



Mountain Plains ATTC (HHS Region 8)

**ATTC**

Addiction Technology Transfer Center Network  
Funded by Substance Abuse and Mental Health Services Administration



# Digital Health Technologies: Navigating New Models to Enhance and Expand Service Delivery

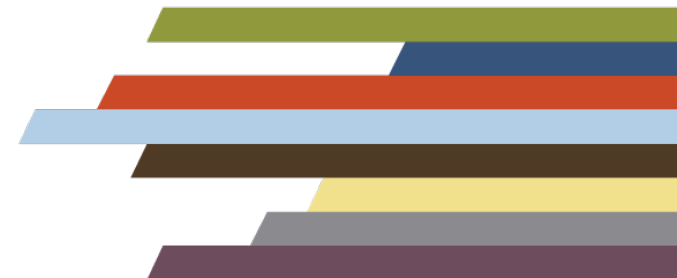
**Nancy A. Roget, MS, MFT, LADC**

Co-Director Mountain Plains ATTC

Executive Director, CASAT – University of Nevada Reno

***SAMHSA***

Substance Abuse and Mental Health  
Services Administration



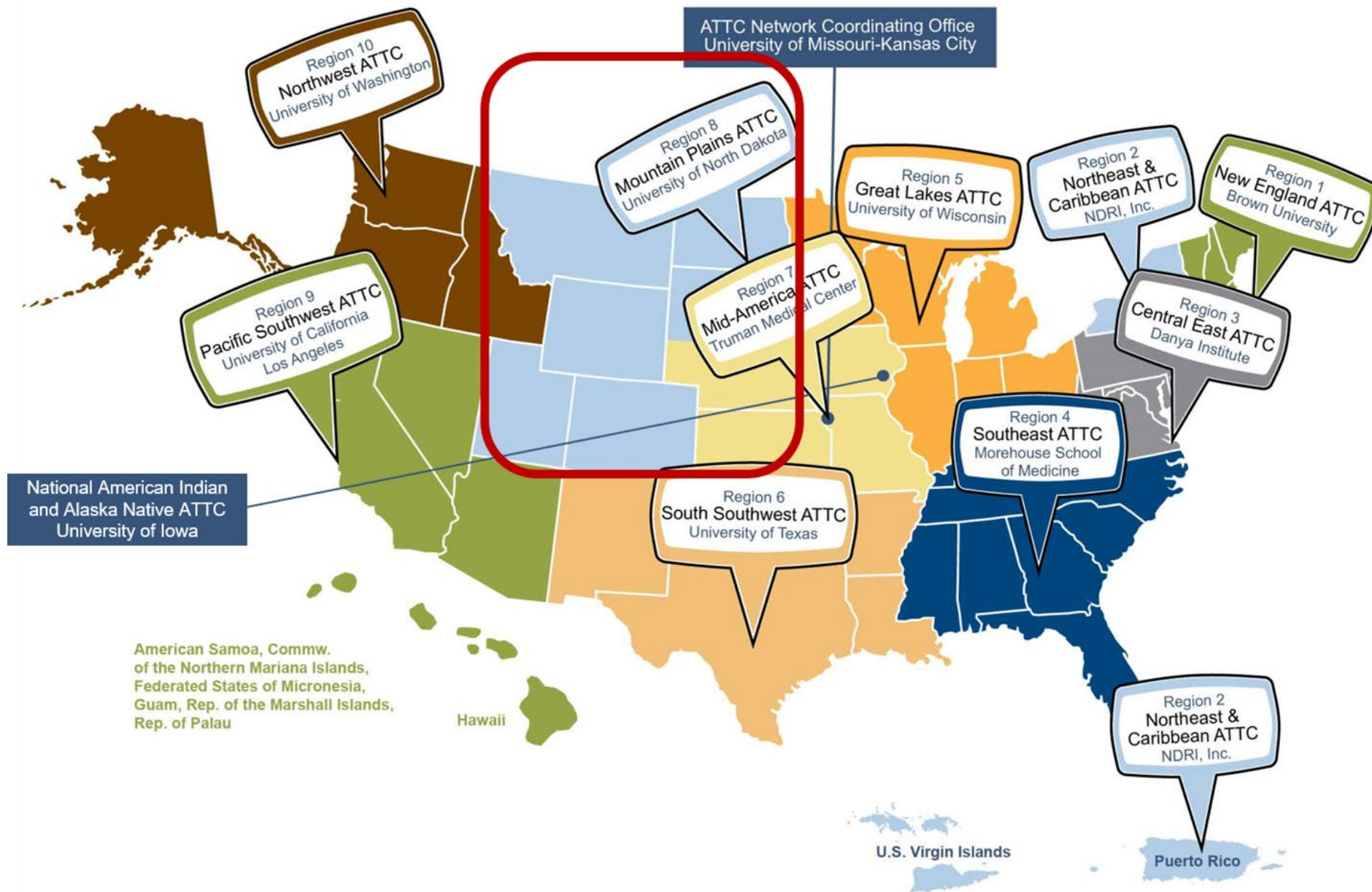


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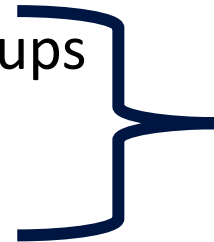
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## Domestic ATTC Network



# Presentation Outline

- Barriers to SUD treatment/recovery
- Prevalence of Technology Use in General Public
- Definition of DHTs
- Patient/Clinician/Peer Interest in DHTs
- Free/Low Cost
  - Online Support/Mutual Aid Groups
  - Apps
  - Social Networking Sites
  - Texting
- Web-based Interventions/Apps that Cost
- Preparing Your Organization/Practice
- Resources

