



# Ellipsis Health for Accenture Challenge



# 11 Years From Onset of Mental Health Symptoms to Treatment



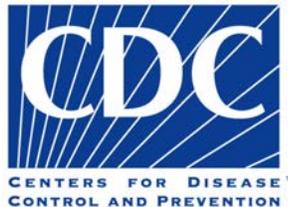
Blood  
Pressure



Blood  
Sugar



Mental  
Health



JUN 2019

FEB 2021

1 in 10 → 4 in 10

US Adults reported symptoms of  
anxiety or depressive disorder

16% ED visits

Mental health and substance  
use disorders



# Ellipsis Health Snapshot



## OUR VISION

**Screen, assess, and monitor mental health** at scale so that every person has equitable access to better care



## THE PROBLEM

There is **no objective measure** of anxiety and depression outside of a mental health professional assessment



## OUR SOLUTION

With natural speech, and no baseline, our **AI** models present **clinical grade scores** for anxiety and depression severity to clinicians



## VALUE PROPOSITION

By leveraging our technology, **we create positive economics** and **better, faster care** through every encounter where measurement of behavioral health supports **improving access and quality of care** for all



## KEY RESULTS

**24%** improvement in averting crisis events

**35%** better than claims data analysis

**30%** of users speak longer than requested



## STRATEGIC PARTNERS

Cigna International, Mayo Clinic, Vanderbilt Health and Best Buy. Live in 12 countries and 12 states



## ARCHITECTURE

HIPAA-Compliant, cloud-based platform, Native Apps, Web Widget, API, EHRs



## SaaS BUSINESS MODEL

PMPM or enterprise  
Value-based care model



## FUNDING

\$31M total Funding. Closed Series A 6/21



## COMPETITION

Paper or digital surveys, Patient Reported Outcomes administered standalone or embedded in digital health platforms

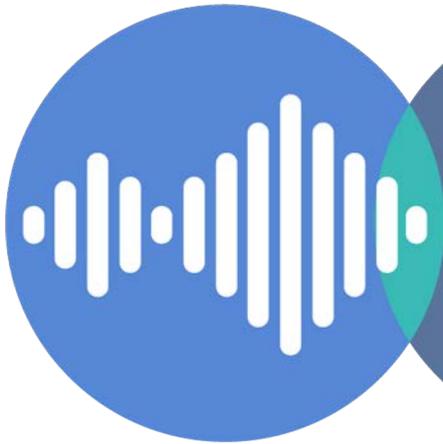


## LEADERSHIP TEAM

Entrepreneurs with multiple exits, 50% female, 50% science or clinical expertise, commitment to DEI

# Ellipsis Health has Pioneered Voice as Vital Signs for Mental Health.

## ACOUSTIC



Low-pitch energy

Compressed Range

Pausing, rate

## WORD-BASED

... the hope's **not**  
there my job's  
**not great. Don't**  
see myself get-  
ting a raise ...

