Application of Al to Real-World **Mental Health Settings: Possibilities and** Limitations Sonja V. Batten, Ph.D. **Vice President of Programs**

★ STOP★ SOLDIER★ SUICIDE





My first experience with significant mental health tech innovation – April 2011



PISD COACH

My first experience with mental health tech innovation – April 2011

headspace

Now there are hundreds of mental health apps



STOP SOLDIER SUICIDE≡

On the heels of the White House Executive Order on #AI, the U.S. Department of Veterans Affairs is announcing \$1M AI tech sprint to reduce burnout among health care providers. These sprints also could allow VA to sole source ...see more



U.S. Department of Veterans Affairs

VA launches \$1 million AI tech competition to reduce health care worker burnout news.va.gov

What if burnout doesn't come so much from the clinical work itself, but from the tedious administrative burden? How can Al help with that?

Or using AI to make the work of therapy even more effective?

The CONTEXT PRESS Mashering ACT Series Committed Action IN PRACTICE

A CLINICIAN'S GUIDE TO ASSESSING, PLANNING & SUPPORTING CHANGE IN YOUR CLIENT

DANIEL J. MORAN, PHD PATRICIA A. BACH, PHD SONJA V. BATTEN, PHD Home > BMC Psychiatry > Article

Action recommendations review in community-based therapy and depression and anxiety outcomes: a machine learning approach

 Research | Open access
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CREATING PERSONALIZED THERAPY TOOLS (examples)

Mindfulness Scripts

Mindfulness of Hands Script

Introduction:

Today, we are going to engage in a mindfulness exercise focusing on your hands. This practice will help you connect with your present experience and cultivate a sense of calm and awareness. Let's begin by finding a comfortable position, either sitting or lying down. Allow your body to relax and settle into this moment.

Body of Script:

1. Settling In:

Close your eyes if you feel comfortable doing so, and take a few deep breaths. Inhale deeply through your nose, filling your lungs completely. Hold for a moment, and then exhale slowly through your mouth. Let go of any tension with each breath out.

2. Awareness of Hands:

Now, bring your attention to your hands. Simply notice where they are resting. Are they on your lap, by your sides, or maybe clasped together? Observe their position without judgment

3. Sensations in the Hands:

Begin to notice any sensations in your ha 4. You might feel warmth or coolness, tingling, or the

Homework **Sheets**

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We now have the ability to gather a tremendous amount of data from smartphones and wearables to measure psychological health and behavioral patterns - we can then use AI/ML to find patterns for digital phenotyping



We're redefining the way we understand and act on suicide risk.

Modeled after the "black box" flight recorder used to determine the cause of an aircraft crash, our inhouse forensics team conducts digital autopsies on the devices of veterans and service members who've died by suicide to help recreate the final moments of life.

Our goal is to uncover never-before-known insights that advance our methods of outreach and care for veterans and service members struggling with suicidality before they get to the point of acting.

Data types	
Select/Deselect All	
 Applications (5510/5510) Archives (142/142) Audio (766/766) Autofill (37/37) Calendar (72/72) Call Log (506/506) Chats (397/397) Configurations (79/79) Contacts (1696/1696) Cookies (1602/1602) Credit Cards (1/1) Databases (986/986) Device Events (10/10) Device Events (10/10) Device Info (101/101) Device Users (1/1) Documents (9/9) Downloads (1/1) Emails (442/442) 	 Form Data (1/1) Images (31681/31681) Installed Applications (556/556 Instant Messages (3475/3475) Locations (10836/10836) Network Usages (12924/12924) Passwords (315/315) Recordings (4/4) Searched Items (123/123) Social Media (551/551) Text (6008/6008) Timeline (63242/63242) Uncategorized (73801/73801) User Accounts (120/120) Videos (2423/2423) Web Bookmarks (25/25) Web History (1484/1484) Wireless Networks (6/6)

LIMITATIONS OF AI IN MENTAL HEALTH

- Implicit bias if not guarded against
- Hallucinations outputs can sound very convincing but be very wrong
- Inaccurate sentiment analysis
- Chatbots dealing with real emergencies
- Average recommendations can be harmful for some
- Therapist and client willingness to have a bot listen in on sessions
- Privacy/HIPAA compliance/data breaches/data scraping by 3rd parties



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Al in mental health is here and will only become more prevalent.

Our clients will be best served by creating teams comprised jointly of mental health experts and tech innovators who can work together to create tools that are effective, safe, and ethical.

Thank you

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