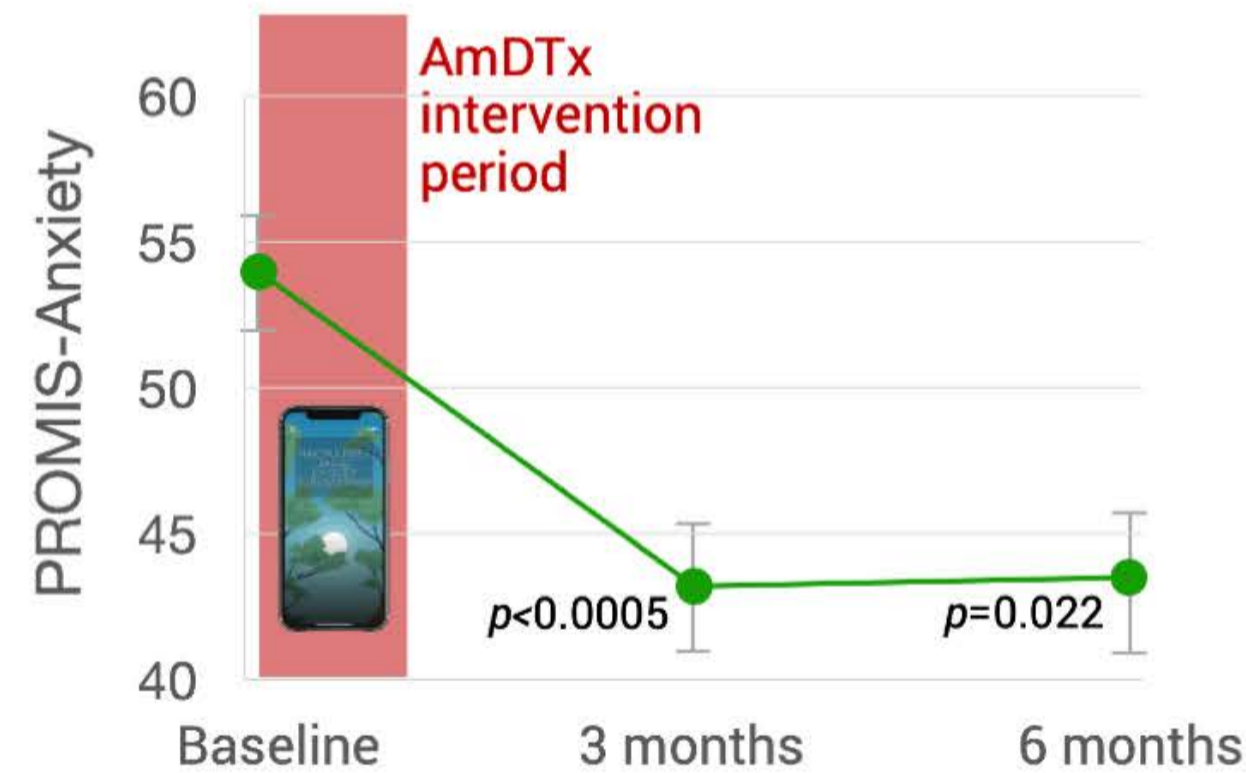
Generalised Anxiety



Chronic Stress



Cancer



Validated & Published:

Generalised Anxiety Disorder: Subnis et al. *Digital Health* 2021 + Brüel et al., *In Prep* 2021

Chronic Stress Conditions: Walsh et al. *JMIR Mental Health* 2019 + Subnis et al. *Digital Health* 2021

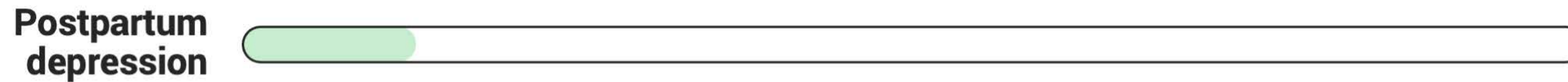
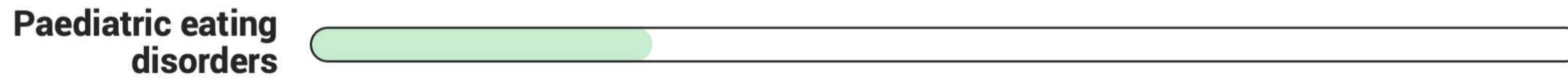
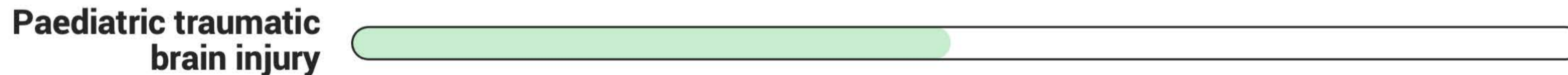
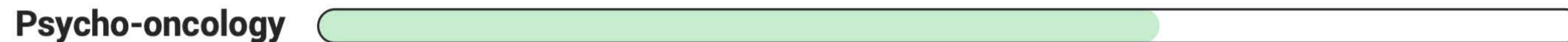
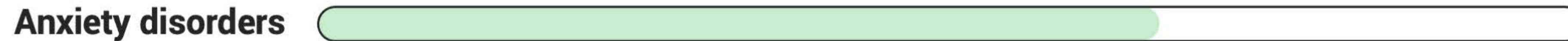
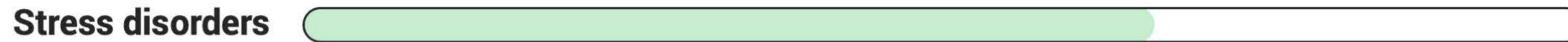
Affect Disorders Co-morbid with Cancer: Subnis et al. *Digital Health* 2021

