

**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:

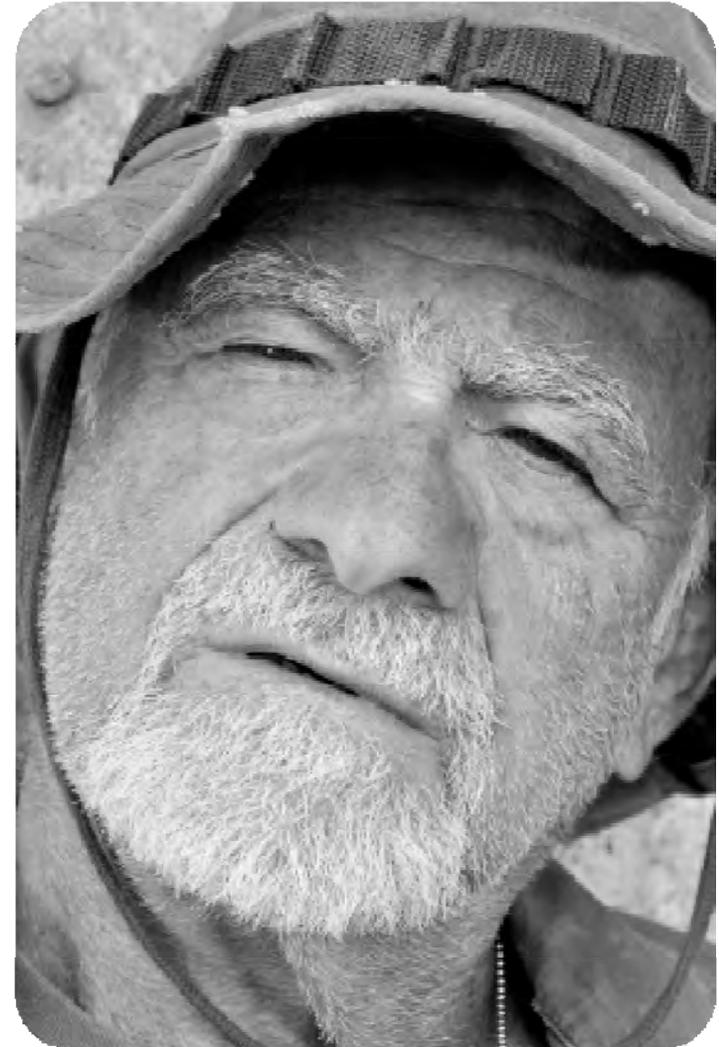
Veterans are at high risk for suicide

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.

