

The Zoom Interface

The screenshot shows the Zoom Webinar interface with several annotations:

- Top Bar:** "You are viewing David Terry's screen" and "View Options" button.
- Main Content Area:** TTC Technology Transfer Centers logo, "Thank you for joining us today!", and "You will not be on video during today's session".
- Q&A Window:** A "Question and Answer" window is open, showing a test question: "This is a test question!". Annotations explain that users can switch between "All questions (1)" and "My questions (1)", and that the Q&A feature allows asking questions of the host and presenters.
- Chat Window:** A "Zoom Webinar Chat" window is open on the right. Annotations explain that the chat feature allows talking with other people, and that the "To" field indicates who will receive the message (e.g., "All panelists").
- Bottom Bar:** Includes "Audio Settings" (with a callout to "Click Here to adjust your audio settings"), "Chat", "Raise Hand", "Q&A", "Click here to leave the session", and a "Leave" button.

All attendees are muted. Today's session will be recorded.

Telebehavioral Health Services: Planning and Investing for the Future of Your Services

Session 2: The Evidence-Base for Telebehavioral Health and Digital Mental Health Services

Jay Ostrowski

Behavioral Health Innovation

7/21/2021



Northeast and Caribbean (HHS Region 2)

MHTTC

Mental Health Technology Transfer Center Network

Funded by Substance Abuse and Mental Health Services Administration

About Us ...

The Northeast and Caribbean MHTTC received 5 years (2018 – 2023) of funding to:

- Enhance capacity of behavioral health workforce to deliver evidence-based and promising practices to individuals with mental illnesses.
- Address full continuum of services spanning mental illness prevention, treatment, and recovery supports.
- Train related workforces (police/first responders, primary care providers, vocational services, etc.) to provide effective services to people with mental illnesses.

Supplemental funding to:

- Support school teachers and staff to address student mental health
- Support healthcare providers in wellness and self-care activities



Grow Your Knowledge and Skills

Keep up with the latest effective practices, resources, and technologies!

Subscribe to receive our mailings.
All activities are free!

<https://bit.ly/2mpmpMb>

We Want Your Feedback!

Our funding comes from the Substance Abuse and Mental Health Services Administration (SAMHSA), which requires us to evaluate our services. We appreciate your honest, ANONYMOUS feedback about this event, which will provide information to SAMHSA, AND assist us in planning future meetings and programs.

Feedback about this training will assist us in developing future trainings that are relevant to your professional needs. Therefore, your feedback counts!

Video Recording Information

Please Note:

We will be recording this webinar and posting it to our website along with the presentation slides and any relevant resources.

Disclaimer

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At the time of this presentation, Tom Coderre served as Acting Assistant Secretary for Mental Health and Substance Use at SAMHSA. The opinions expressed herein are the views of the speakers, and do not reflect the official position of the Department of Health and Human Services (DHHS), or SAMHSA. No official support or endorsement of DHHS, SAMHSA, for the opinions described in this presentation is intended or should be inferred.

This work is supported by grant H79SM081783 from the DHHS, SAMHSA.

Your Interactions With Us

Question and Answers

- Q & A will occur at the end of the call.
- Type your questions in the Q & A feature in Zoom located on the task bar (hover over task bar).
- Note: your question is visible to all participants.

Chat and Polls

- Throughout the webinar, we will be asking for your input.
- Use the Chat or Poll features in Zoom located on the task bar.
- You can control who can see your chat comments.

The MHTTC Network uses affirming, respectful and recovery-oriented language in all activities. That language is:

STRENGTHS-BASED
AND HOPEFUL

INCLUSIVE AND
ACCEPTING OF
DIVERSE CULTURES,
GENDERS,
PERSPECTIVES,
AND EXPERIENCES

HEALING-CENTERED AND
TRAUMA-RESPONSIVE

INVITING TO INDIVIDUALS
PARTICIPATING IN THEIR
OWN JOURNEYS

PERSON-FIRST AND
FREE OF LABELS

NON-JUDGMENTAL AND
AVOIDING ASSUMPTIONS

RESPECTFUL, CLEAR
AND UNDERSTANDABLE

CONSISTENT WITH
OUR ACTIONS,
POLICIES, AND PRODUCTS

Our Presenter



Jay Ostrowski MA, LPC-S, NCC, DCC, ACS, CTCP



Evidence Base for Telebehavioral Health

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JAY OSTROWSKI
MA, LPC-S, NCC, ACS, BC-TMH

