Evaluation of Multisite E-learning Training for VA Mental Health Providers within the CAMS Study
Presentation

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Presentation Outline

• Grant information
• Background
  – Targeted intervention
• Presentation objectives
• Methodology
• Approval
• Implementation-timeline, development, CEU’s,
• Sites, recruitment, delivery
• Evaluation-measures, initial findings
• Preliminary conclusions
• Next steps
Patient and Provider Outcomes of e-Learning Training in CAMS

Objective:
to develop and test the effectiveness of an electronic learning alternative to the Collaborative Assessment and Management of Suicidality (CAMS) in-person approach.

VA HSR&D EDU 08-424 funded health education research

3 year, multisite study
Background:
Veterans are at high risk for suicide

The VA has identified suicide in Veterans as a priority.

The risk for suicide in Veterans is:
- higher than for non-Veterans.
- higher for rural than urban Veterans

The risk in military populations is highest in the Army and the Marines.
Background: Consider a VA-specific study of suicide

A retrospective review of 887,859 Veterans receiving depression intervention in VA medical centers found:

- Significantly elevated rates of suicide:
  - 48 weeks after hospitalization
  - 12 weeks after hospitalization for 61-80 year olds (highest suicide rate group)
  - 12 weeks after medication changes
Targeted Intervention: CAMS

The Collaborative Assessment and Management of Suicidality (CAMS) is an overall process of clinical assessment, treatment planning, and management of suicidal risk.

The CAMS core multipurpose risk assessment tool is the Suicide Status Form (SSF).

The SSF serves as a roadmap for guiding the clinician and patient, providing crucial and comprehensive documentation.
Suicide Status Form

The Suicide Status Form (SSF) document is used for:

1. Assessment
2. Treatment Planning
3. Tracking
4. Outcomes
CAMS is Consistent with...

- VA Suicide Prevention Plan
- VISN7 & VISN2 CoE priorities
- Military & VA systematic reviews
- National and VA Recovery Initiatives
Empirical Support for CAMS

CAMS is used in multiple settings

Core SSF Assessment aspects and quantitative properties established, support for qualitative aspects

5 published correlational studies supporting feasibility and clinical use of CAMS and the SSF with suicidal outpatients and one inpatient psychiatric study
Why is training important?

A patient’s ambivalence about dying is an opportunity for a provider to save a life.

A systematic method of managing suicidality can assuage the fear of losing a patient.

Training can help increase confidence and competence and dispel common myths.
Who can benefit from CAMS? (Providers)

Providers can use the theoretical orientation of their choice with the CAMS approach.

Examples include:

- Marital/family counseling
- Exposure therapy and MST
- 12 step programs
- Pain management
Why should I use CAMS?

“I have always considered it a privilege to be allowed into the life of an individual in crisis. For me, one of the most challenging clients is the person who can no longer find a reason to live. Personal experience has shown that this is a life threatening situation. I have found the CAMS approach, (and specifically the SSF tool), to be effective at engaging suicidal persons and eliciting important information that might help in their recovery”.

David Koerner, MSW, VA provider who uses CAMS
Background: Health Education Research

U.S. Department of Education meta-analysis:
The effectiveness of eLearning compared favorably with blended learning, and generally led to more learning than traditional face-to-face interaction.

Mixed studies but little research evidence for changes in practice.
Presentation Objectives

Describe the process and outcomes related to aims:

1) Develop CAMS e-learning including the same material & objectives of In-person training

2) Testing effectiveness of the e-Learning compared to In-person & non-intervention control in terms of provider evaluation of training
Methodology

• Multicenter, randomized, cluster three group design

• Multivariable modeling strategy to analyze change in confidence, beliefs, and practice

• Pilot delivery to assess provider evaluation and improve training

• Formative evaluation of facilitating and inhibiting factors of the process
Approval

• IRB Medical University of South Carolina
• VA Office of Research
• Site specific IRBs

In hind site - We WISH we could have used Central IRB
Benefits of Participation

• ARM 1-2:
  – CAMS Training
  – 6.5 hours of CEU credit
  – Biweekly telephone coaching calls
  – CAMS manual

• ARM 3:
  – Emergencies in Mental Health Practice book
Risks of Participation

May experience:
• discomfort due to content
• increased anxiety due to performing new interventions

Confidentiality – risk in all studies
Participant Eligibility

Outpatient mental health providers-
psychiatrist, psychologist, APRN, social worker, case manager.

