Implementing web-based interventions at VA: case studies in diabetes prevention and cognitive behavioral therapy for women Veterans
Julian Brunner, MPH
Alison Hamilton, PhD, MPH

VIReC Cyberseminar Series: Using Data & Information Systems in Partnered Research
Acknowledgements

Funding:
• VA QUERI funding for “Enhancing Mental and Physical Health for Women Veterans through Engagement and Retention” (EMPOWER; QUE 15-272)
• VA HSR&D Women’s Health Research Network (SDR 10-012)

EMPOWER Investigators:
• Tannaz Moin, MD, MBA, MSHS\textsuperscript{1,2,3}
• Ariel Lang, PhD\textsuperscript{4}
• Sabine Oishi, PhD\textsuperscript{1,2}
• Bevanne Bean-Mayberry, MD, MHS, FACP\textsuperscript{1,2,4}
• Melissa Farmer, PhD\textsuperscript{1,2}
• Dawn Glover, MA\textsuperscript{1,2}
• Erin P. Finley, PhD, MPH\textsuperscript{5}

(1) VA Greater Los Angeles Healthcare System
(2) HSR&D Center for the Study of Healthcare Innovation, Implementation & Policy
(3) David Geffen School of Medicine at UCLA
(4) VA San Diego Healthcare System and University of California, San Diego
(5) South Texas Veterans Health Care System and UT Health Science Center, San Antonio
Disclaimer

The views expressed are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the United States Government.
Today’s Presentation

Case studies of implementing web-based interventions from EMPOWER QUERI:
 – Online DPP (Diabetes Prevention Program)
 – Computer-assisted CBT (Cognitive Behavioral Therapy)
Poll Question #1: What is your role in the VA?

• Research investigator/PI
• Data manager, analyst, or programmer
• Project coordinator
• Clinical or operations staff
• Other – please describe via the Q&A function
Poll Question #2: Has development or evaluation of health IT interventions been a part of your job?

• Yes, a big part
• Yes, a small part
• No, it hasn’t
Background: Frameworks

Implementation/Innovation-Focused (not IT-specific), e.g.

- CFIR
- RE-AIM
- Diffusion of Innovation

IT adoption (not healthcare-specific), e.g. ...

- TAM
- User-Centered Design

Health IT Frameworks, e.g. Sociotechnical model (Sittig & Singh)
Lessons

(things that were important or challenging in unexpected ways)

- App introduction and training
- Contracts and partnerships
- Integration with existing systems
- Collecting and using feedback
CASE 1: ONLINE DPP

PI: Tannaz Moin, MD, MBA, MSHS
Co-PI: Sally G. Haskell, MD
Background: Diabetes Prevention Program (DPP)

- **2002:** DPP study was published in the NEJM
  - 58% relative diabetes risk reduction with intensive lifestyle interventions

- **2018:** 15+ years of evidence showing diabetes can be delayed or prevented with metformin or intensive lifestyle interventions
Compare & contrast w/ MOVE!

MOVE!

- 8-12 core sessions (6 months)
- Variable goals
- Isolated topics in each session
- Open groups, multiple instructors
- Target all overweight/obese

DPP

- 16 core sessions (6 months)
- Standardized goals
- Linked sessions with skill building
- Closed groups, single instructor
- Target those with prediabetes
Online DPP

• Why:
  – Weekly in-person sessions may not be possible for women Veterans with competing demands

• What:
  – Human coaching
  – Online group w/ messaging
  – Online lessons
  – Wireless scales, smartphone integration
Human Coaching

Health Coach Lorena
30 minutes ago

Hey, it’s 2pm. Your afternoon snack attack is due to hit in 30 minutes. Can you sneak in a short bike ride now? Your cravings will fade, I promise.
Online Group

Visual displays of progress (green circles around pics)

Messaging
Online Lessons

16-WEEK CORE CURRICULUM
- Changing food habits
- Increasing activity levels
- Preparing for challenges
- Sustaining healthy choices

LESSON 14
Dealing with Social Cues
- Consider the influence of social cues in your life
- Address negative social cues and add helpful ones
- Review strategies for coping with special events
- Rally support from your peers

Start date: Jan 27
Wireless Scales & Smartphone Integration
Online DPP: Implementation
DPP: App introduction and training

• Directly to patients: letters and follow-up calls
  – Identified prediabetes in CPRS
  – Offered in-person or online DPP
  – Website and code for linking