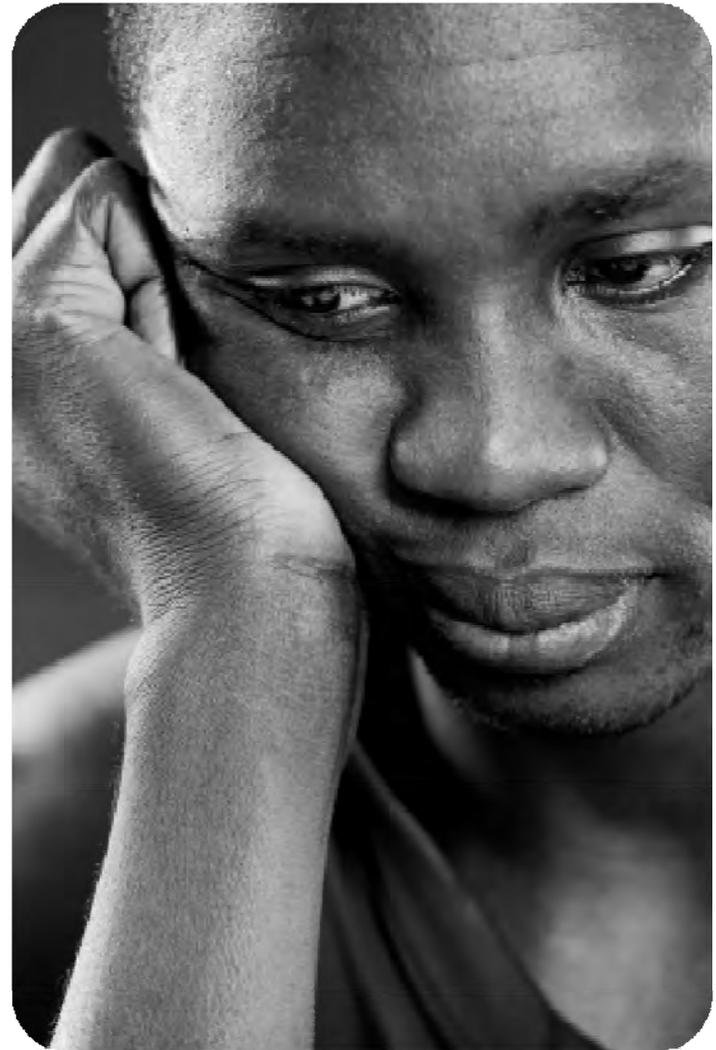


Background: Consider a VA- specific study of suicide

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

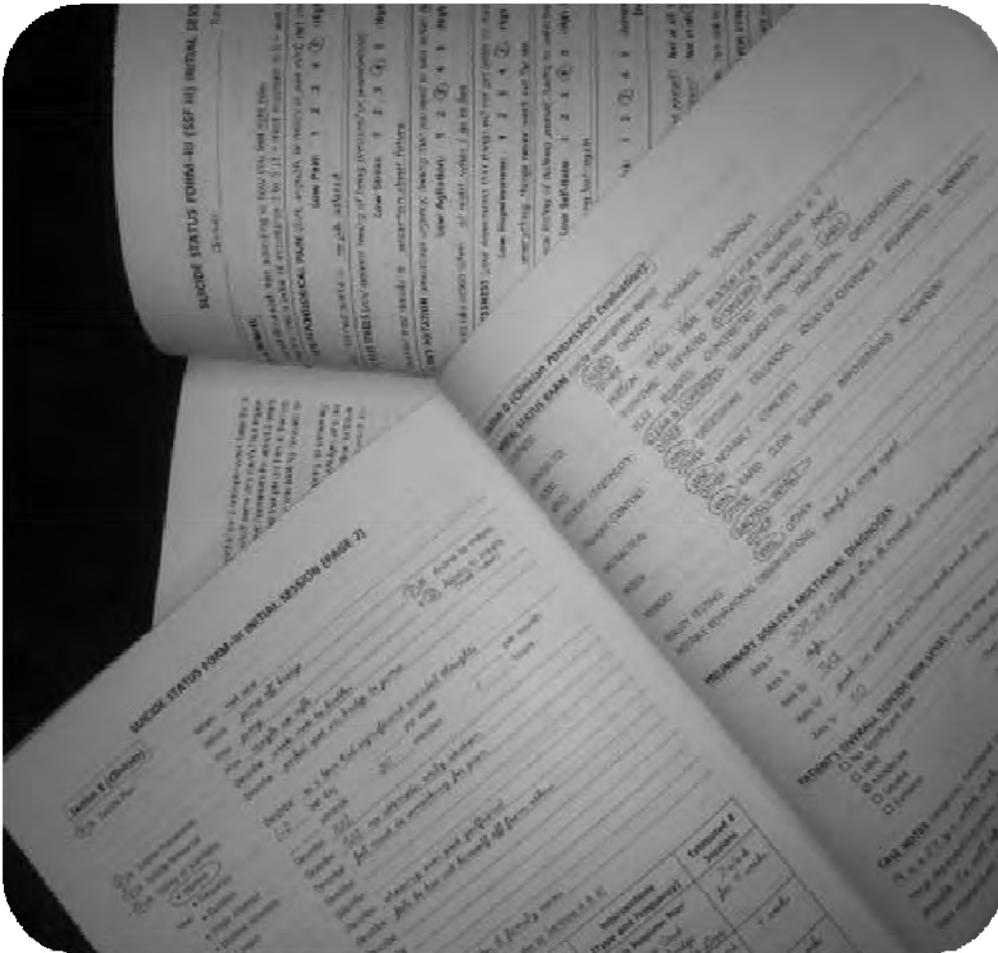


The Collaborative Assessment and Management of Suicidality (CAMS) is an overall process of clinical assessment, treatment planning, and management of suicidal risk.

