CHESS Framework

• Relatedness

• Competence

• Autonomy

A-CHESS is a smartphone app. It is one more tool that a patient can use to help them in their recovery.
Social support
- Discussion groups
- Private messaging
- Panic Button

Education and training
- Games and relaxation
- Tailored information & stories
- Healthy events/Meeting locator

Risk identifier
- Hi risk locater (GPS)
- Language analysis

Assessments
- EMA
- Scheduled assessment
- Tailored feedback
- ACHESS use

Alerts
- Reminders
- Risk alerts
- Clinician alerts
Overview and Testimonials

Social support
- Discussion groups
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Education and training
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Alerts
- Reminders
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- Clinician alerts
CHESS has been tested in 15 Randomized Trials

• PC based:
  • Breast cancer (3)
  • Lung cancer
  • Transplant families
  • Asthma parents
  • Children of alcoholics
  • Alzheimer’s caregivers
  • HIV/AIDS
  • Smoking (Teens)
  • Smoking (Adults)
  • Menopause

• Smart phone based
  • SUD (2)
  • Colon cancer
  • Asthma (teens)

• Ongoing trials
  • Combine w MAT
  • Combine w case mgt.
  • Combine w EMA
  • Combine w CBT
  • Support older adults.
  • Multiple Chronic Conditions
ACHESS had 57% fewer heavy drinking days. Differences significant at $p = .003$.
The difference widens; even after ACHESS leaves (in patients w Co-occurring OPIOID use)
Change in retention rates
Opioid Addicted Appalachian Women (n=200).

Percent Improvement via ACHESS

Mathews D. (2014). *Combatting Addiction with Technology for Young Appalachian Women Using Smart Phones*. Kentucky River Community Care. Hazard KY.
Is it CHESS or the phone?

RCT 100 per arm

Analyze discussions: Swearing predicts relapse
Clinician Report
(Lung Cancer & ACHESS)
If CHESS shares patient status data with providers, then patients improve.

If patient reports a health status level over threshold, & CHESS notifies the clinical team, Lung Cancer patients got better.

RCT - Lung cancer patients with CHESS lived 35% longer.

Clinician Report
Integrating ACHESS and the Clinical Team
Welcome Randy Brown

Select User: [Dropdown]

2015/01/18 to 2015/03/18  Reload Chart

Brief Alcohol Monitor (BAM):
- OVER ALL
- SLEEP
- DEPRESSION
- URGES
- RISKS
- RELATIONSHIPS
- CONFIDENCE
- MEETINGS
- RELIGION
- ACTIVITIES
- SUPPORT

Reload Chart
Challenges

• We know clinician report works. How to get clinicians to use?
  • No work
  • Link to EMR

• Finding accurate sensors

• Sustaining use

• Balancing human touch vs automation
Implementation

• www.chess.health
• Together development team owns 3%
• 5500 licenses sold
• Implementation Science research
• 2017 finalist “Innovations in American Government Awards” – Harvard
• 2018 Ohio Opioid Technology Challenge