No previous CAMS training

Informed consent
## Implementation Time-Line

<table>
<thead>
<tr>
<th>WEEK</th>
<th>MONTH</th>
<th>ACTIVITY / DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Local site PI is identified</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>PI and others named on protocol complete CITI training (1 week)</td>
</tr>
<tr>
<td>2-9</td>
<td>1-2</td>
<td>PI works with Charleston CAMS team to prepare and submit all R&amp;D and IRB materials to local IRB/R&amp;D. (2 months)</td>
</tr>
<tr>
<td>10-13</td>
<td>3-4</td>
<td>Once approved by R&amp;D, coordinator is hired. (1-3 months)</td>
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<tr>
<td>14</td>
<td>4</td>
<td>In-person/e-learning training scheduled 3-4 months out. (1 day)</td>
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<tr>
<td>15-22</td>
<td>4-6</td>
<td>Coordinator works with PI&amp;SPC to recruit and consent providers for participation in study. (2 months)</td>
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<tr>
<td>23-24</td>
<td>6</td>
<td>Pre-evaluation survey administered and participants randomized. (2 weeks)</td>
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<tr>
<td>25</td>
<td>7</td>
<td>Books distributed to non-intervention group. (1 week)</td>
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<tr>
<td>25</td>
<td>7</td>
<td>Providers block clinic schedules accordingly. (1 week)</td>
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<tr>
<td>31</td>
<td>8</td>
<td>In-person training held. Post evaluation survey administered &amp; CAMS manual distributed to in-person participants. (1 day)</td>
</tr>
<tr>
<td>31-35</td>
<td>8-9</td>
<td>E-learning goes online. (3 weeks)</td>
</tr>
<tr>
<td>35</td>
<td>9</td>
<td>Post evaluation survey administered to e-learning group. CAMS manuals distributed to completers. (2 weeks)</td>
</tr>
<tr>
<td>38-43</td>
<td>10-11</td>
<td>Three 1-hour coaching sessions held biweekly. Dave Jobes and local PSC participate. (6 weeks)</td>
</tr>
<tr>
<td>45</td>
<td>11</td>
<td>3 month survey administered online. (2 weeks)</td>
</tr>
<tr>
<td>63</td>
<td>20</td>
<td>Chart abstraction begins at one year post training. Done by Charleston staff.</td>
</tr>
</tbody>
</table>
Delayed Onset

Project start date: August 1\textsuperscript{st} 2009

Project Research Coordinator in Charleston
   Barrier
   Start Date: January 3\textsuperscript{rd} 2011

Satellite sites:
Local PI’s & Study Coordinators (.5 for 6 months)
Barriers
   - delayed hiring & staff transferring
Keep in Mind:
Budget Barriers

Budget was off due to late hiring of Research Coordinator (1.5 years)

Contract process lengthy - unable to contract out during the first year

People had to be hired internally for jobs-via transfer of funds
In-Person – vs. eLearning

Both: 6.5 CEU’s
   the Suicide Status Form (SSF)
   The CAMS Approach to Suicide Risk Assessment
   CAMS Intervention (Problem-Focused Treatment)
In-Person:
   CAMS research studies
   CAMS in college population
   Ethics/Malpractice and Next Steps
eLearning:
   Veteran specific
   CAMS video segments
   VA Suicide Prevention Strategy
   4 Modules
E-learning Design Elements with Empirical Evidence

- Provide evidence-based intervention strategies
- Keep it simple, easy to use
- Make it accessible 24/7
- Make it platform-independent
- Keep it anonymous
- Make it self paced
- Make it visually attractive & appealing
- Make it interactive & engaging
- Organize it in modules
- Offer individuation
- Provide resources for help
Iterative process with multiple paths and revisions

Early stages...

- In-person CAMS and Moodle (platform) trainings for study staff

- Balancing CAMS research & “How to do CAMS”
  - Transcripts of In-person training
  - Use of Jobes (2006) manual to inform curriculum

- Guidance of education and technology experts (development of modules, Moodle capacity, use of web site)
Production stages...

- Development of scripts for main video & 2 vignettes reflecting diversity & short introductions
- One day filming of Dave Jobes and Keith Jennings

Barrier
Delivery in first site underscored problems and limitations
Late stages...

**Major** revision of eLearning curriculum
Ensuring simplicity and adding artistic appeal
Barriers in Development

- Microphone problems during filming
  - Subtitles developed

- Technology issues with bandwidth
  - Multiple compression attempts in order for videos to download
  - Consultation with VISN technology group
Barriers in Development

Limits of file sharing

• Large amount of file graphics & security issues (burning of DVD’s, thumb drives)

Development of dedicated share drive
Barriers in Development

Remember:

Great Minds Don’t Always Think Alike!