Consultative Partner- [TBHCOE.MATRC.org](https://www.tbhcoe.matrc.org)
CEO, [Behavioral Health Innovation](#)
CEO, [Adaptive Telehealth](#)

Jay Ostrowski

Roles

CEO - Behavioral Health Innovation

CEO - Adaptive Telehealth

Consultant

- Mid-Atlantic Telehealth Resource Center

Consultant - Various, periodically

Licenses and Certifications

Licensed Professional Counselor Supervisor

Licensed Professional Counselor (MI, SC)

Approved Clinical Supervisor

National Certified Counselor

Board Certified - Telemental Health Provider



Learning Objectives

- Describe the efficacy of different types of TBH.
- List services ready now services ready to deploy in the near future.
- Identify the research challenges and opportunities in Telebehavioral Health services (TBH).

What is Telebehavioral Health?

Types of Telehealth

Telehealth

Telemonitoring

Telemedicine

Telebehavioral Health

Remote Patient Monitoring

Ambulatory

Telepsychiatry

Telemental Health

Clinical Apps

Surgical Consults

Clinical Apps

Case Management

Many use-cases

Case Management

Telemental Health Modalities

Text-Based



*Individual or
Group*

*Secure Messaging
Chat
Forums*

Apps or cCBT



*Self-help or
Provider-Led*

Video



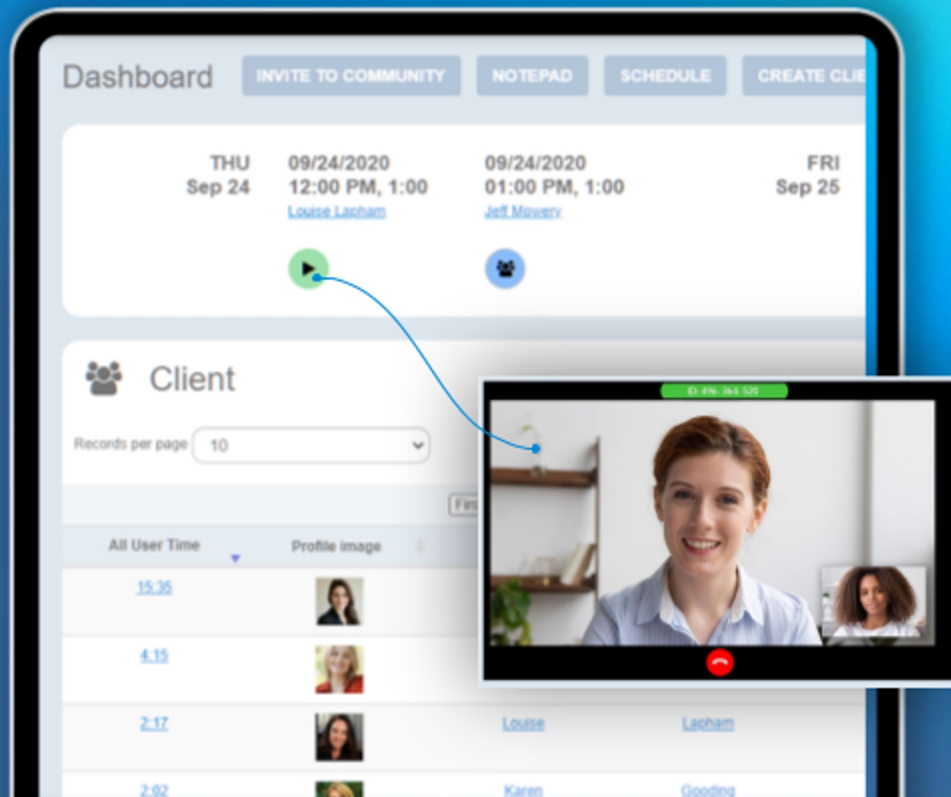
*Individual or
Group*

Avatar



*Individual or
Group*

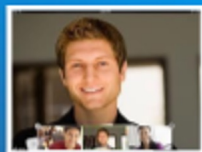
Client led self-help / Provider led / Community led / Provider prescribed / Combinations