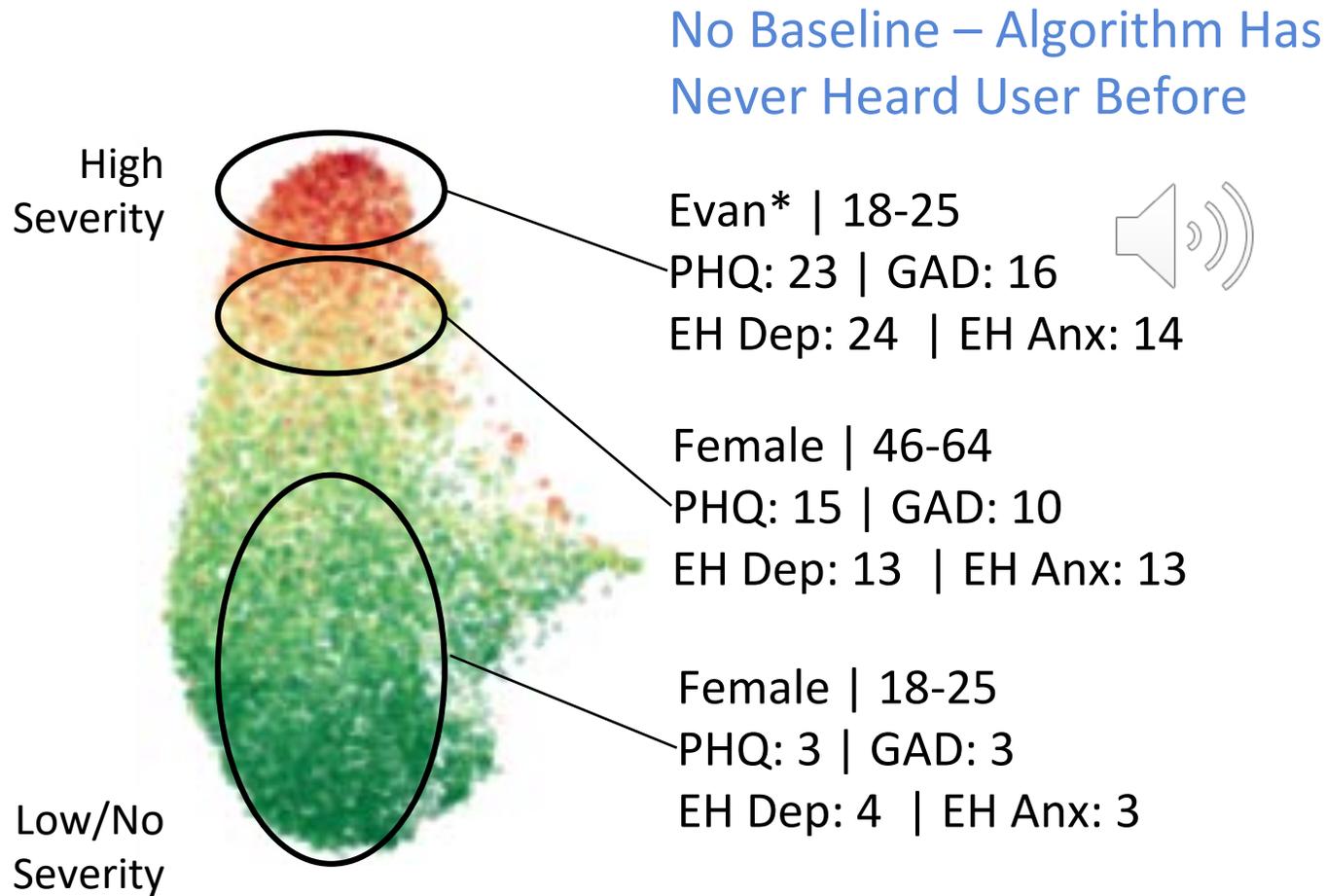
Negative sentiment

First Person pronouns

Hedges



# Voice Opens a New Path to Quantify Mental Health



## Machine-Learning Performance

### Population

- 15000+ individuals
- 18-80+
- No baseline

### Depression Performance

AUC (PHQ $\geq$ 15): 0.87