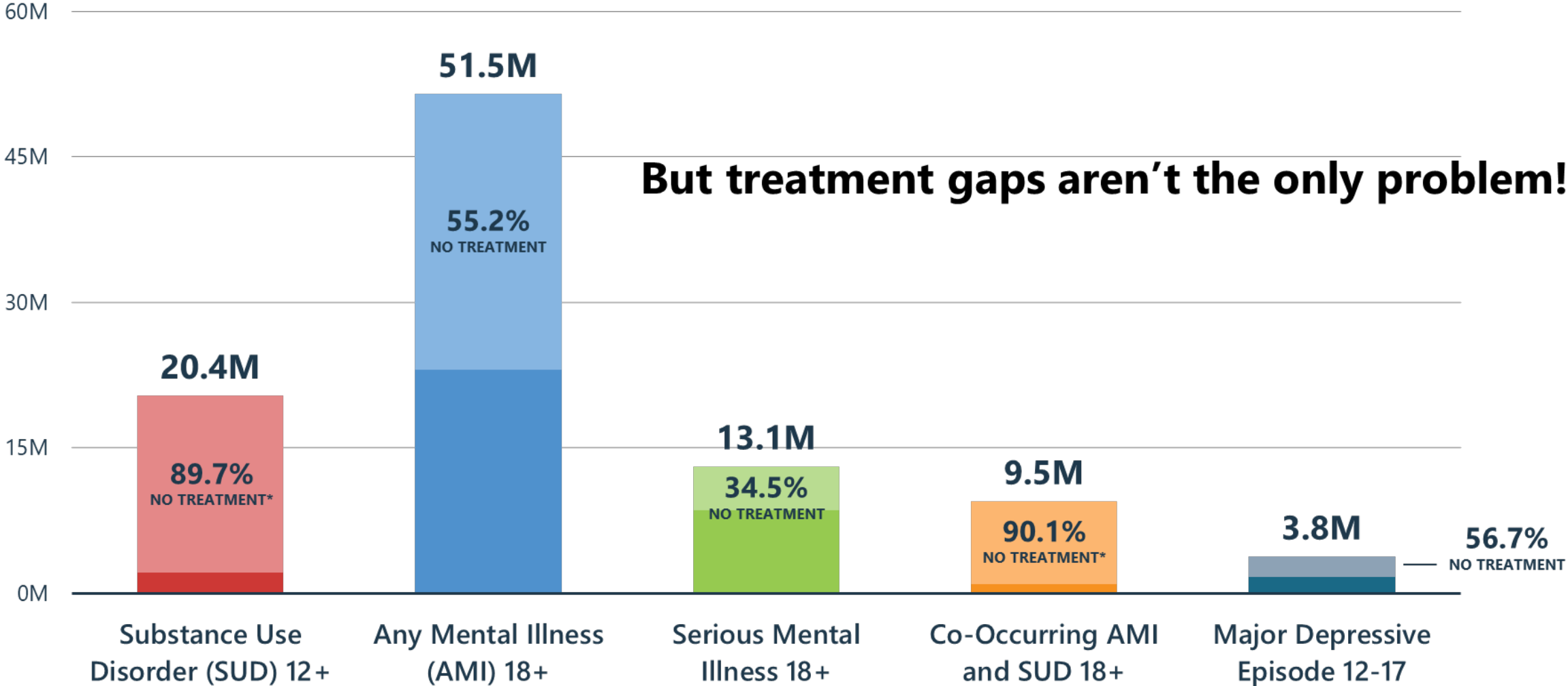


Dilemmas



# Mental and Substance Use Disorders: High Prevalence/Huge Treatment Gaps

PAST YEAR, 2019 NSDUH, 12+



\* No Treatment for SUD is defined as not receiving treatment at any location, such as a hospital (inpatient), rehabilitation facility (inpatient or outpatient), mental health center, emergency room, private doctor's office, self-help group, or prison/jail.

# Barriers



- People with substance use disorders experience pervasive health disparities
- These disparities create greater vulnerability when linked with other demographic and psychosocial characteristics
- SUDs is one of the most stigmatized health conditions
- Barriers to entering treatment stem from
  - Shortage of specialty treatment programs
  - Perceived Stigma
- Service delivery in public sector is hampered by the need for additional:
  - Funding
  - Staff
- Increased access to evidence-based behavioral interventions are needed

**“The goal of health care—to have the most engaged patient you possibly can, to get the best possible outcome.” Greg Burke**

# 81% of Adults Own a Smartphone

35% in 2011 *to* 81% in 2019



**35%** of US smartphone users check their phones more than **50** times a day.



73% of Americans now  
have broadband internet  
access at home

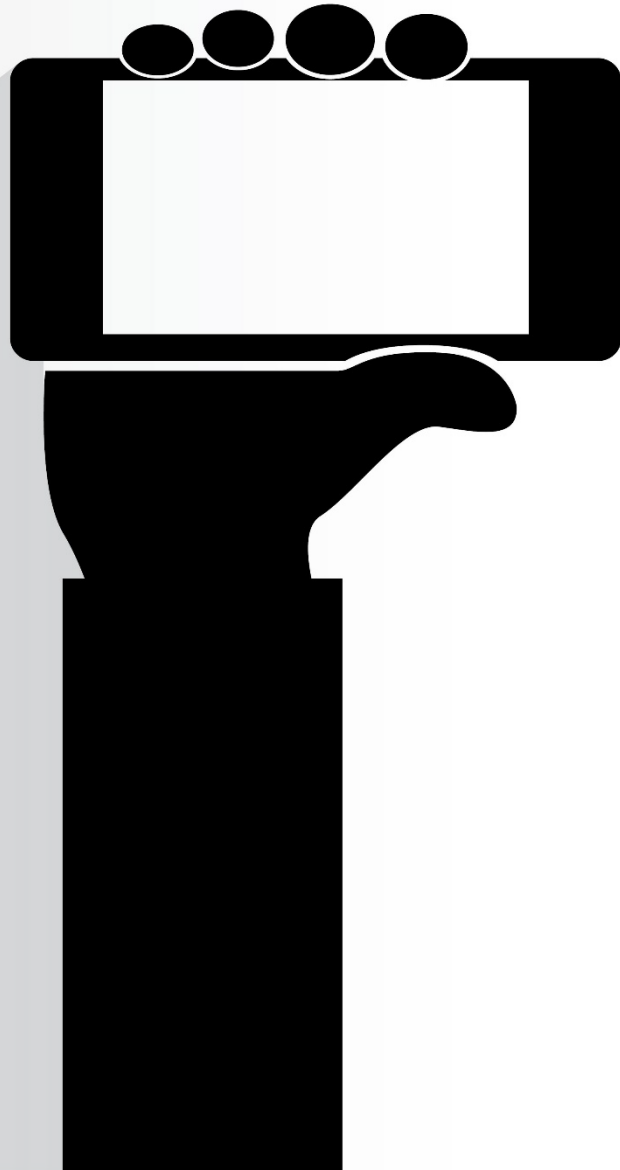




**Consumers now regularly rely on web- and smartphone-based tools for health information and tracking.**



**Use of online and mobile technologies is increasingly ubiquitous across age, race/ethnicity, and geography.**



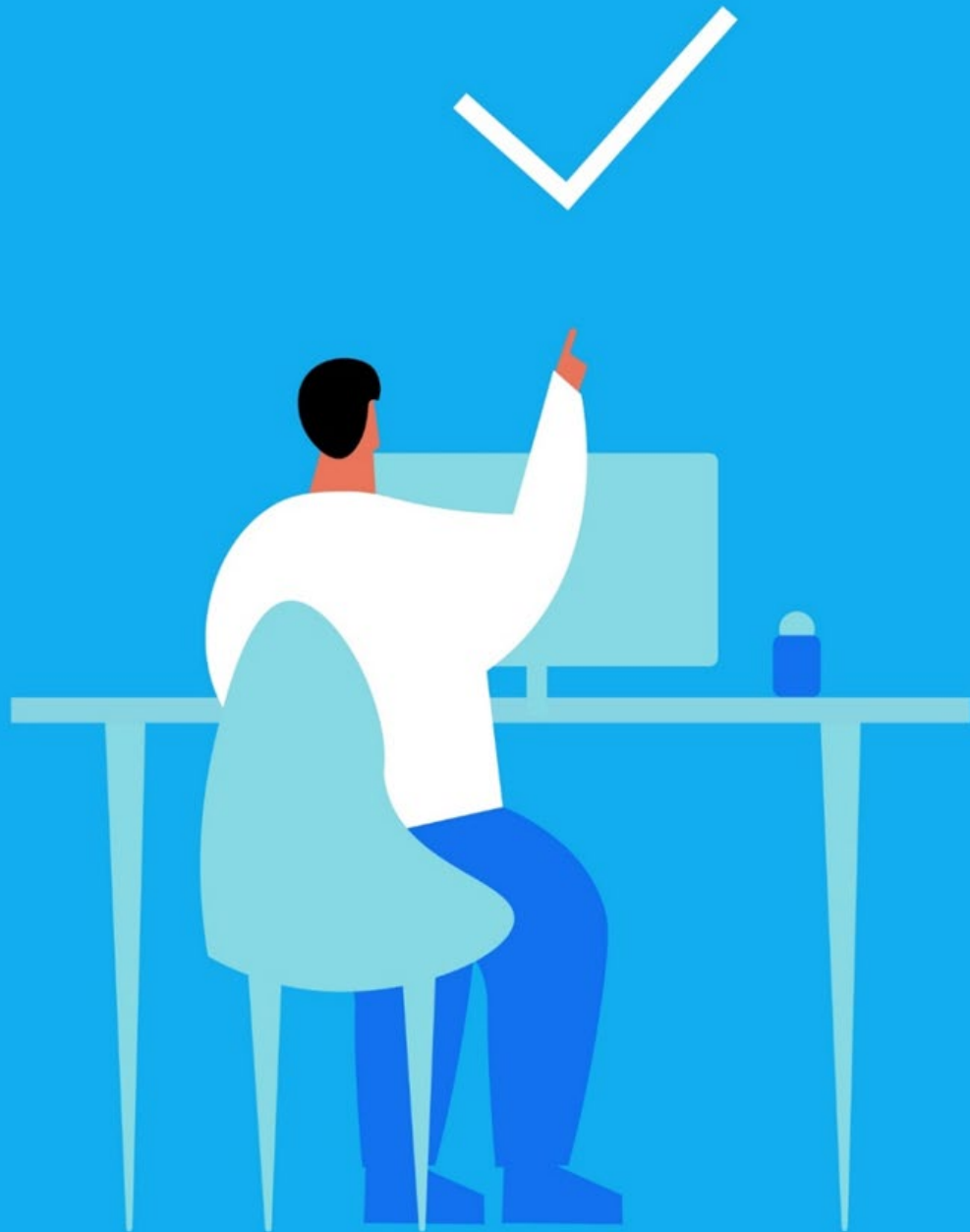
**Current evidence demonstrates that patients/peers use and are interested in using technologies as part of their continuing support.**



- Digital health is rooted in eHealth, which is defined as “*the use of information and communications technology in support of health and health-related fields*”.
- Mobile health (mHealth) is a subset of eHealth and is defined as “*the use of mobile wireless technologies for health*”.
- Digital health was introduced as “a broad umbrella term encompassing eHealth (which includes mHealth)-‘big data’, genomics, and artificial intelligence”.