• Helpdesk
DPP: Collecting and using feedback

• From patients
• From providers
• From “implementers”
DPP: Contracts and partnerships

• Barriers as vendor grew:
  – Not always women-only groups
  – Proprietary data

• Implications:
  – Contracting expertise
  – Vendor as partner
DPP: Integration with existing systems

- What extent of integration with CPRS is appropriate for a direct-to-patient program?
CASE 2: COMPUTER-ASSISTED COGNITIVE BEHAVIORAL THERAPY

PI: Alison Hamilton, PhD, MPH
Co-PI: Ariel Lang, PhD
Background: Coordinated Anxiety Learning & Management (CALM)

Delivery of Evidence-Based Treatment for Multiple Anxiety Disorders in Primary Care
A Randomized Controlled Trial

Implementation of the CALM intervention for anxiety disorders: a qualitative study
Geoffrey M Curran¹,²*, Greer Sullivan¹,³, Peter Mendel⁴, Michelle G Craske⁵, Cathy D Sherbourne⁶, Murray B Stein⁶, Ashley McDaniel³ and Peter Roy-Byrne⁷,⁸

Who Gets the Most Out of Cognitive-Behavioral Therapy for Anxiety Disorders?:
The Role of Treatment Dose and Patient Engagement
Daniel Glenn, MA⁹, Daniela Golinelli, PhD⁹, Raphael D. Rose, PhD⁹, Peter Roy-Byrne, MD⁹, Murray B. Stein, MD, MPH⁹, Greer Sullivan, MD, MSPH⁹, Alexander Bystritsky, MD⁹, Cathy Sherbourne, PhD⁹, and Michelle G. Craske, PhD⁹
Original Implementation in VA (Little Rock, AR)


Implementation Science

STUDY PROTOCOL

Assessing fidelity of cognitive behavioral therapy in rural VA clinics: design of a randomized implementation effectiveness (hybrid type III) trial

Michael A. Cucciare1,2,3,4, Geoffrey M. Curran1,2,5, Michelle G. Craske6, Traci Abraham1, Michael B. McCarthur1, Kathy Marchant-Miros1, Jan A. Lindsay3,4,7,8, Michael R. Kauth3,4,7,8, Sara J. Landes1,2,3,4 and Greer Sullivan9
“Calm Tools for Living”
<table>
<thead>
<tr>
<th>Care Management Functions</th>
<th>CCWV Element (each locally tailored)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial MH assessment of patients referred by PCP</td>
<td>Care manager (CM) conducts baseline MH assessments, medication history, etc.</td>
</tr>
<tr>
<td>Women with anxiety and/or depression offered treatment choices</td>
<td>Treatment choices are medications, CALM CBT, or both</td>
</tr>
<tr>
<td>Women requiring specialty treatment receive support to access resources</td>
<td>Care manager inquires about preferences, facilitates warm hand-off, follows up with patient</td>
</tr>
<tr>
<td>Symptoms and emergent problems monitored</td>
<td>CM uses structured MH assessments to monitor treatment response</td>
</tr>
<tr>
<td>Patient education and activation</td>
<td>If patient chose medication, CM provides education; if chose CBT, they use CALM</td>
</tr>
<tr>
<td>Decision support</td>
<td>CM uses stepped care protocol under supervision</td>
</tr>
</tbody>
</table>
Computer-assisted CBT: Implementation
CBT: App introduction and training

• Care managers are the most direct users

• Staggered implementation: first site experience informs training at next site
CBT: Contracts and partnerships

• Partnership w/ Little Rock VA to use program already adapted for VA
CBT: Integration with existing systems

- Existing system has some of the same assessment tools (e.g., “Behavioral Health Lab”)
  - Which one is “primary”?
  - Info transfer?

- App artifacts in patient record?
CBT: Collecting and using feedback

- From patients, care managers, “implementers”

- Feedback:
  - Physical space constraints with shared computer use
  - Flexibility
EMPOWER Protocol

Online DPP

Computer-assisted CBT

Health IT Framework
Thank You!/Questions?

Contact:
Julian.Brunner@va.gov
Alison.Hamilton@va.gov
Next Session: Tuesday, May 22\textsuperscript{nd} at 12pm Eastern

Using Data & Information Systems in Partnered Research Cyberseminar Series

Designing Performance Feedback about Goals of Care Conversations in VA CLCs & HBPC sites

Zach Landis-Lewis, PhD
University of Michigan