- Sensitivity/ Specificity: 79%

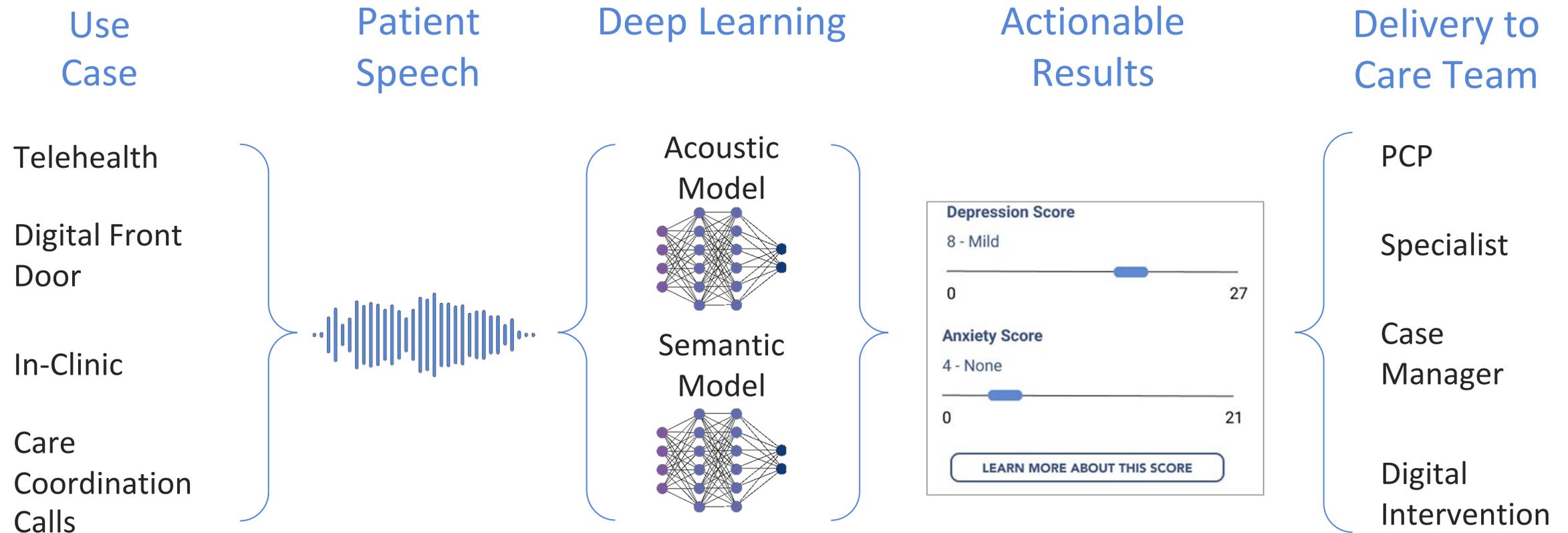
### Anxiety Performance

AUC (GAD $\geq$ 15): 0.85

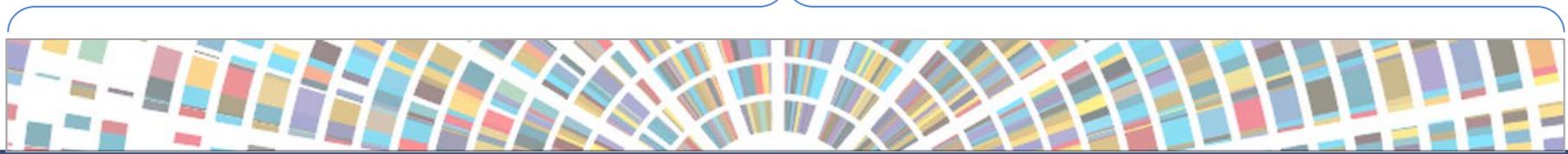
- Sensitivity/ Specificity: 77%

Voice from User Tests and Shared with Permission \*name changed to protect identity