The Coordinator not only has to do his/her job, but also Coordinate significant styles and views within their team. They must be persistent but flexible with their approach.
Lessons Learned

• Keep diversity in mind from the beginning
• Identify people early for product review
  – Consider:
    • Content and Learning experts
    • Similar providers
• Build in a formal pilot site and participants
  – Use outside resources if possible
• Know VA technology limitations
  …especially if you are collaborating with outside experts
Tick-Tock

Time isn’t usually on your side!

– Incorporate site **weekly** meetings and teleconferences.
– Do your best to make sure task **assignments are clear** & deadlines are met!

Scheduling around holidays

Gross underestimate of time for eLearning development :
• Projected- 6-12 months
• Actual- 15 months
Dissemination Barriers- CEU’s

VA approved In-Person CAMS brochure
New & unclear process for eLearning
Guidelines changed in process
Change in personnel at TMS
Dissemination Barriers- Websites

CAMS eLearning training
• Process for VA platform delivery lengthy
• Website independent of VA

eLearning CEU accreditation on TMS website VA
• VA satisfactory survey
• eLearning Quiz (Social Workers had the strictest requirements out of all groups)
Providers

Get Their Attention!

**Goal is 268 providers**

4 Sites expanded to 5

Provider range across sites:
Eligibility- 32 to 100.
Recruitment- 65 to 93%
Revision of Sites

Why the new direction?
- One site withdrew due to staffing issues
- Two sites added due to a replacement and a site request
Recruitment of Participants

Informed consent process:
• Pen and Paper- Sites 1-4
• Verbal Consent- Site 5

Site variability due to IRBs’ approval

Lesson Learned- Verbal approval may be less binding
Recruitment of Participants

So what happened…

- Suicide Prevention Coordinators (SPC’s) were asked to endorse the study

- SPC’s were active in the recruitment process at 3 of the 5 sites

Lesson Learned:
ACOS support and SPC involvement crucial

Recruit at service line meetings
In the early evening of April 27th 2011, there was a wedge tornado that tracked across Tuscaloosa County, Alabama. Reports from Tuscaloosa indicated 43 people were killed, with over 1000 injured.

Reports from our Tuscaloosa staff was that the Tuscaloosa VAMC was used primarily as a morgue.
Delivery of Training

Clinic blocking 6-8 weeks in advance

4 In-person trainings
  – Tuscaloosa attended another site
  – CHS staff attended each training

E-Learning delivery
  – Available same day as in-person
  – 2 week accessibility extended

Lesson Learned: Early birds more likely to complete
Delivery:
Coaching Component

The Purpose:
Determine CAMS implementation & increase dissemination

The Format: VANTS call with Dr. Jobes
• Bi-monthly, 6-1 hour sessions (lunch and learn)
• Multiple email reminders

78 % had NO attendees

Lessons Learned:
• Little utilization
• Low cost-benefit ratio
Learning Measures

• CAMS Training Surveys
  – Pre-training
  – Post-training
  – 3 month Follow-up

• Measures 10-15 minutes

(Adapted from Jobes, Knox & VISN2 CoE)
CAMS Survey Items

Eleven Items
- Competence
- Reactions
- Beliefs
- Motivations
- Practice & CAMS

- Delivery mode-satisfaction & preference
- Demographics
Survey Dissemination

Note: Multiple- email reminders

<table>
<thead>
<tr>
<th>Electronic surveys</th>
<th>Hard copy survey</th>
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</thead>
<tbody>
<tr>
<td>Pros</td>
<td>Face-to-face reminders</td>
</tr>
<tr>
<td>- Forced choice (choose a,b,c, etc)</td>
<td>- More personal</td>
</tr>
<tr>
<td>- Easy access</td>
<td></td>
</tr>
<tr>
<td>Cons</td>
<td></td>
</tr>
<tr>
<td>- Wrong emails</td>
<td>No forced choice</td>
</tr>
<tr>
<td>- Easily forgotten</td>
<td>More difficult to disseminate</td>
</tr>
</tbody>
</table>

Workbook delivered after Post-survey
**Provider Profile**

Demographic Description of Providers (n = 217)

<table>
<thead>
<tr>
<th>Demographics</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>&lt; 40 (31.3%), 40-59 (52.1%), ≥ 60 (10.1%)</td>
</tr>
<tr>
<td>Gender</td>
<td>71.4% Female</td>
</tr>
<tr>
<td>Education</td>
<td>Master’s deg. (47.9%), Doctorate (44.2%)</td>
</tr>
<tr>
<td>Profession</td>
<td>Psychiatrist (17.1%), Psychologist (22.1%), APRN/ RN, Social Worker, etc, (60.8%)</td>
</tr>
</tbody>
</table>
### Randomization Summary

<table>
<thead>
<tr>
<th>Training Group Assignment</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-learning (A)</td>
<td>71 (32.7%)</td>
</tr>
<tr>
<td>In-person (C)</td>
<td>72 (33.2%)</td>
</tr>
<tr>
<td>Control (B)</td>
<td>74 (34.1%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research Site</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54 (24.9%)</td>
</tr>
<tr>
<td>2</td>
<td>56 (25.8%)</td>
</tr>
<tr>
<td>3</td>
<td>17 (7.8%)</td>
</tr>
<tr>
<td>4</td>
<td>27 (12.4%)</td>
</tr>
<tr>
<td>5</td>
<td>63 (29.0%)</td>
</tr>
</tbody>
</table>
Interesting Find...