**Telebehavioral Health
is mostly
Clinical video.**

**But that is rapidly
changing.**

Multi-Use, HIPAA-Secure, Telehealth Applications



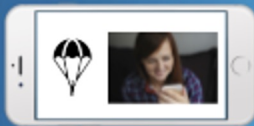
Secure
Video
Conferencing



Secure
Email,
SMS, or Chat



Topical
Modules



Specialty
Apps

Your Logo
Your brand coors

Welcome, Jay L. Ostrowski

INVITATIONS CREATE CLIENT FILE CREATE NOTE ADD EVENT

Dashboard

Messaging

Scheduling

Notepad

Video on Demand

Clients

Client Accounting

Referrals

Community

Documents

THU 25 FEB

09:00 AM 1 hour Jay Trillick

09:00 AM 1 hour Donald Duck

10:00 AM 15 minutes Bruce Wayne

10:15 AM 30 minutes Charles M. Butts

11:45 AM 1 hour Lena D.

INVITE CLIENT

INVITE TO COMMUNITY

VIDEO ON DEMAND

Search for client, work...

SETTINGS

LAST NAME	LAST LOGIN	STATUS	GROUPS
Client	12/09/2013 04:23 AM	Registered	-
Test	12/04/2013 06:14 AM	Yes Contacted By Client	Morning Meditation, Group 1
Sally	No activity yet	Registered	-
Milton	02/25/2016 09:43 AM	2 YES YES Active	-
Smith	05/25/2016 09:40 AM	1 [Choose status]	Morning Meditation, Adolescent Group

PREVIOUS 1 2 3 4 NEXT

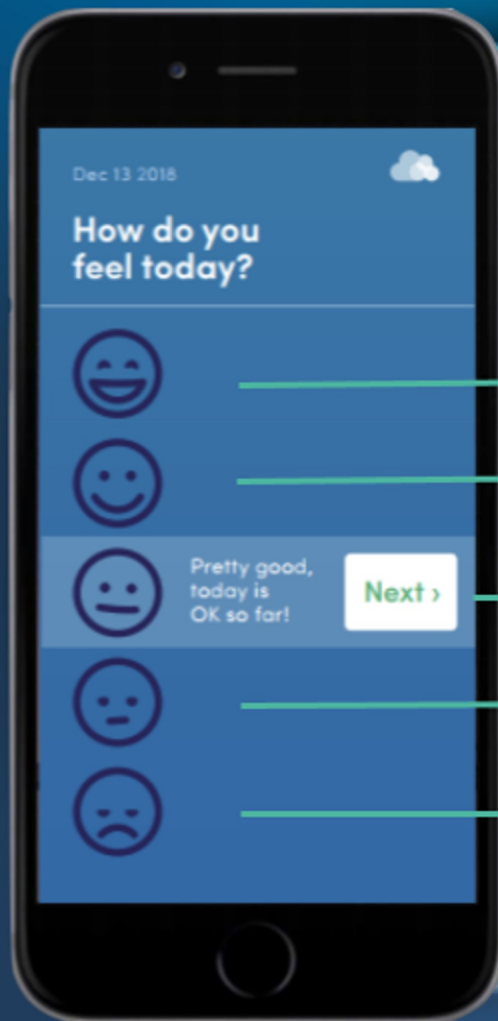
Terms of Use

This application is not for emergency services. If you are having an emergency, please contact your local health department.

Apps for Treatment and Relapse Prevention



Triage and/or Checkups



Response 1	Response 2	Response 3
Congrats! Direct to content	Content	
Ask about improvement areas	Assessment	Ask self-help or more assessment
Assessment	Live help	Assess-live or self help
Assessment	Live help	Live help
Assessment	Live help	Live help

TRIAGE SYSTEM

DAST SCREENING QUESTIONS

Drug Screening Questionnaire (DAST)

Using drugs can affect your health and some medications you may take. Please help us provide you with the best medical care by answering the questions below.

Patient name: _____
Date of birth: _____

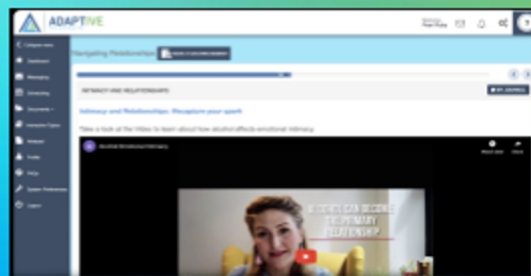
Which recreational drugs have you used in the past year? (Check all that apply)