# Cutting-Edge Deep Learning Scales an Expert's Ear to Every Encounter



Powered by one of the Industry's Largest Labeled Data Sets



# Our Science Leads the Industry



## Robust

Validated in ages **18-80+**  
in over **15K** individuals



## Published

**6** Papers **1** Chapter  
**1** Completed IRB  
**5** IRBs in process



## Effective

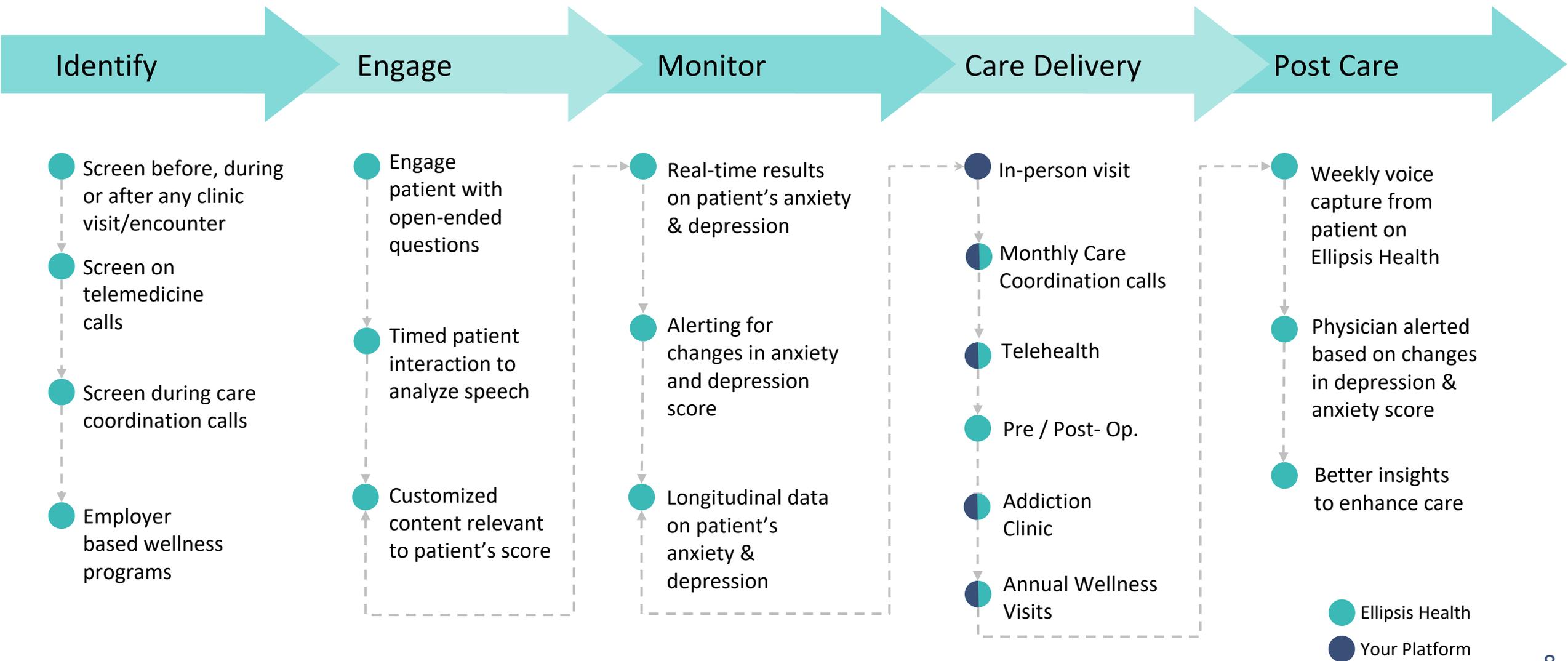
**24%** Improvement in averting  
crisis events  
**35%** Better than claims data analysis

RESEARCH  
PARTNERS

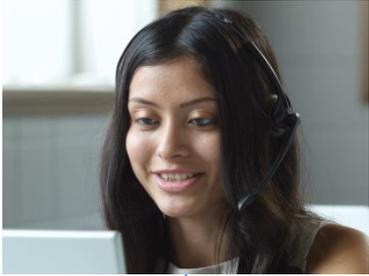


# Patient Experience Journey

Ellipsis uniquely connects every point of the patient digital journey



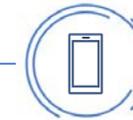
# Real-time Analysis, Layers on Calls or Video



“How are you doing today?”



“I just wanted to check in on you as I see you missed your last appointment with Dr. Johnson.”



“I’ve been better”