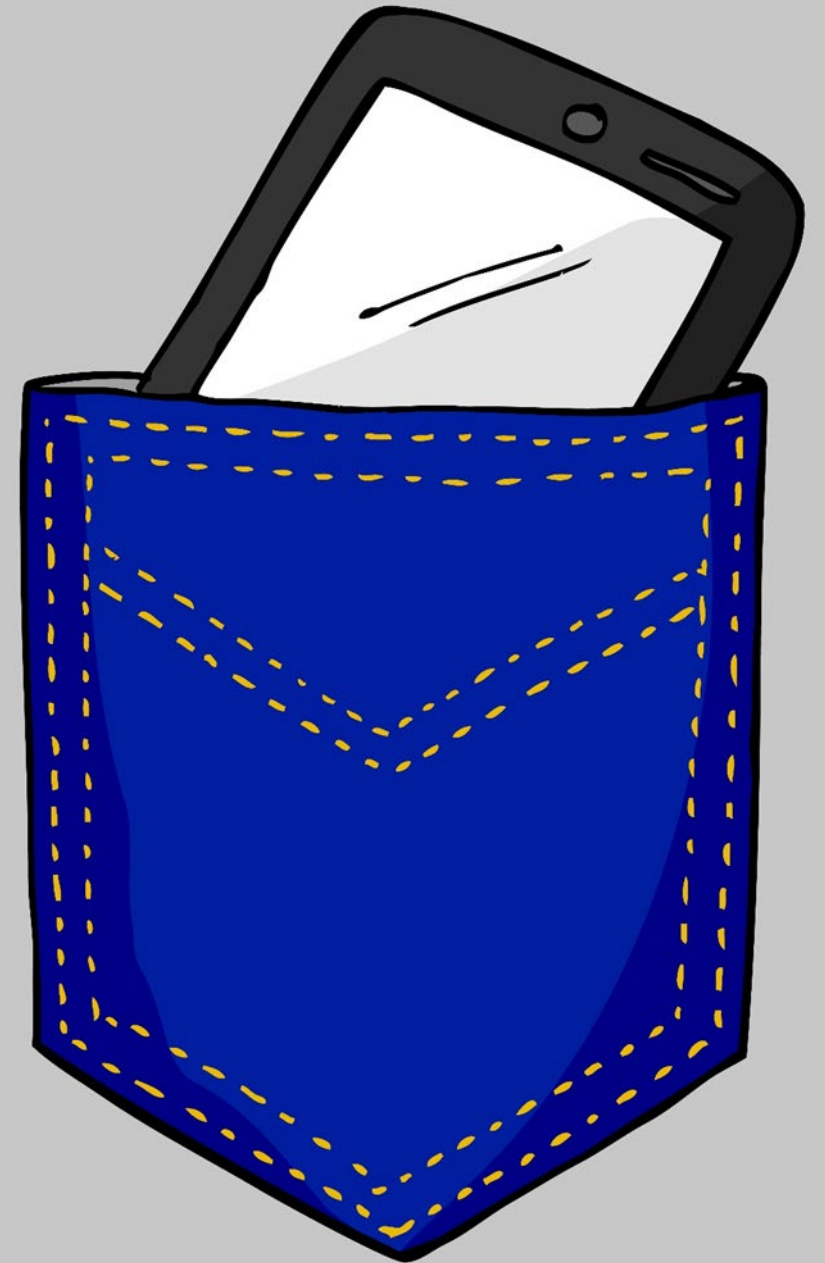
# Asynchronous Technologies

- **Includes:**
  - interactive media
  - online courses
  - artificial intelligence–powered chatbots
  - voice assistants
  - video games
- Can be found in books, videos, podcasts, blog and print articles, and self-contained Internet sites
- Social media, online courses, and mass-market mobile apps also can include technologies



**Asynchronous technologies  
can serve as a patient or  
practice or peer extender**

**Digital tools can function like a therapist “in your pocket” and can be accessible at times when individuals struggling with SUDs may be in greatest need of therapeutic assistance.**