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



- ARMs 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

APPROXIMATE TIMELINE FOR CAMS STUDY IMPLEMENTATION		
WEEK	MONTH	ACTIVITY / DURATION
1	1	Local site PI is identified
1	1	PI and others named on protocol complete CITI training (1 week)
2-9	1-2	PI works with Charleston CAMS team to prepare and submit all R&D and IRB materials to local IRB/R&D. (2 months)
10-13	3-4	Once approved by R&D, coordinator is hired. (1-3 months)
14	4	In-person/e-learning training scheduled 3-4 months out. (1 day)
15-22	4-6	Coordinator works with PI&SPC to recruit and consent providers for participation in study. (2 months)
23-24	6	Pre-evaluation survey administered and participants randomized. (2 weeks)
25	7	Books distributed to non-intervention group.(1 week)
25	7	Providers block clinic schedules accordingly. (1 week)
31	8	In-person training held. Post evaluation survey administered & CAMS manual distributed to in-person participants. (1 day)
31-33	8-9	E-learning goes online. (3 weeks)
34-35	9	Post evaluation survey administered to e-learning group. CAMS manuals distributed to completers. (2 weeks).
38-43	10-11	Three 1-hour coaching sessions held biweekly. Dave Jobs and local PSC participate. (6 weeks)
45	11	3 month survey administered online. (2 weeks)
83	20	Chart abstraction begins at one year post training. Done by Charleston staff.

Delayed Onset

Project start date: August 1st 2009

Project Research Coordinator in
Charleston

Barrier

Start Date: January 3rd 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



eLearning Development

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 Jobs (2006) manual to inform curriculum
- Guidance of education and technology experts (development of modules, Moodle capacity, use of web site)



eLearning Development

Production stages...

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

Barrier

Delivery in first site underscored problems and limitations



eLearning Development

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



Mother Nature

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



Electronic surveys

- Pros
- Forced choice (choose a,b,c, etc)
 - Easy access

Hard copy survey

- Pros
- Face-to-face reminders
 - More personal
- Cons-
- Wrong emails
 - Easily forgotten
- Cons-
- No forced choice
 - More difficult to disseminate

Workbook delivered after Post-survey

Provider Profile

Demographic Description of Providers (n = 217)

Demographics	(%)
Age	< 40 (31.3%), 40-59 (52.1%), ≥ 60 (10.1%)
Gender	71.4% Female
Education	Master's deg. (47.9%), Doctorate (44.2%)
Profession	Psychiatrist (17.1%), Psychologist (22.1%), APRN/ RN, Social Worker, etc, (60.8%)

Randomization Summary

Training Group Assignment	n (%)
E-learning (A)	71 (32.7%)
In-person (C)	72 (33.2%)
Control (B)	74 (34.1%)

Research Site	n (%)
1	54 (24.9%)
2	56 (25.8%)
3	17 (7.8%)
4	27 (12.4%)
5	63 (29.0%)

Interesting Find...

Provider's career experience with suicidal patients

n=209

192 providers:

32% lost \geq 1 patient due to suicide

75% treated > 100 suicidal patients

17 providers:

8% NEVER treated a suicidal patient.