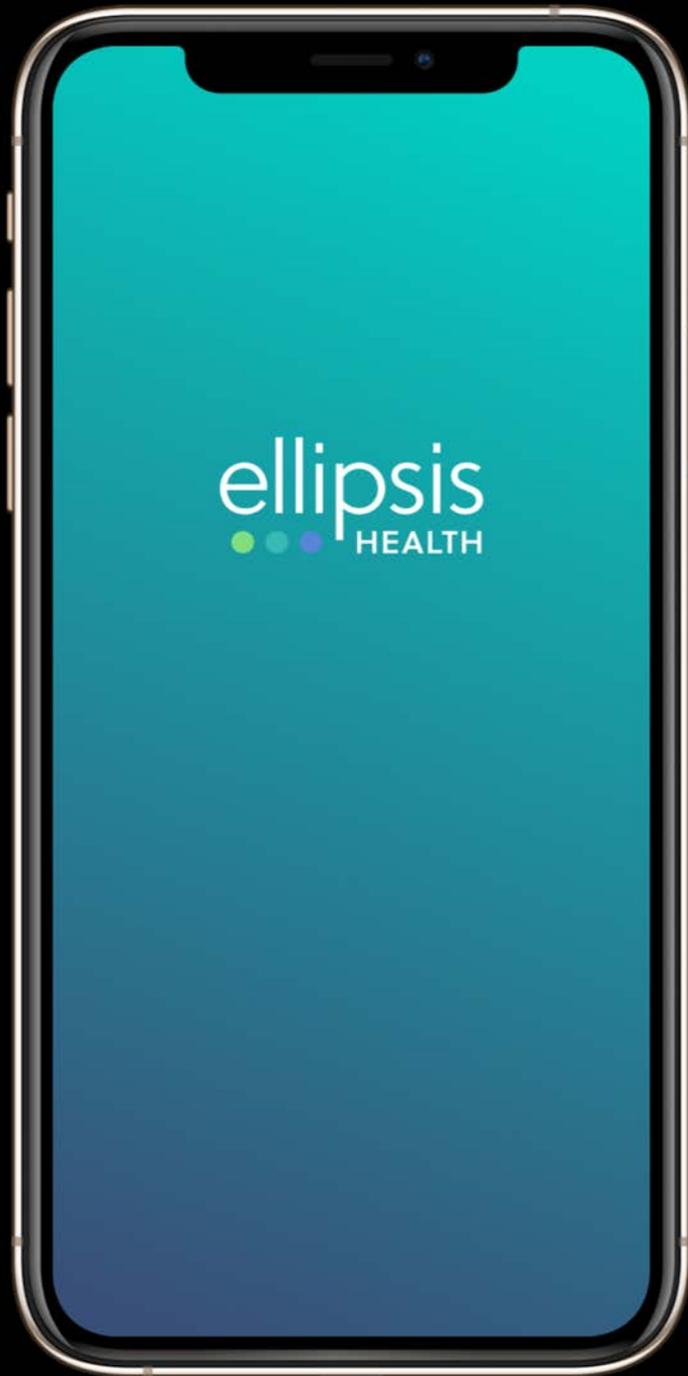
“Yeah, I have a lot of schoolwork and this whole COVID not being able to go out is taking a toll on me.”



Moderate Depression

**EH Depression: 14**

**EH Anxiety: 14**



ellipsis  
HEALTH



**Your privacy is super  
important for us.**

Your data is protected and it is only  
available to you and United Healthcare.

[Continue](#)

## Current Worries

What have you been worried about lately?



Tap to record



Exit Recording

9:41



Thanks for sharing  
more with me!

Continue sharing

Done talking



Work

Health



### Your privacy is important to us.

You're about to share your results with your personal Mental Health provider. Remember that your information is totally confidential and you are the only one that decides to whom it may be shared.

**Do you want to share your results with: doctor@mentalhealth.com?**

**Yes, share my results**

No, maybe later



New Sessions



Average Patient Score per Session



7/10 Accepted Invitations

New Patients	MRN	First Session Completed?
Sarah Goddard	197836390	Yes; 08/01/2021
Megahan Fry	354638292	No
Brian Wheeling	373627899	No

New Sessions	Patient	MRN
1:48	Rama Patel	197836390
2:23	Molly Malone	354638292
0:24	Dan Deering	373627899

Today's Patients					
Patient Name	MRN	Last Session Date	Depression Score	Anxiety Score	Actions
Evan Favreau	1876532425	7/22/2021	• 18	• 22	
Angela Mayer	1876532425	7/22/2021	• 18	• 22	
Adeline O'Reilly	1876532425	7/22/2021	• 18	• 22	