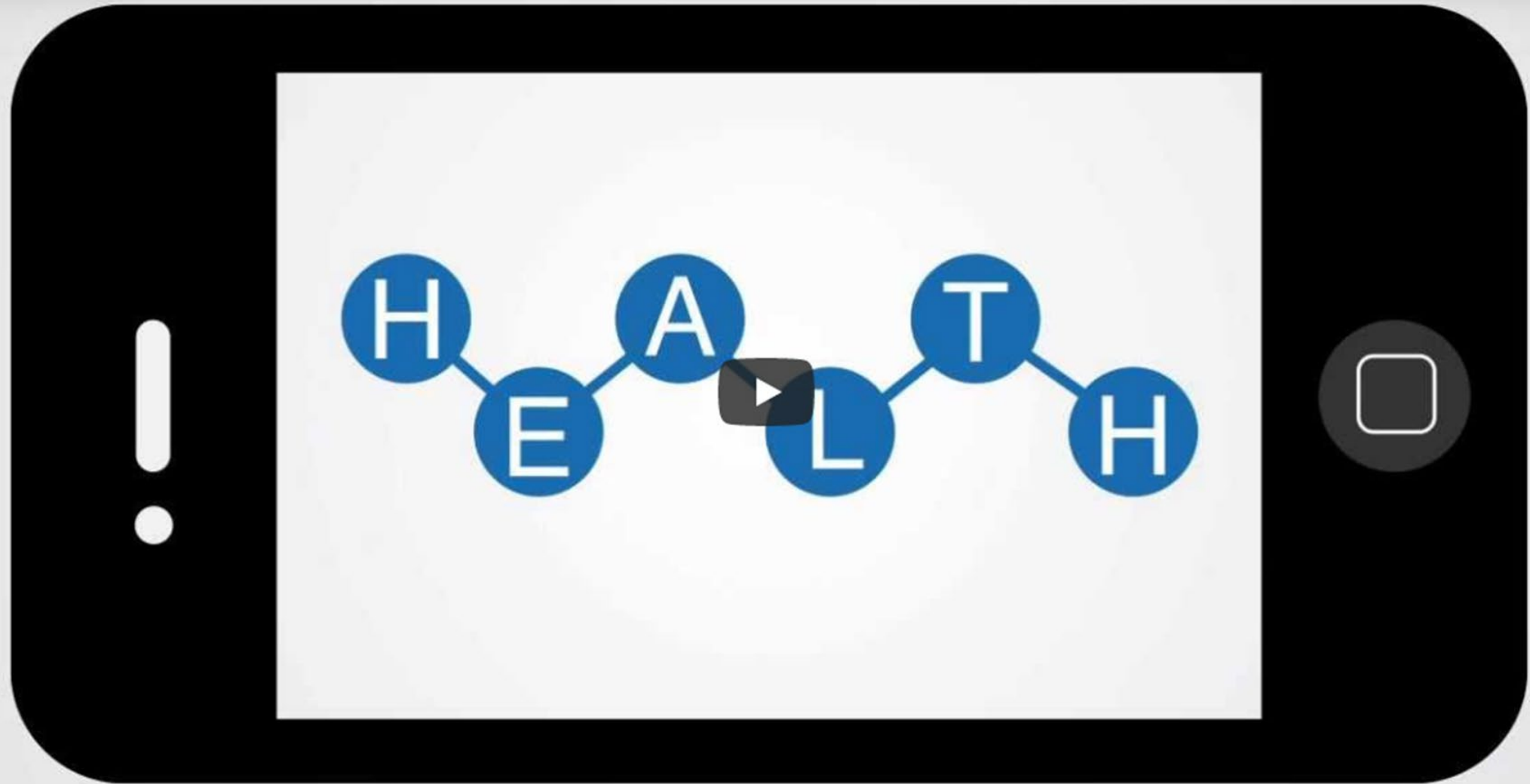
What is Digital Health? by Paul Sonnier



Watch later

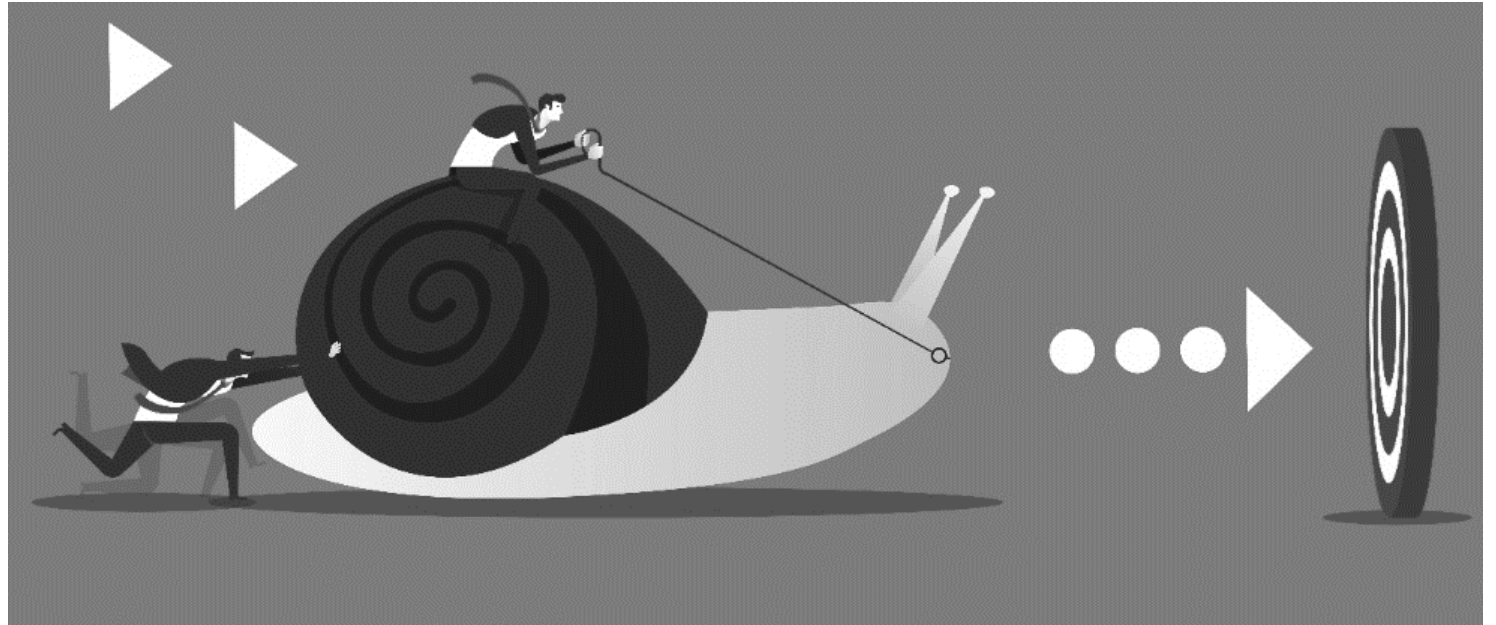


Share



# Technology & Substance Use Disorders Treatment

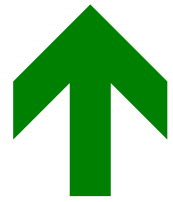
Despite increasingly widespread adoption of technology in healthcare services... the adoption of technologies in the SUD treatment field has been much slower...



More limited user acceptance has affected both patients' and clinicians' willingness to abandon more traditional practices in favor of new technologies.



# Limited Uptake of Technology for SUD Treatment



**Interest**

**but**



**Utilization**

- Computerized screening and assessments (70%/45%)
- Telephone-based therapy (49%/28%)
- Video-based therapy (55%/20%)
- Texting for appointment reminders (69%/13%)
- Mobile treatment apps (41%/5%)
- Mobile recovery apps (56%/9%)
- Virtual world therapy (35%/<1%)

# Digital Health Technologies

## No Cost/Low Cost

- Online Support Groups
- Social Media
  - Social Networking Sites
  - Videos
  - Podcasts
  - Blogs
- Texting
- Apps



## Technologies that Cost

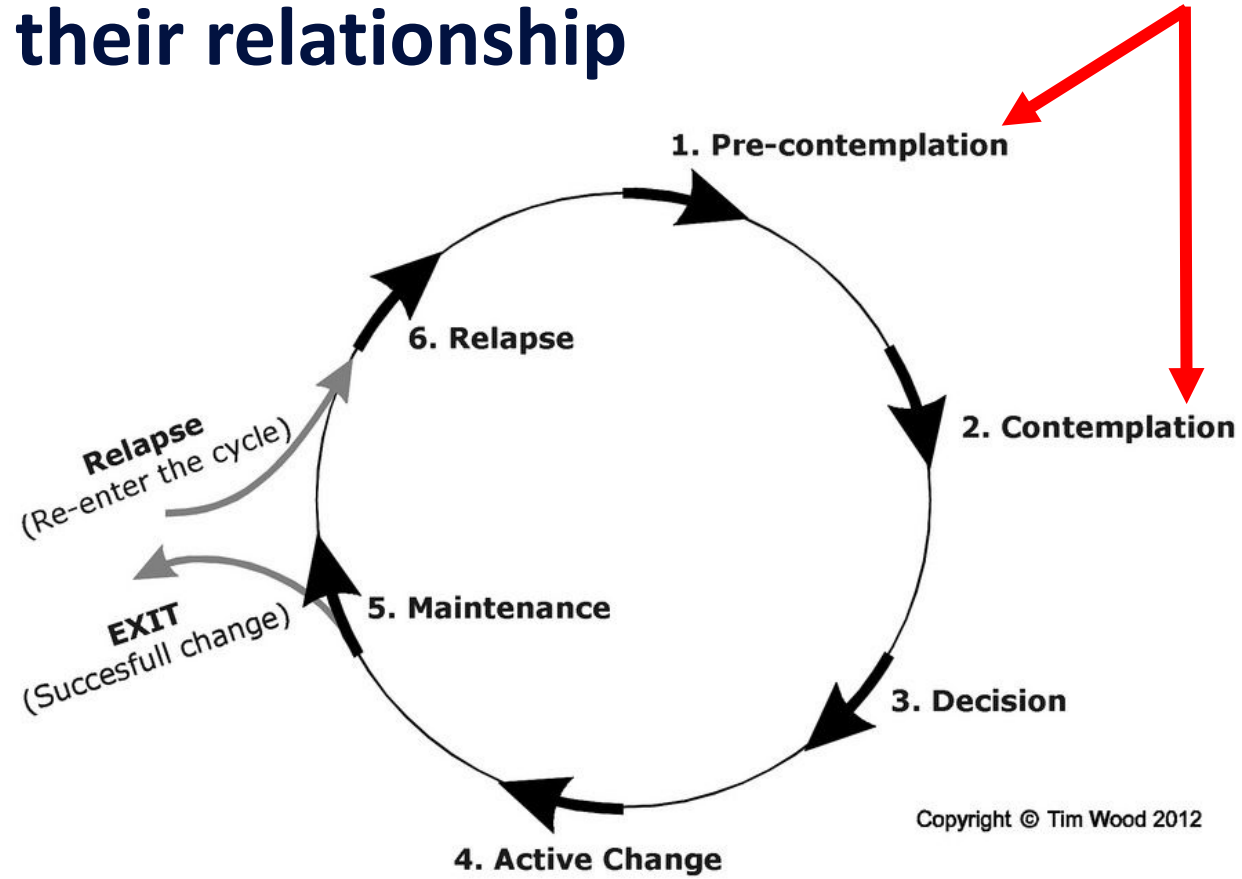
- Web-based Programs/Apps
- Prescription Digital Therapeutics





**Low-hanging fruit –  
time & a little \$\$\$**

Online groups appear to provide an alternative for people who experience barriers in accessing traditional services, and may serve as a place to explore their relationship with alcohol at early stages of change.