☐ methamphetamine (speed, crystal) ☐ cocaine
☐ cannabis (marijuana, pot) ☐ narcotics (heroin, oxycodone, methadone, etc.)
☐ inhalants (glue, thinner, aerosol, glue) ☐ hallucinogens (LSD, mushrooms)
☐ tranquilizers (valium) ☐ other _____

How often have you used these drugs? ☐ Monthly or less ☐ Weekly ☐ Daily or almost daily

1. Have you used drugs other than those required for medical reasons?	No	Yes
2. Do you abuse (use) more than one drug at a time?	No	Yes
3. Are you unable to stop using drugs when you want to?	No	Yes
4. Have you ever had blackouts or flashbacks as a result of drug use?	No	Yes
5. Do you ever feel bad or guilty about your drug use?	No	Yes
6. Does your spouse (or partner) ever complain about your involvement with drugs?	No	Yes
7. Have you neglected your family because of your use of drugs?	No	Yes
8. Have you engaged in illegal activities in order to obtain drugs?	No	Yes
9. How often have you used drugs in the past year?	0	100
10. How often have you used drugs in the past year?	0	100
11. How often have you used drugs in the past year?	0	100
12. How often have you used drugs in the past year?	0	100
13. How often have you used drugs in the past year?	0	100
14. How often have you used drugs in the past year?	0	100
15. How often have you used drugs in the past year?	0	100
16. How often have you used drugs in the past year?	0	100
17. How often have you used drugs in the past year?	0	100
18. How often have you used drugs in the past year?	0	100
19. How often have you used drugs in the past year?	0	100
20. How often have you used drugs in the past year?	0	100

Library

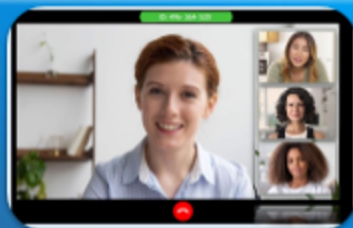


Automated workflow for each response.

Chat or Workbook



Video meeting



What does “Evidence-Based” mean?

Methods of Evaluation

- Direct research Study
- Look Back - Analysis of data
- Meta-Analysis - Study of studies
- Filtered Meta-Analysis



Research Limitations

Terms

Types

Data

Measurement



Data Limitations

Study Compared

1. Asynchronous technologies (text telepsychiatry),
2. Synchronous telepsychiatric (video telebehavioral health),
3. In-person care.

Hilty, D. M., Parish, M. B., Chan, S., Torous, J., Xiong, G., & Yellowlees, P. M. (2020). A comparison of In-Person, Synchronous and Asynchronous Telepsychiatry: Skills/Competencies, Teamwork, and Administrative Workflow. *Journal of Technology in Behavioral Science*, 5(3), 273-288. doi:10.1007/s41347-020-00137-8

Does Telebehavioral Health Work?

Yes.



U.S. Department
of Veterans Affairs

- 900,000 Veterans used telehealth services in 2019
- 99,000 Veterans used VA Video Connect - ⅓ Visits consisted of Telemental health care

<https://www.aha.org/news/headline/2019-11-26-va-veterans-use-telehealth-services-17-fy-2019>



- *Telebehavioral Health treatment is increasing in the United States.*
- 17.4% (12,334) of Substance Abuse Facilities now offer Telebehavioral Health in 2020
- 22.4% of all facilities offer telebehavioral treatment in rural areas

<https://www.sciencedirect.com/science/journal/07405472>



Clinical Outcomes:

- Telepsychiatry Preferred for Adults with Anxiety Disorders
- Highly effective to patients that have PTSD

<https://www.psychiatry.org/psychiatrists/practice/telepsychiatry/toolkit/clinical-outcomes>

Veterans Administration

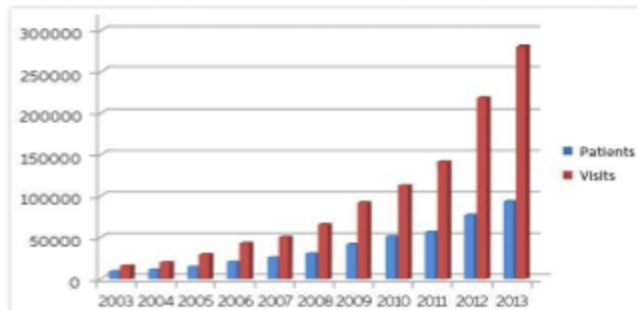
Great Outcomes

Patient Satisfaction Outcomes

- **25% Drop in Hospitalizations**
- **94% satisfaction rate of 8,000+ surveyed**

WHERE WE ARE NOW:

VA TMH Services FY 2003-2013



TMH CVT Implementation Measures in VA Since 2002

2003-2013

- **1,200,000 TMH encounters**
- **10 fold increase in new patients annually**
- **150 Medical Centers**
- **530 Clinics**

Telebehavioral Health Research

What does the research say about telebehavioral health?