CAMS Study Participation by Profession

Profession	Pre-survey (t ₁)	Post-survey (t ₂)	Survey Completion	Completed Training	Full Participation
Psychiatrist	37	18	48.6%	27	73.0%
Psychologist	48	24	50%	37	77.1%
RN, Social worker, etc.	132	75	56.8%	98	74.2%
Total	217	117	53.9%	162	74.7%

CAMS Study Participation by Research Site

Site	Pre-survey (t ₁)	Post-survey (t ₂)	Survey Completion	Completed Training	Full Participation
1	54	15	27.8%	43	46.3%
2	56	38	67.9%	42	75.0%
3	17	8	47.1%	12	70.6%
4	27	24	88.9%	15	51.9%
5	63	32	50.8%	50	79.4%

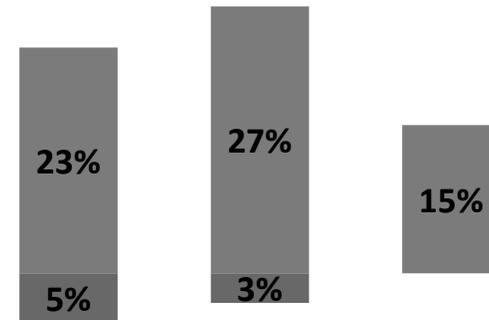
CAMS Study Participation by Training Condition

Training Assignment	Pre-survey (t ₁)	Post-survey (t ₂)	Survey Completion	Completed Training	Full Participation
E-Learning	71	42	59.2%	45	63.4%
In-person	72	42*	58.3%*	43	59.7%
Control	74	33	44.6%	74	100%

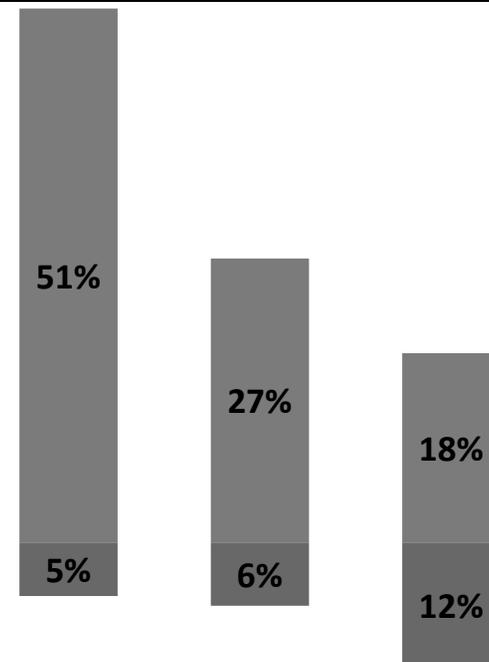
*Paper and pencil t2 surveys only

E-Learning In-person Control

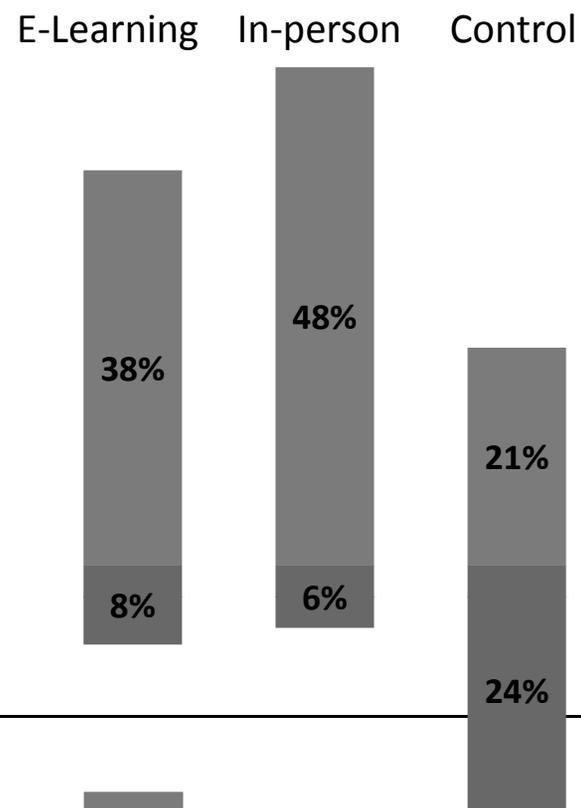
Q2. I am confident in my ability to successfully assess suicidal patients.