Copyright © Tim Wood 2012

- 1. Pre-contemplation (**Why bother?**)
- 2. Contemplation (**Partly want to change**)
- 3. Decision (**Deciding to change**)
- 4. Active change (**Changing behaviour**)
- 5. Maintenance (**Keeping it going**)
- 6. Relapse (**Return to pre-contemplative behaviour**)



We're Saving a Seat For You

# Telephone Group

## A.A. Holiday Group

[HOME](#)

[CONTACT](#)

### HOLIDAY MORNINGS ONLY

8AM PACIFIC  
11AM EASTERN

Tel: 712-432-3900

Access Code:  
283636#

New Year's Day  
MLK Birthday  
Washington's Birthday  
Memorial Day  
Independence Day  
Labor Day  
Columbus Day  
Veterans Day  
Thanksgiving Day  
Christmas Day

THIS IS AN OPEN  
MEETING.

THIS AA GROUP IS A SPECIAL GROUP  
THAT MEETS ONLY ON HOLIDAY  
MORNINGS. THIS IS A PLACE FOR  
NEWCOMERS TO GO WHEN FEELING  
SHAKY AND OTHER AA'S TO COME &  
CARRY A MESSAGE OF HOPE TO THEM.

## #hashtags

#recovery; #sobriety; #AA

#onedayatatime

#soberissexy

#soberliving

#teamsober

#recoveryispossible

#celebraterecovery

#sobernation

#sobermovement

#addictionchat

#HopeSharedHere

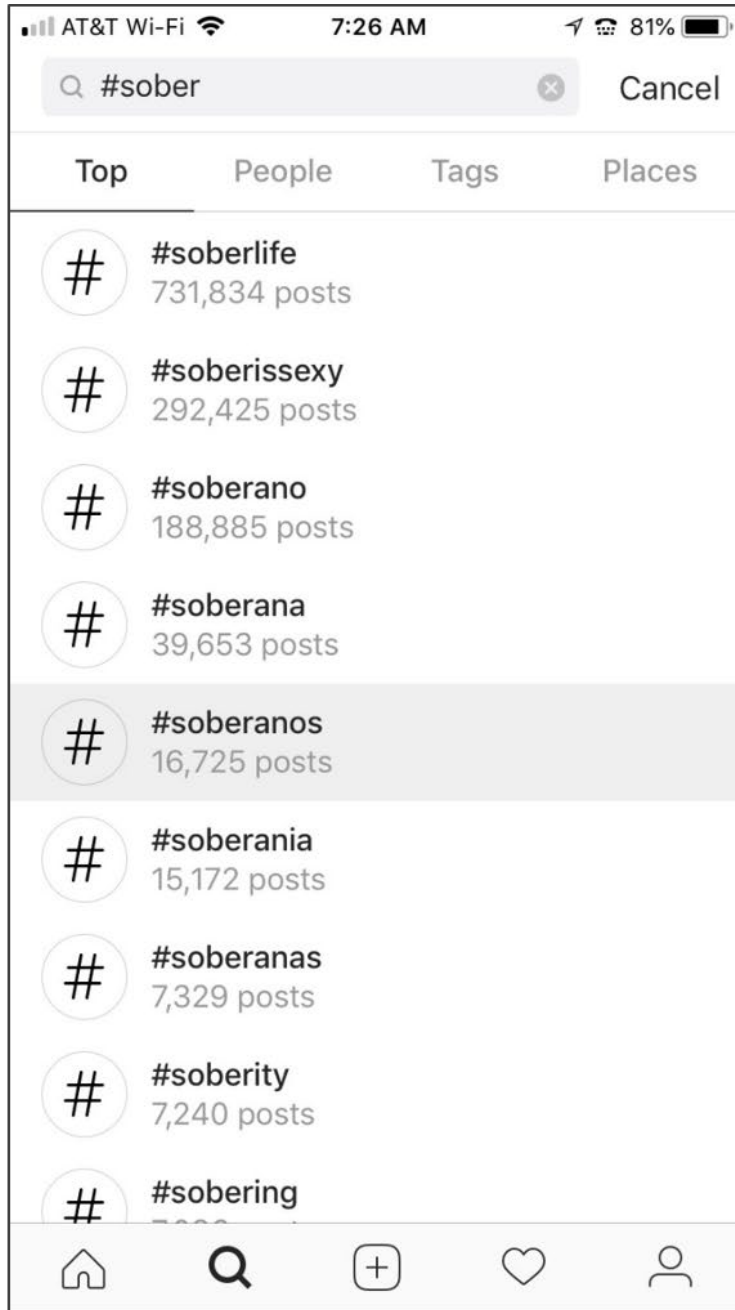


Instagram

## Address another user or organization with “@”

@Recovery\_Org

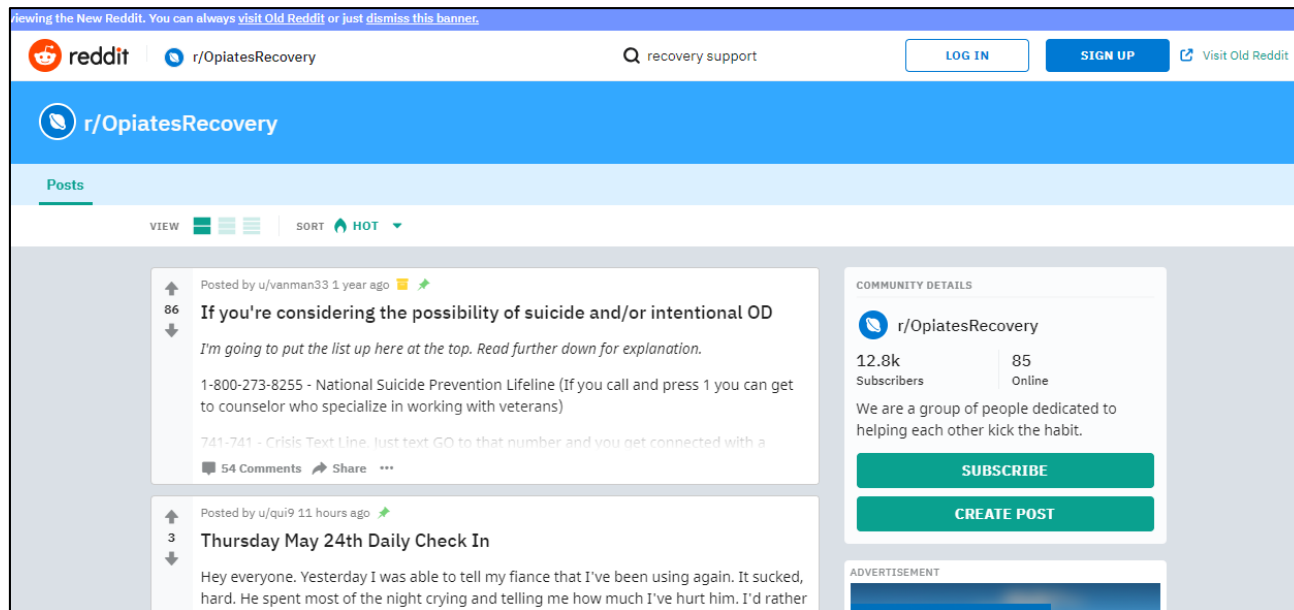
@OurYoung Addicts





**Aim to contribute value with every action  
and consider the community first**

<https://www.shopify.com/blog/how-to-use-reddit>



<https://www.reddit.com/r/OpiatesRecovery/>

**Reddit is a social news  
website and forum where  
content is socially curated  
and promoted by site  
members through voting.  
The site name is a play on  
the words "I read it".**