Same Efficacy

Literature supports efficacy of nearly all TMH/TBH services¹



Same Methods

TBH uses same theoretical methods & techniques²



Same Services

All in-person mental health services can be delivered via video³



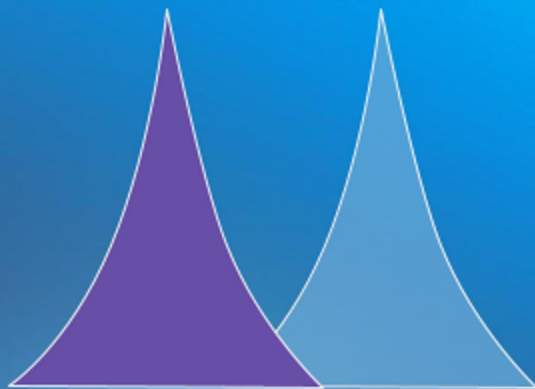
Same Clients

No Contra indications

Effectiveness

Research on Telebehavioral Health

In-Person TMH



Meta-analysis of 92 studies of online therapy

Journal of Technology in Human services, Vol. 26, No. 2

Meta-analysis of 148 peer-reviewed studies on the use of video therapy online

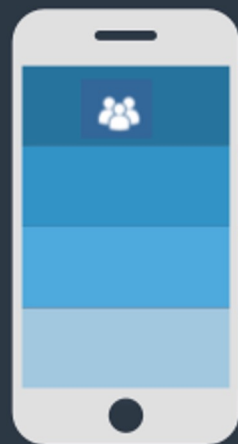
Clinical Psychology: Science and Practice, Vol. 16, No. 3

Positive Outcomes

**High Patient
Satisfaction**

**Moderate to High
Clinical
Satisfaction**

Apps for Telebehavioral Health



Patient Engagement

Treatment Adherence

Communication

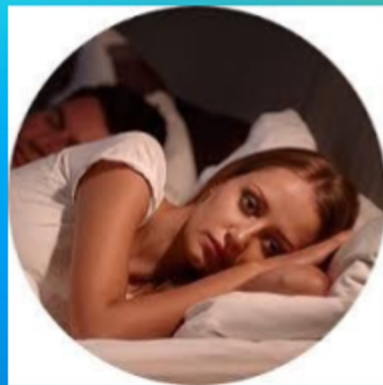
Access to...

**Evidence for Apps in
Behavioral Health
Treatment**

Computerized Cognitive Behavioral Therapy (cCBT)

Insomnia Example

- 30-40% say they suffer each year (NIH)
- 10-15% say they suffer chronically (NIH)
- Increased direct medical costs by \$924-1,143 over a 6 mo. period¹
- Insomnia causes 2x missed work days and 2x error rate²
- Treating insomnia improves outcomes for depression & heart disease³
- Insomnia is a significant factor in alcohol relapse⁴