Full Indication Pipeline

Clinical trial partners:



	Intervention funded	Ethics approved	Trial(s) underway	Clinically validated*	Regulatory approved**	Commercially reimbursed
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*Relevant clinical studies:

- Reduction in mental illness symptoms in cancer patients: Subnis et al. JMIR Protocols 2020 & Subnis et al. Digital Health 2021
- Reduction in stress, improved in focus and mental wellbeing in young adults with anxiety: Walsh et al. JMIR Mental Health 2019

**AmDTx is currently certified as a MDD Class I medical device and is approved by the mHealth digital formulary ORCHA. Applications for MDR Class IIa and FDA Software as a Medical Device are underway.

More than 10m fully or partially covered lives



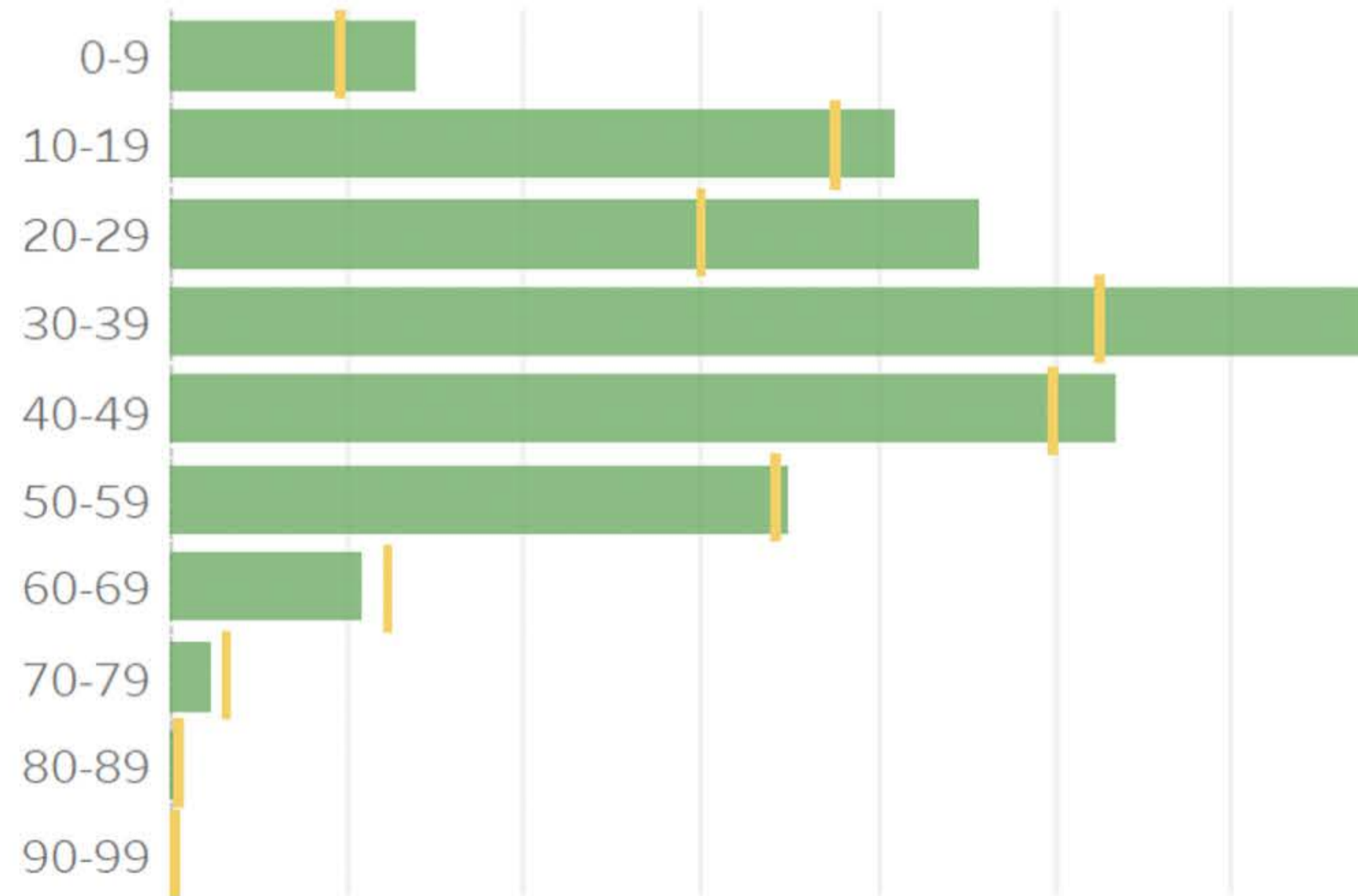
Each of these partners help with key steps needed for establishing market access.