**Evan Favreau**

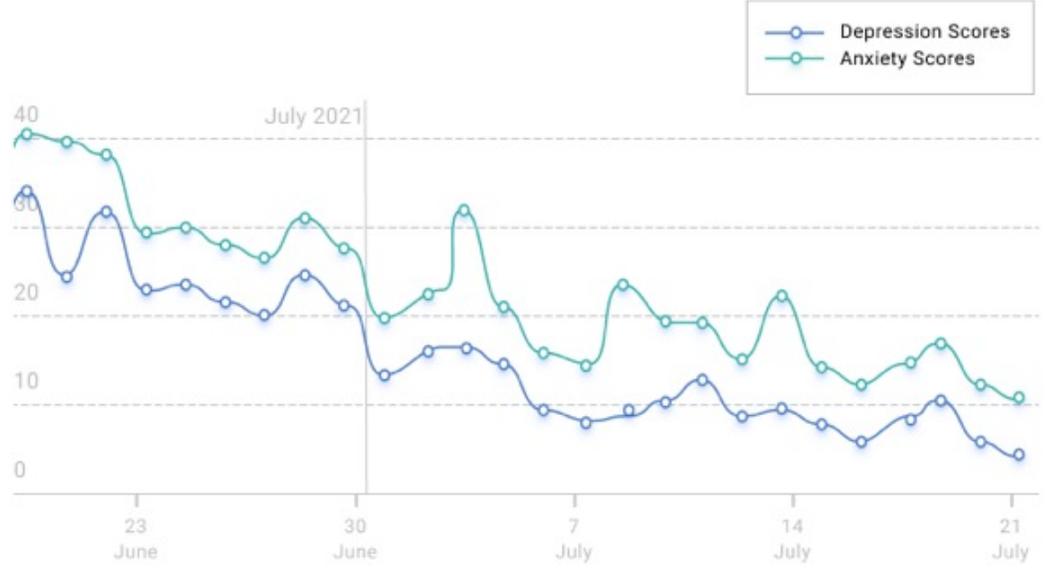
MRN: 12787379

DOB: 3/14/1999

Patient Since 4/11/2018

Sessions Completed: 304

**Next Appointment: 8/15/21**



—○ Depression Scores  
—○ Anxiety Scores

Last Session: August 3, 2021    Scores: **18/23**

Session Audio: 3:01

Clinical Notes:

Session History [View all](#)

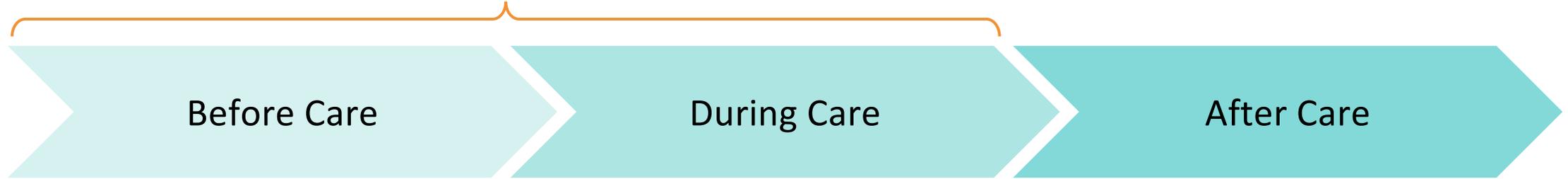
Filter Sessions

Session Date	Session Audio	Notes	Sessions Completed	Depression/Anxiety Scores	Actions
7/21/2021	1:48	<a href="#">Clinical Note</a>	18	24/18	
7/18/2021	5:33	<a href="#">Clinical Note</a>	17	22/6	
7/15/2021	2:11	<a href="#">Clinical Note</a>	16	28/15	

# How We Help You (and Other Partners) with the Care Model

Better Screening

Better Monitoring



# Flexible Architecture

## Configurable deployment options



Real-time API



Web Widget



Webapp



Standalone Apps

## Works on any platform & EHR agnostic



## Privacy & Security from the ground-up



HIPAA & GDPR-Compliant



Thought-leader on voice security & consent

# Meet Ellipsis Health's Leadership Team

Ellipsis Health is a global movement to democratize emotional wellbeing



**Mainul Mondal**  
Co-Founder & CEO



**Dr. Mike Aratow, MD**  
Co-Founder &  
Chief Medical Officer



**Susan Solinsky**  
Co-Founder &  
Chief Growth Officer



**Elizabeth Shriberg, PhD**  
Chief Science Officer



**Ajit Verma**  
Chief Technology Officer



**Shirley Bergin**  
Chief Innovation Officer



**David Lin**  
Chief Behavioral Health  
Officer



**Melissa McCool**  
VP, Clinical Engagement



# You Can't Manage What You Can't Measure

- We are creating a new standard of care by assisting care teams with scalable decision support tools to identify, triage and monitor behavioral health conditions
- We are stopping crisis events, creating workflow efficiencies and improving the patient experience
- Please connect us with payer and provider groups that want to have data to inform care for mental health
- Wherever there is voice, we can assess behavioral health



Thank you to the Judges  
and to  
Accenture for this opportunity

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