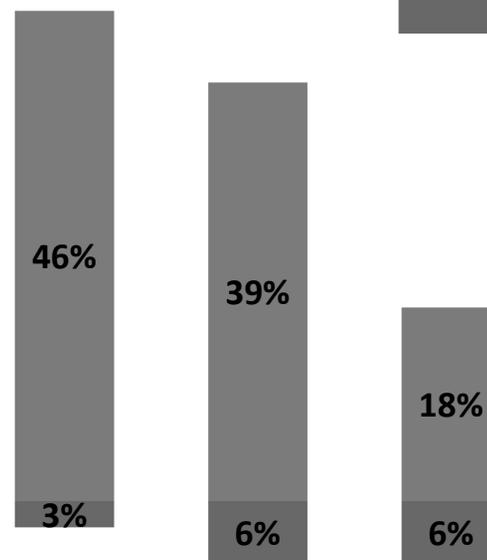
Q3. I am confident in my ability to determine suicidal risk level in patients.



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.



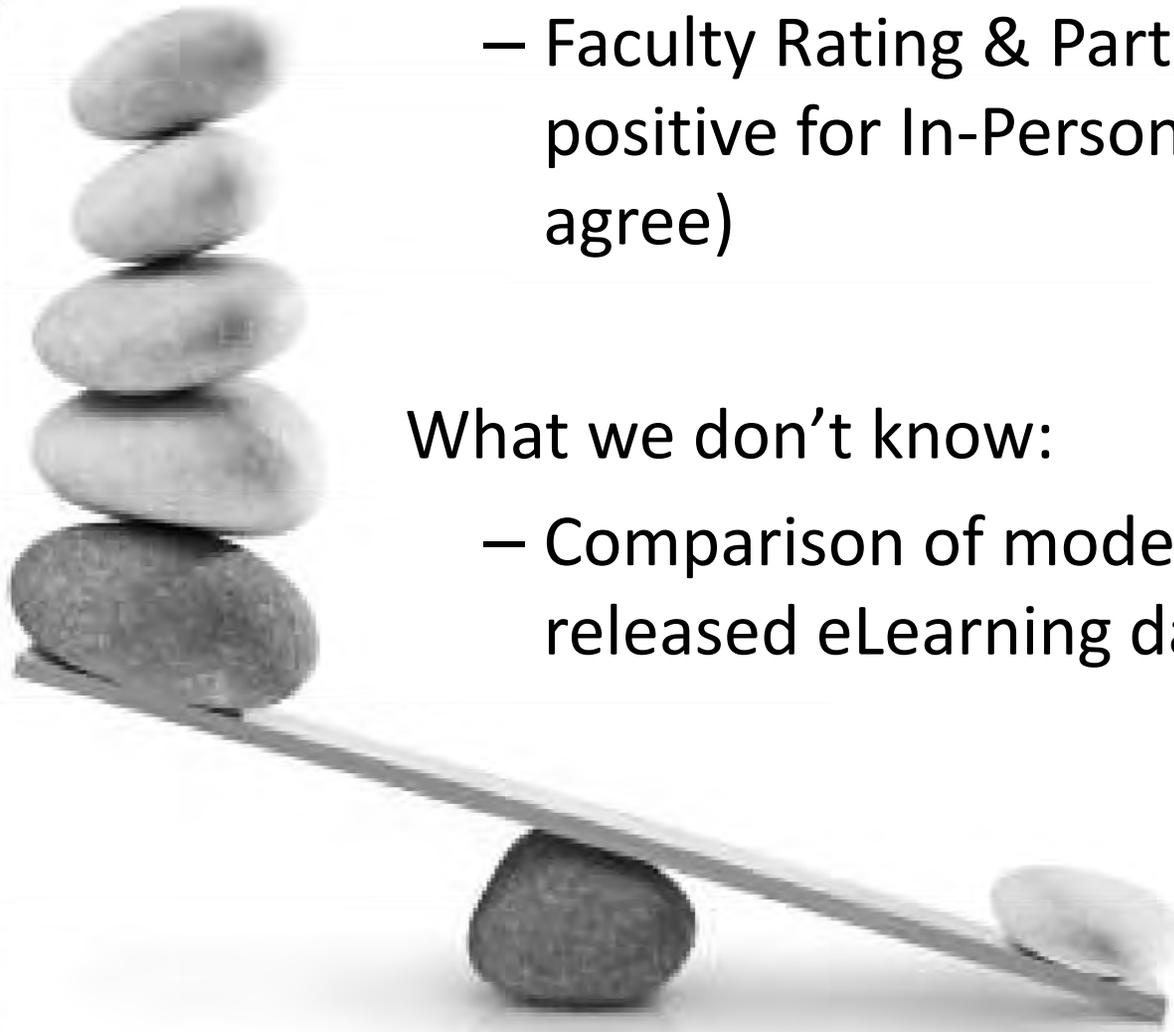
VA Evaluation of Training

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.
- Bossarte R, Claassen C, Knox K. Veteran suicide prevention: emerging priorities and opportunities for intervention. *Military Medicine* 2010; 175:461462.
- Brenner L, Department of Veterans Affairs, Centers for Disease Control and Prevention, Department of Defense. Self-directed Violence (SDV) Classification System. 2010.
- Department of Veterans Affairs, Health Services Research and Development Services. *Strategies for Suicide Prevention in Veterans*. Washington DC: Department of Veterans Affairs; January 2009.
- Department of Veterans Affairs. *Office of inspector general implementing VHA's mental health strategic plan initiatives for suicide prevention*. 2009. <http://www.va.gov/oig/publications/reports-list.asp>. Accessed July 29, 2009.
- Hawks S, Smith T, Thomas H, et al. The forgotten dimensions in health education research. *Health Education Research* 2008; 23:319-324.
- Jobes D. *Managing Suicidal Risk: A Collaborative Approach*. New York, NY: Guilford Press; 2006.
- Jobes D, Comtois K, Brenner L, Gutierrez P. Clinical Trial Feasibility Studies of the Collaborative Assessment and Management of Suicidality (CAMS). In R O'Connor, S Platt, J Gordon (eds), *International Handbook of Suicide Prevention: Research, Policy & Practice*. Chichester, UK, Wiley –Blackwell: 2011.

References



Magruder K, York J, Jobes D, et al. Patient and provider outcomes of e-learning training in CAMS. EDU 08-424. Health Services R & D, Department of Veterans Affairs. 8/1/09-7/31/12.