<https://searchcio.techtarget.com/definition/Reddit>



# Recovery Blogs

- **a type of website started by someone in recovery**
- **contains entries of personal commentary and discussions on different aspects of addiction recovery**
- **similar to an online diary**
- **usually interactive, allowing visitors to make comments and message each other**
- **helps people connect, learn, and share ideas**
- **may also feature news or magazine articles**



## 021: 10 Ways to meet new friends in sobriety



July 13, 2015 By paully12b [Podcast](#) 0 Comments



Here are the 10 ways to meet new friends in sobriety that Paul discusses in this podcast episode

### Recent Posts

[025: The Other Side Part 3 |Cassy Married an Alcoholic](#)

[We Loved It, We Hated It | The Confusing Dynamics During Early Alcohol Recovery](#)

[024: The Other Side Part 2 |Emma is the daughter of an alcoholic](#)

[Sobriety First | Making Alcohol Recovery a Priority](#)

[023: The Other Side](#)



- **2<sup>nd</sup> most visited website in the world**
- **5 billion videos are watched on You Tube every day**
- **Female users are 38% and male users are 62%.**
- **User Percentage by Age**
  - **18-24 – 11%**
  - **25-34 – 23%**
  - **35-44 – 26%**
  - **45-54 – 16%**
  - **50-64 – 8%**
  - **65+ – 3%**
  - **Unknown age – 14%**
- **More than half of YouTube views come from mobile devices**



Finding sobriety on a mountaintop | Scott Strobe | TEDxMileHigh

53,021 views

740 14 SHARE + ...

# Research Studies Using Texting

- **weight/obesity**  
(Gerber et al., 2009)
- **diabetes**  
(Franklin et al., 2006; Hanauer et al., 2009)
- **asthma**  
(Neville et al., 2002)
- **tobacco dependence**  
(Rodgers et al., 2005)
- **sexual health**  
(Leach-Lemens, 2009; Lim et al., 2008)



# Text messages can change behavior!

**29% vs. 36%**

no-show

Percent no-show, with vs. without text reminder

**36%**

increase

Percent increase in smoking cessation  
(similar to other brief interventions)

**56%**

fewer days

Probationers who chose not to receive reminders  
attended 56% fewer treatment days

**Text messages are scalable, easy to use, can be tailored,  
and reach people in real-time!**

# Messages can help with...



Motivation

Remember how much money you are saving by being sober!



Skills, ideas,  
& planning

Some people find it's helpful to talk to people with clean time, to see how they did it.



Reminders  
about action

It's almost the weekend!  
Remember to spend time  
with sober people.

Source: Fogg, 2009

Slide created by Dr. Scott Walters

# Texting Benefits

- **Allows for direct contact**
- **Asynchronous—can reach someone at any time; flexibility in timing**
- **Used routinely for reminders in medical settings—increases attendance**
- **Tailored messages can change behavior**
- **Therapeutic reminders can bridge gap between treatment and daily life**
- **Cost effective**





# A Guide to Using Text Messages

to Improve Substance Use  
Treatment Outcomes



Mountain Plains  
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## EXAMPLES OF SOME TEXTS

17

### Appreciative Stems

- *Great work tonight! You really know a lot about...*
- *Your...has really paid off!*
- *You have a lot of great ideas for...*
- *You're doing things right!*
- *That's wonderful. It really shows a lot of...*
- *You're really strong/brave/thoughtful/proactive.*
- *You're very committed to...*
- *You're working hard to...*
- *You're way ahead of...*

### Task Stems

- *Hi! A reminder to...*
- *Before group tonight, jot down a couple...*
- *Come prepared to say something about...*
- *Today, spend 5 minutes...*
- *Take a moment today to...*
- *Use today to think about...*

### Relationships/Social Support

- *Why reinvent sobriety? Talk to someone with clean time to see how they did it.*
- *Have a Plan B! Put a number in your phone of someone you could call if you needed to talk.*
- *Surround yourself with the best people! Get in touch with old friends who might help you stay clean.*
- *Go to an NA or AA meeting, or other support group.*
- *Attend a church or faith group.*
- *Keep in touch with your sponsor, or find another who will better serve your needs.*
- *Volunteer to chair a recovery meeting in your area.*

# Apps provide

- Information
- Motivation
- Support
- Feedback



# Apps

- **Users can use the app when they want, where they want, repeat content to reinforce learning, and can use multiple apps or interventions to address the issues they need** (Whiteman et al., 2017)
- **Emerging evidence suggests that engagement with self-care apps is often lower in real world clinical use than predicted from pilot studies in which patients are offered extra support and resources** (March et al., 2018)

# Apps

- **A recent study on top 50 app suggestions by app stores showed that only 4% had scientific support and evidence. (Haskins et al., 2017)**
- **Evaluating an app requires knowledge of its clinical, financial, and technology performance.**





# 12 Steps AA Companion 2 - App

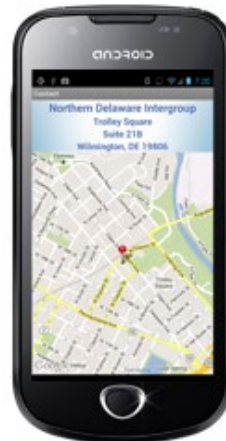
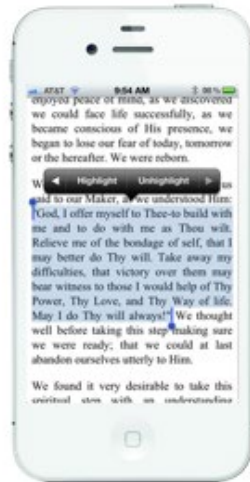
iPhone + iPod Touch + iPad + Android + Kindle + Nook



## The ORIGINAL & MOST COMPREHENSIVE sobriety tool available for members of Alcoholics Anonymous.

With a feature packed Big Book reader, search tool, sobriety calculator, notes, AA contacts database and more, your experience is unmatched! Every member of AA will find this app very useful yet quite simple to use.

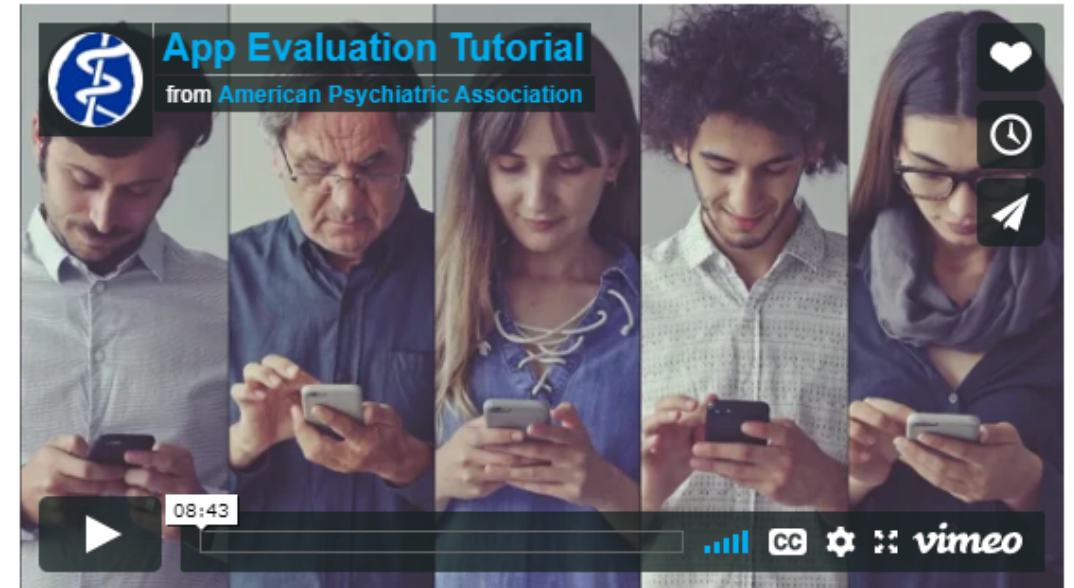
iPhone iPod touch iPad **ANDROID** **nook app**



## APA's Hierarchical Rating System

- Safety/Privacy
- Evidence (i.e., effectiveness)
- Ease of Use
- Interoperability

## App Evaluation Model



Our approach to rating mental health apps is grounded in the belief that any decision between you and a patient is a **personal decision based on many factors**, for which there is rarely a binary 'yes' or 'no' answer. For example, cognitive behavioral therapy is often appropriate for many patients, but certainly not all. This is because it requires getting to know the patient's specific clinical case in order to make the best decision. However, the process behind selecting an app to use with a patient is slightly different compared to selecting a form of psychotherapy or a medication. This is because making this type of decision is not what psychiatrists and mental health clinicians are classically trained to do. It is still a fairly novel process and many clinicians may be unfamiliar with.