Health insurance pilot summary

Claims data on psychotherapy

Paid Claims by Age



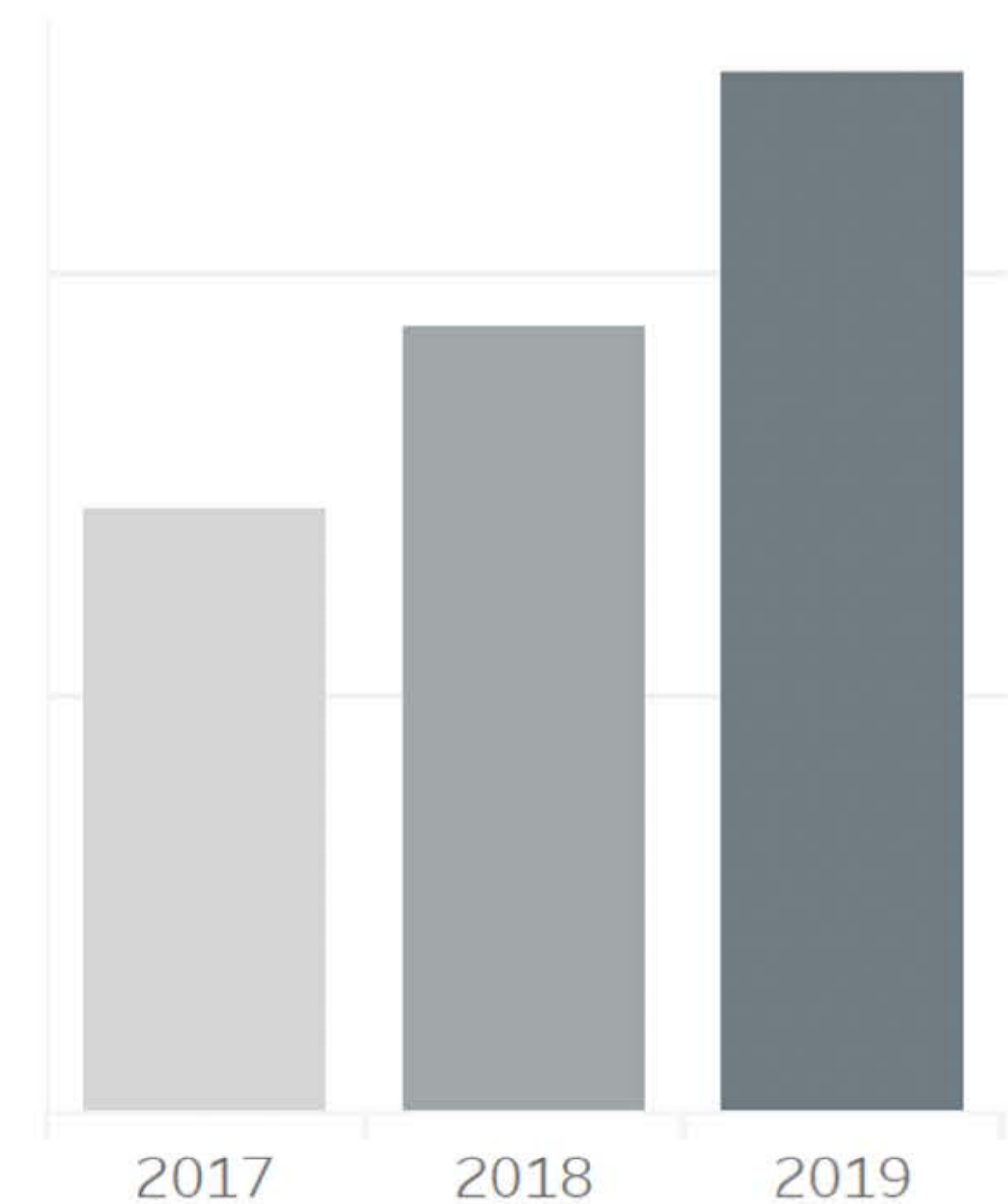
Measure Names

- Claims Paid Amount Prior Year
- Claims Paid Amount This Year

Avg Cost Per Claim

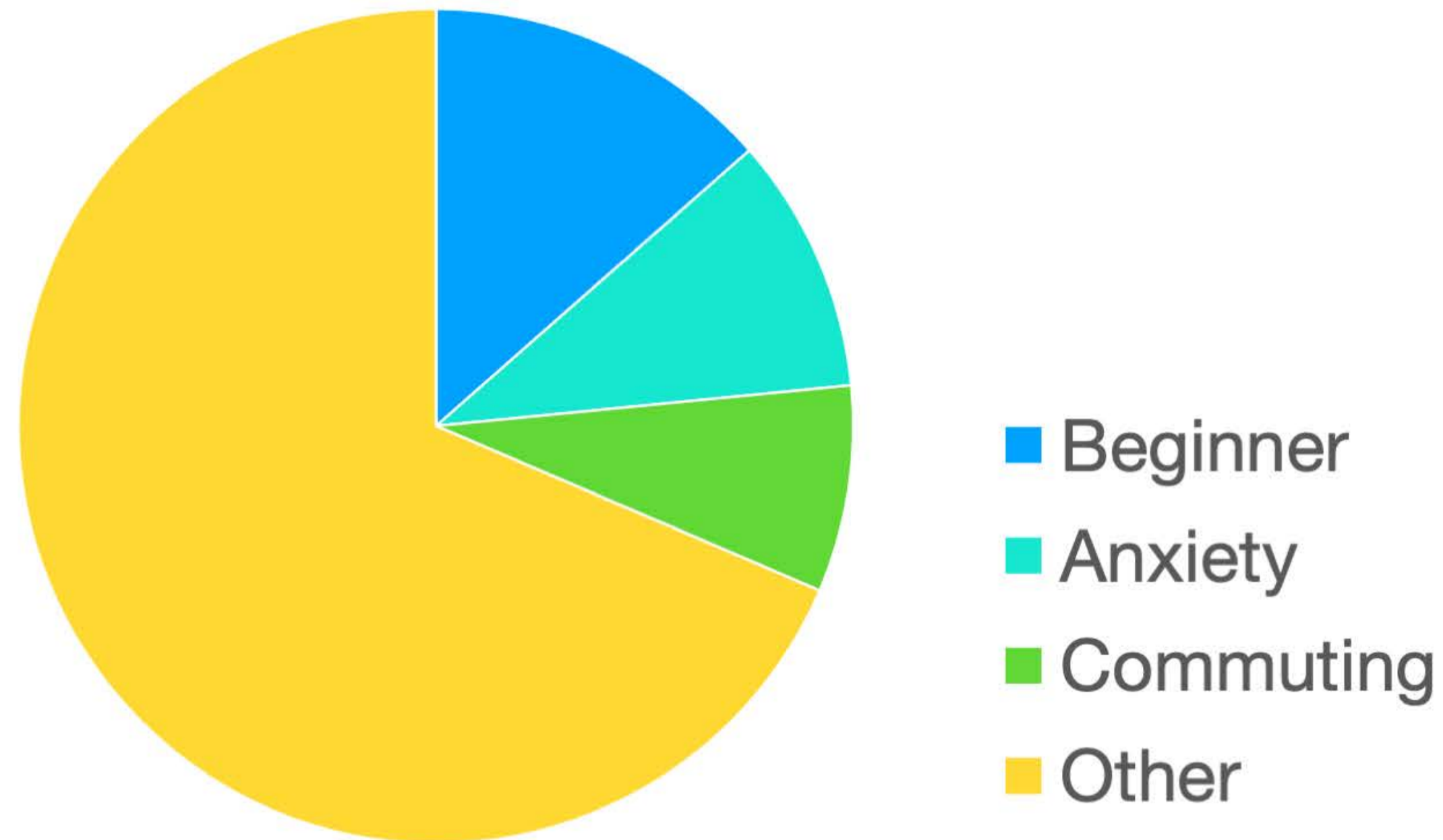


Claims Count



Health insurance pilot summary

Plan member content preferences



Health insurance pilot summary

Plan member change in mood

8% Improvement in mood



Health insurance pilot summary

Plan member change in stress

19% decrease in self-assessed stress



4% decrease in stress objectively measured by AI



Health insurance pilot summary

What is the effect on claims?





**Where there is great crisis,
there is also great opportunity**



Where there is great crisis, there is also great opportunity

“I was able to control my anxiety.... I have worked with therapists and have used numerous apps... This is the first thing that really 'clicked' with me.”

Young adult with anxiety & clinical trial participant





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