1. Ozminkowski et al (2007). Cost Burden of Untreated Insomnia. Sleep, Vol. 30, No. 3.

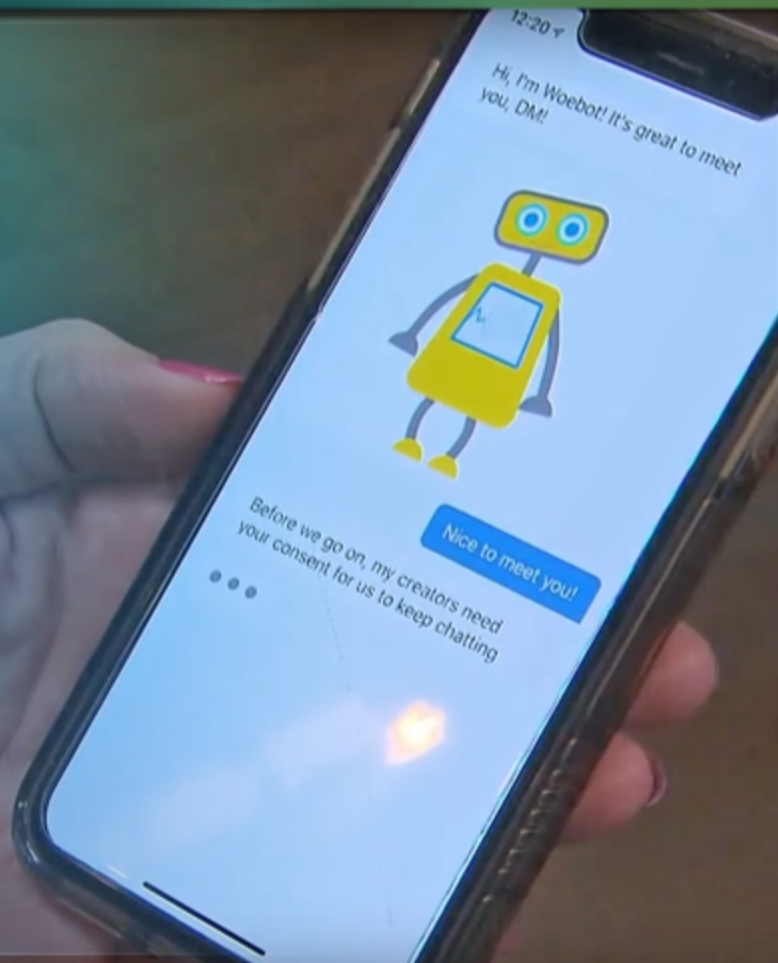
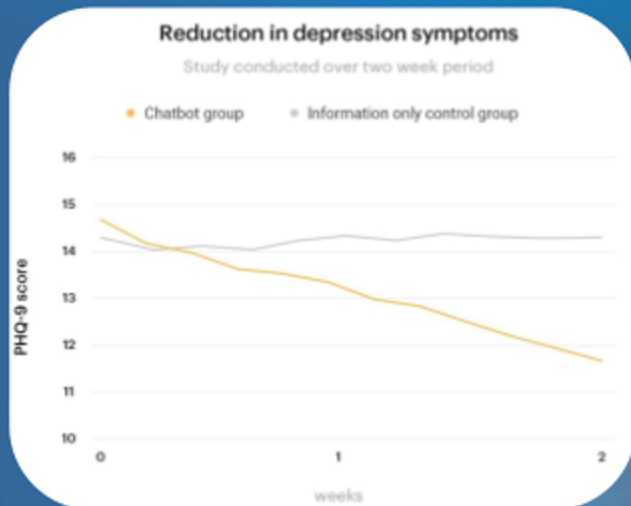
2. Godet-Cayre et al (2006). Insomnia, Who Pays the Cost? Sleep, Vol 29, No.2.

3. Clinical Correlates of Insomnia in Patients with Chronic Illness - Arch Intern Med. 1998; 158: 1099-107

4. Brewer et al, (2001). Insomnia, Self-Medication and Relapse to Alcoholism. Am J Psychiatry. 2001 Mar; 158(3): 399-404.

Chatbots

In a study of university students suffering from depression, **those using the chatbot experienced close to a 20% improvement in two weeks**, based on PHQ-9 scores.



Avatars

Ellie was designed to treat veterans experiencing depression and post-traumatic stress syndrome.