Provider’s career experience with suicidal patients

n=209

192 providers:

32% lost > 1 patient due to suicide

75% treated > 100 suicidal patients

17 providers:

8% NEVER treated a suicidal patient.
# CAMS Study Participation by Profession

<table>
<thead>
<tr>
<th>Profession</th>
<th>Pre-survey ($t_1$)</th>
<th>Post-survey ($t_2$)</th>
<th>Survey Completion</th>
<th>Completed Training</th>
<th>Full Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatrist</td>
<td>37</td>
<td>18</td>
<td>48.6%</td>
<td>27</td>
<td>73.0%</td>
</tr>
<tr>
<td>Psychologist</td>
<td>48</td>
<td>24</td>
<td>50%</td>
<td>37</td>
<td>77.1%</td>
</tr>
<tr>
<td>RN, Social worker, etc.</td>
<td>132</td>
<td>75</td>
<td>56.8%</td>
<td>98</td>
<td>74.2%</td>
</tr>
<tr>
<td>Total</td>
<td>217</td>
<td>117</td>
<td>53.9%</td>
<td>162</td>
<td>74.7%</td>
</tr>
</tbody>
</table>
CAMS Study Participation by Research Site

<table>
<thead>
<tr>
<th>Site</th>
<th>Pre-survey (t₁)</th>
<th>Post-survey (t₂)</th>
<th>Survey Completion</th>
<th>Completed Training</th>
<th>Full Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>54</td>
<td>15</td>
<td>27.8%</td>
<td>43</td>
<td>46.3%</td>
</tr>
<tr>
<td>2</td>
<td>56</td>
<td>38</td>
<td>67.9%</td>
<td>42</td>
<td>75.0%</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
<td>8</td>
<td>47.1%</td>
<td>12</td>
<td>70.6%</td>
</tr>
<tr>
<td>4</td>
<td>27</td>
<td>24</td>
<td>88.9%</td>
<td>15</td>
<td>51.9%</td>
</tr>
<tr>
<td>5</td>
<td>63</td>
<td>32</td>
<td>50.8%</td>
<td>50</td>
<td>79.4%</td>
</tr>
</tbody>
</table>
CAMS Study Participation by Training Condition

<table>
<thead>
<tr>
<th>Training Assignment</th>
<th>Pre-survey (t₁)</th>
<th>Post-survey (t₂)</th>
<th>Survey Completion</th>
<th>Completed Training</th>
<th>Full Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Learning</td>
<td>71</td>
<td>42</td>
<td>59.2%</td>
<td>45</td>
<td>63.4%</td>
</tr>
<tr>
<td>In-person</td>
<td>72</td>
<td>42*</td>
<td>58.3%*</td>
<td>43</td>
<td>59.7%</td>
</tr>
<tr>
<td>Control</td>
<td>74</td>
<td>33</td>
<td>44.6%</td>
<td>74</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Paper and pencil t2 surveys only
Q2. I am confident in my ability to successfully assess suicidal patients.

Q3. I am confident in my ability to determine suicidal risk level in patients.
Q5. I am confident that I can help motivate a patient to live.

Q6. I can develop an adequate safety/coping plan with patients who are at-risk for suicide.
VA Evaluation of Training

What we know:

– Faculty Rating & Participant Satisfaction positive for In-Person (agree or strongly agree)

What we don’t know:

– Comparison of modes- TMS has not released eLearning data
Conclusions - Breaking New Ice

- The complexity of integrating product development, training dissemination, and evaluation of health education
  - bumpy, unpredictable road

- The gift was our multitalented team and collaboration

- Little known about health education research that includes assessing patient outcomes
Next Steps

Patient Level Analyses...

- Multivariable Modeling Strategy
- Non-inferiority analysis
References

Bagley S, Munjas B, Shekelle P. A systematic review of suicide prevention programs for military or Veterans. *Suicide and Life-Threatening Behavior* 2010; 40:257-265.


Brenner L, Department of Veterans Affairs, Centers for Disease Control and Prevention, Department of Defense. Self-directed Violence (SDV) Classification System. 2010.


References


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