Means B, Toyama Y, Murphy R, Bakia M, Jones K. Evaluation of evidence-based practices in online learning: A meta-analysis and review of online studies. U.S. Center for Technology in Learning, Office of Planning, Evaluation, and Policy Development, U.S. Department of Education 2009. Available at: <http://www.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>. Accessed on January 12, 2012.

Oordt M, Jobes D, Fonseca V, et al. Training mental health professionals to assess and manage suicidal behavior: Can provider confidence and practice behaviors be altered. *Suicide and Life-Threatening Behavior* 2009; 39:21-32.

Report of the Blue Ribbon Work Group on Suicide Prevention in the Veteran Population. www.mentalhealth.va.gov/suicide_prevention/Blue_Ribbon_Report_FINAL_June30_08.pdf.

Seal K, Bertenthal D, Miner C et al. Bringing the war back home: Mental health disorders among 103,788 US Veterans returning from Iraq and Afghanistan seen at Department of Veterans Affairs Facilities. *Archives of Internal Medicine* 2007; 167:476-82.

Sundaraman R, Panangala S, Lister S. *Among Veterans- CRS Report to Congress Report for Congress*. Washington, DC: Congressional Research Services, Domestic Social Policy Division; 2008.

Valenstein M, Kim H, Ganoczy D et al. Higher-risk periods for suicide among VA patients receiving depression treatment: Prioritizing suicide prevention efforts. *Journal of Affective Disorders* 2009; 112:50-58.

Williams R, Gatien G, Haggerty B. Design element alternatives for stress-management intervention websites. *Nursing Outlook* 2011; 59: 286-291.

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