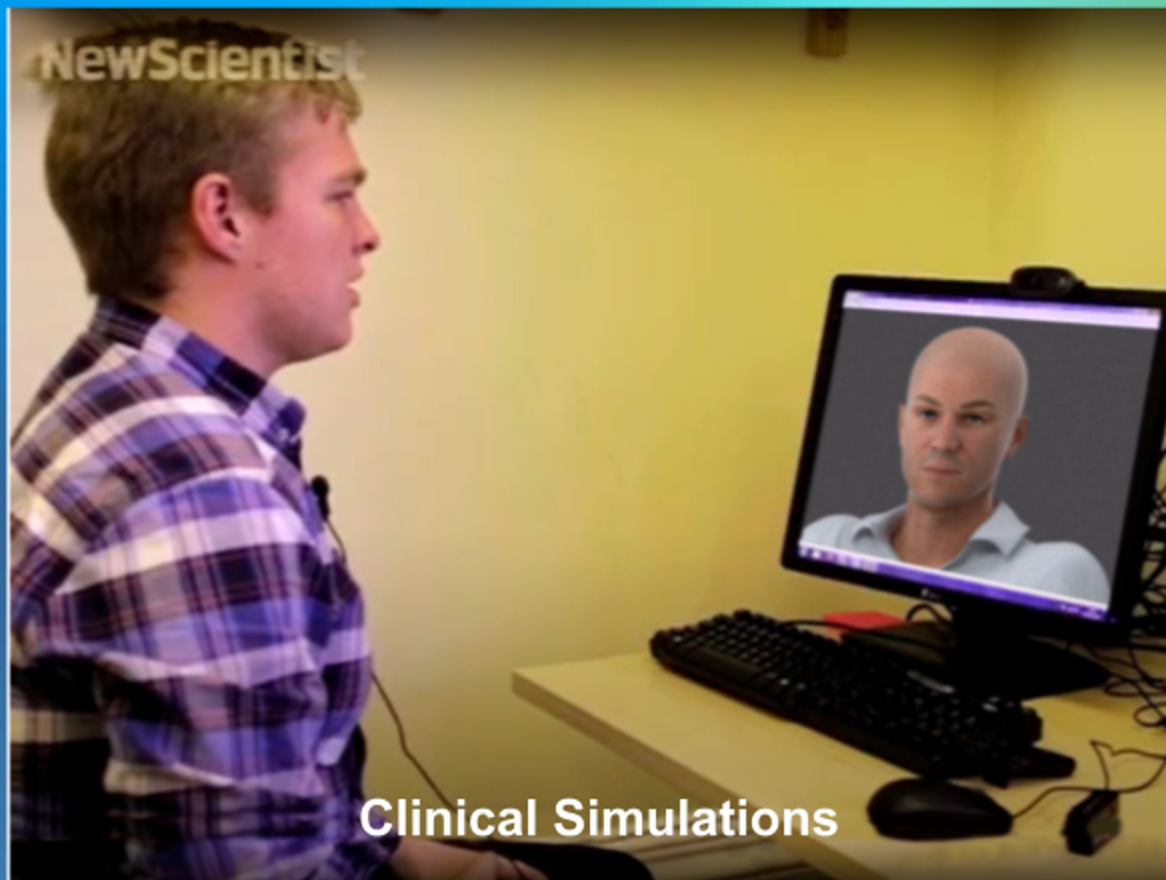
What is so special about the technology is that Ellie can detect not only words but also nonverbal cues (e.g., facial expression, gestures, posture). Nonverbal signs are very important in therapy, yet can be subtle and difficult to pick up.

Ellie can gather and analyze multisensory information and help assess a user.

Ellie's creators argue that this virtual human can advance mental health and improve diagnostic precision.

Other Avatars - Can be used to as treatment tools or to provide a novel treatment environment.





AI in Mental Health Right Now

- EHRs (some)
- Mood Rating Scales (some)
- Brain Imaging
- Novel Monitoring Systems
- Social Media Platforms

Artificial Intelligence can
finish my sentence.

AI in Mental Health - Right Now

- EHRs (some)
- Mood Rating Scales (some)
- Brain Imaging
- Novel Monitoring Systems
- Social Media Platforms



Artificial Intelligence

Artificial Intelligence In Behavioral Health

Patient-Client Monitoring & Intervention

- Prediction
- Prevention
- Detection
- Response-Treatment
- Maintenance
- Relapse-Prevention

Users

Patients
Providers
Caregivers
Researchers

Provider Training and Support

- Epidemiology Studies
- Monitoring and Alert Systems
- Evidence-based Treatment Plans
- Intervention Recommendations
- Training Tools - Simulations, Provider Feedback
- Provider Resiliency Monitoring & Support



What is Possible?