# App Rating Criteria from American Psychological Association

## Background Ratings Key

(categories rated from 1-5, with 5 being the most positive score)

Privacy/Security	If applicable, do the creators acknowledge that providers need to be HIPAA compliant? Is there a privacy policy? Is data collected, stored, shared? Is data de-identified? Can you opt out? Is there a security policy? Data encryption?	1- HIPAA relevant and ignored, no privacy policy etc.; 5- Highest levels of privacy & security
Evidence Base	Is there any research support for the product? Is it peer-reviewed? Between-group design experiments? Who provided the funding for the research?	1- No research evidence; 5- Ample research evidence
Cost & Business Model	If it is free, how is it supported? Are there in app purchases?	1- Heavy marketing/advertising; 5- Reasonably priced, clear and easy to navigate payment options
User Feedback	What are current user feedback/ratings?	1- Very negative reviews; 5- Very positive reviews

## Psychologist Panel Review Ratings Key

(categories rated from 1-5, with 5 being the most positive score)

Purpose	What is the proposed intervention or what does it claim to do? Is it likely to do what it claims?	1-Highly unlikely 5- Highly likely
Appropriateness of Content	Is the content appropriate? Does the content match the description and purpose? Were any clinical/psychology experts involved in the development of the material?	1- Very inappropriate 5- Highly appropriate
Cultural Responsiveness	Did the app/software consider a variety/range of cultural factors (e.g., age, race, ethnicity, gender, gender identity, sexual orientation, ability levels) in the development? Is the app/software likely to appeal to people from different cultural backgrounds? Is it available in multiple languages?	1- Very unresponsive 5- very responsive
Ease of Use	Is it easy to navigate? Is it customizable?	1- Very difficult 5- Very easy
Functionality	Does it perform well? Does it need the internet to work? Can you export/download your data?	1- Very poor 5- Very well
<b>Overall Rating</b>	Would you recommend this app to other psychologists? How often would you use or ask a client to use this app? What is your overall rating of this app?	1- Strongly do not recommend 5- Strongly recommend

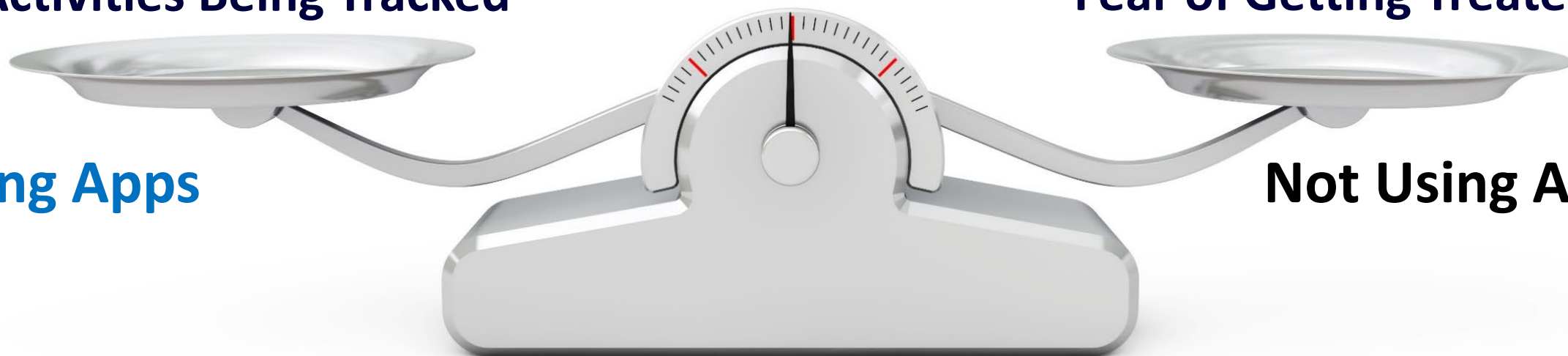
**Inaccurate Information**  
**Self-Diagnosis**  
**Privacy Risks**  
**Activities Being Tracked**

**Using Apps**

**Feeling Alone with Condition**  
**Inaccurate Information**  
**Self-Diagnosis**  
**Fear of Getting Support**  
**Fear of Getting Treated**


**Not Using Apps**

**Weigh It Out**





# Web-based/Apps - Research-Based & Commercially Available

- CBT4CBT
  - A-CHESS-CHESS
  - reSET
  - reSET-O
- 
- Prescribed Digital Technologies
- Center for Technology and Behavioral Health Website
  - 65 Web-based/Apps for SUDs

**8 Commercially Available** (not counting tobacco-related apps/web-based programs or those unavailable in English)

- MORE – My Ongoing Recovery Experience - Hazelden/Betty Ford patients
- eTOKE
- Alcohol Screening/Support
  - e-CHUGG
  - Check your Drinking
  - Alcohol.edu



# CBT4CBT, LLC

Developers of Computer Based Training  
for Cognitive Behavioral Therapy

[Home](#)[Providers](#)[Evidence](#)[Patients](#)[Program Access](#)[Additional Products](#)[Contact](#)

## Welcome to CBT4CBT™

We provide Computer Based Training for Cognitive Behavioral Therapy (CBT4CBT). CBT4CBT™ can help people stop or reduce use of drugs or alcohol when used as part of a treatment plan supervised by a healthcare professional.

[PROVIDERS](#)[CONTACT](#)

<https://cbt4cbt.com/>



CHESS Health announces new Envoy app, offering support for families and loved ones.

[LEARN MORE](#)

## Evidence-based Technology Addressing the Crisis of Substance Use Disorder (SUD) from Intervention to Treatment to Recovery

- ▶ Patient and family engagement
- ▶ Referral and care transitions
- ▶ Digital therapy
- ▶ Analytics and benchmarking

[LEARN MORE](#)

[REQUEST A DEMO](#)



FOR TREATMENT PROVIDERS



FOR HEALTH PLANS & GOVERNMENTS



FOR HEALTH SYSTEMS



Interested in prescribing reSET-0 or reSET?  
Request a demo to learn more.

Request A Demo



watch the reSET video



watch the reSET-0 video

<https://www.resetforrecovery.com/prescription-digital-therapeutics#:~:text=Prescription%20digital%20therapeutics%20are%20software,devices%2C%20or%20remote%20care%20programs>



# Trend

- **Hybrid-Relationships with patients/peers**
- **Use of telehealth, texting, apps, web-based programs to provide treatment and recovery support services**
- **Managing these relationships will include:**
  - **What DHTs are patients/peers using?**
  - **Should I prescribe/recommend apps or SNSs or podcasts**
  - **Should I produce my own media for my patients/peers**
  - **What does research say (what's the evidence)?**
  - **What's commercially available and what are the costs?**



# Checking In With Patients/Peers

- **Ask patient/peers to:**
  - **Identify which DHTs they are using**
  - **Describe frequency of use and attendance patterns**
  - **Identify which OSGs or SNS they feel most comfortable with and/or accepted by? Why?**
  - **Share with you some correspondence (threads, messages, etc.) they have received**
  - **Describe any problems they have experienced**
  - **Show you new sites or groups and if ask if they have or will share their experience with other peers**
  - **Identify any advice or messages that they question its veracity or causes confusion**

**SPEND TIME CHECKING IN**

## Informing Patients/Peers

**Clinicians/Peers using asynchronous technologies must pay special attention to their impact on patient-clinician and peer-peer communication**

- **Clinicians/Peers' delays in responses** (*If you leave me a message in a secure portal or through an PDT, my response may be delayed.*)
- **Patient/Peer use of messaging during acute crises** (*When you need to talk to someone, immediately do this.*)
- **Potential misinterpretations of text communications** (*Text messages are only one-way communications*)
- **Review Social Media Policy** (*I do not respond to messaging in SNSs.*)
- **Goal-reduce miscommunication and frustration with technology**

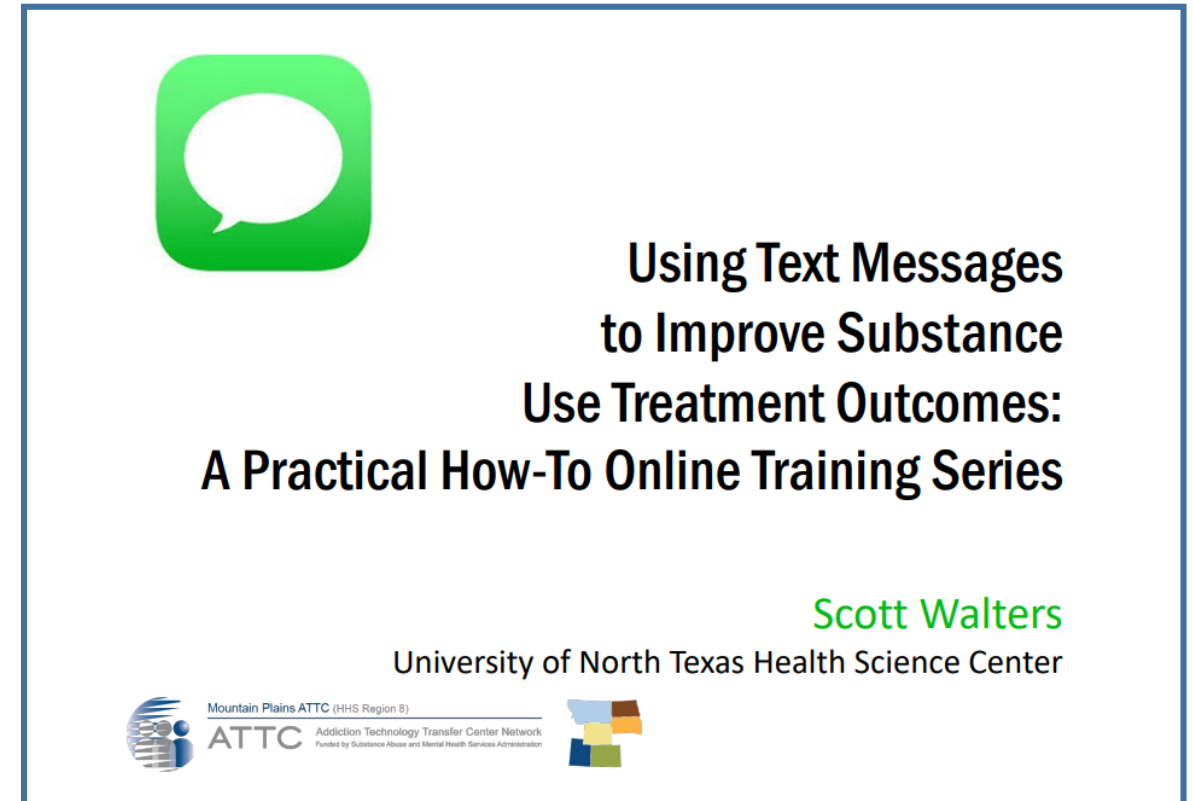
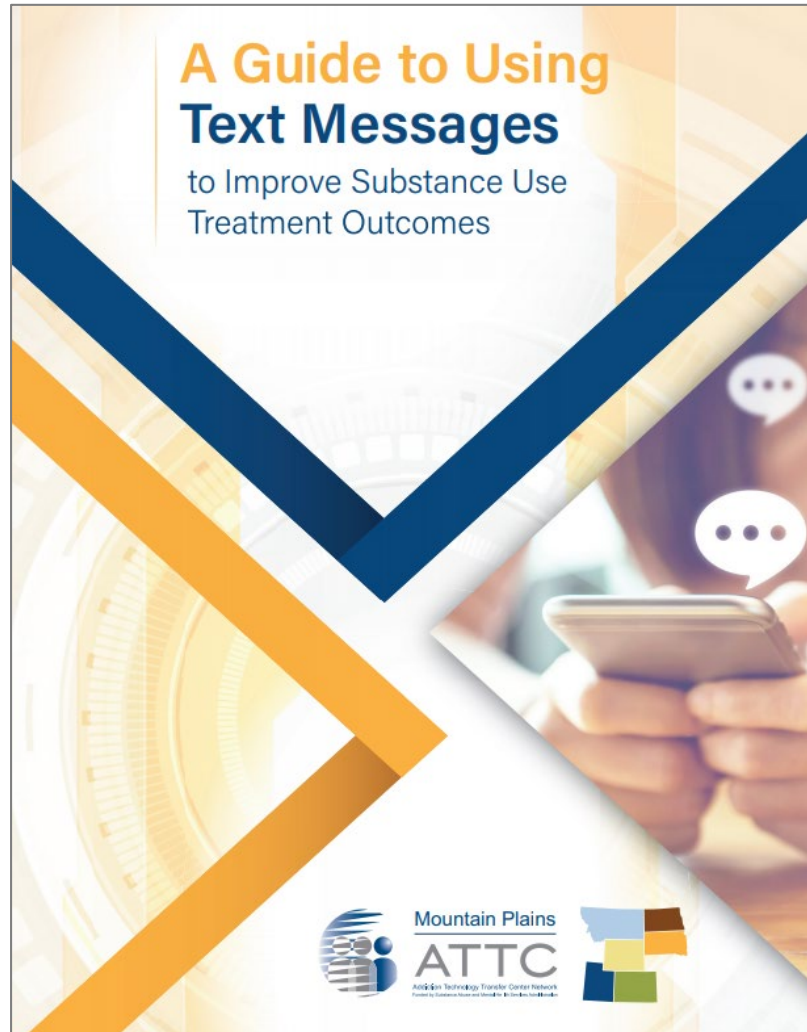
# Engagement

- Create a dedicated internal team with clear role and responsibilities to lead implementation
- Identify staff with positive attitudes toward the technology to serve as champions to promote buy-in among clinicians and clients
- Collaborate with the technology experts to address technical issues and create adaptations to improve patient/peer engagement and fit with agency and patient/peer needs
- Work with technology experts to ensure that technology fits with the service area and the technology infrastructure of agency
- Orient patients/peers to the technology early to build awareness and interest
- Use contracts with patients/peers to set mutual expectations about use of technology
- Sponsor discussion forums with patient/peers to build interest/engagement

# Integrate Technologies into Different Points of Care

- Intake (Screening- **Tablet-IVR**)
- Informed Consent (**Video/Podcast**)
- Waiting Room (What to Expect in Treatment- **Video/Audio Recordings**)
- Early Treatment (Engagement- **Text messages; Online Support Groups, Apps, etc.**)
- Ongoing Care (Addressing Comorbidities & Cravings- **Apps, Online Support**)
- Post Treatment (Recovery Support- **Online Support Groups, Podcasts, Blogs, etc.**)

# Text Messaging Resources





www.nfarattc.org



# Telehealth Capacity Assessment Tool



National Frontier & Rural

ATTC

Addiction Technology Transfer Center Network  
Funded by Substance Abuse and Mental Health Services Administration

## TCAT

Is your Agency ready for  
○○○○○ **○ Telehealth?**





# QUOTE

**Numerous efforts in using apps and media for self-care can help educate, reduce stigma and bias, and decrease barriers to care. Such tools are certainly no substitute for traditional care, and the gold standard is to have a mental health professional assess, diagnose, and treat the patient.**

**Despite this, these tools can help provide support for patients who have no access to care, or otherwise have limited access due to geographic or time constraints. Health care professionals benefit from not only understanding these tools, but also how to use them, evaluate for clinical applicability, and consider leading efforts to create such tools.**

# For more information, contact



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