Apply To These Sample Goals:

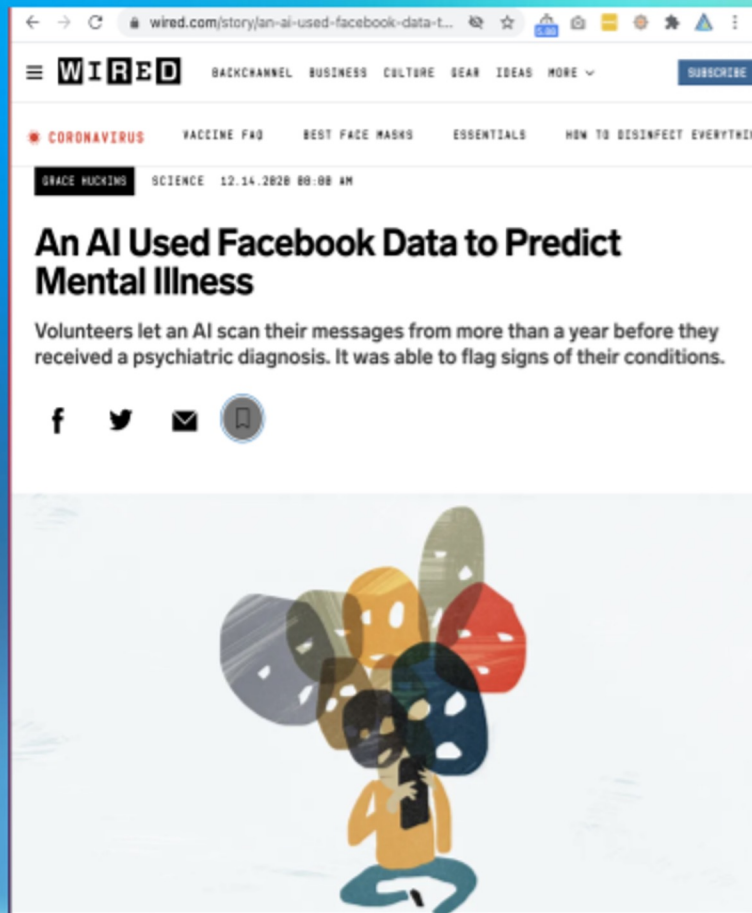
- Identification of behaviors-trends
- Awareness for early intervention
- Triage of clients to appropriate level of treatment
- Tracking clinical progress
- Monitoring provider effectiveness
- Education and treatment of clients
- Education of providers - feedback loops

Many, many more possibilities...

What if...
We could predict that
someone would develop
psychotic symptoms
1-1.5 years ahead of a
clinical diagnoses?

Wired Magazine
Grace Huckins,
12.14.2020 08:00 AM

<https://www.wired.com/story/an-ai-used-facebook-data-to-predict-mental-illness/>





Free (grant-funded) Technical Assistance.

.....

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CEO, [Behavioral Health Innovation](#)
CEO, [Adaptive Telehealth](#)

TELEMENTAL HEALTH RESEARCH REFERENCES

Same Efficacy

Same Methods

Same Services

Same Populations

- Hilty, D. M., Parish, M. B., Chan, S., Torous, J., Xiong, G., & Yellowlees, P. M. (2020). A comparison of In-Person, Synchronous and Asynchronous Telepsychiatry: Skills/Competencies, Teamwork, and Administrative Workflow. *Journal of Technology in Behavioral Science*, 5(3), 273-288. doi:10.1007/s41347-020-00137-8
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- Novella, J. K., Ng, K., & Samuolis, J. (2020). A comparison of online and in-person counseling outcomes using solution-focused brief therapy for college students with anxiety. *Journal of American College Health*, 1-8. doi:10.1080/07448481.2020.1786101
- Patel, S. Y., Huskamp, H. A., Busch, A. B., & Mehrotra, A. (2020). Telemental Health and US Rural-Urban Differences in Specialty Mental Health Use, 2010–2017. *American Journal of Public Health*, 110(9), 1308-1314. doi:10.2105/ajph.2020.305657
- Rojas, S. M., Piccirillo, M. L., McCann, R. A., Reger, M. A., & Felker, B. (2020). An examination of suicidal behaviour among veterans receiving mental-health appointments in person versus clinical video telehealth. *Journal of Telemedicine and Telecare*. <https://doi.org/10.1177/1357633X20942041>

Question and Answer



Evaluation Information

The MHTTC Network is funded through SAMHSA to provide this training. As part of receiving this funding we are required to submit data related to the quality of this event.

At the end of today's training please take a moment to complete a **brief** survey about today's training.



Connect With Us

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Website:

<https://mhttcnetwork.org/centers/northeast-caribbean-mhttc/home>

Like and follow us on social media!

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Northeast and Caribbean (HHS Region 2)

MHTTC

Mental Health Technology Transfer Center Network

Funded by Substance Abuse and Mental Health Services Administration

SAMHSA
Substance Abuse and Mental Health
Services Administration