Award Number: W81XWH-13-2-0032

TITLE: Increasing Treatment Seeking Among At-Risk Service Members Returning from Warzones

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RECIPIENT: Medical University of South Carolina

REPORT DATE: AUGUST 2020

TYPE OF REPORT: Final Report

PREPARED FOR: U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE	**2. REPORT TYPE**	**3. DATES COVERED**
AUGUST 2020	FINAL	28FEB2013 - 31MAY2020

4. TITLE AND SUBTITLE

Increasing Treatment Seeking Among At-Risk Service Members Returning from Warzones

5a. CONTRACT NUMBER
W81XWH-13-2-0032

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

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5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Medical University of South Carolina
CHARLESTON, SC 29425

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION / AVAILABILITY STATEMENT:

Approved for Public Release; Distribution Unlimited

13. SUPPLEMENTARY NOTES

14. **ABSTRACT**

SEE ATTACHED ABSTRACT

15. SUBJECT TERMS NONE LISTED

16. SECURITY CLASSIFICATION OF:			**17. LIMITATION OF ABSTRACT**	**18. NUMBER OF PAGES**	**19a. NAME OF RESPONSIBLE PERSON**
a. REPORT	**b. ABSTRACT**	**c. THIS PAGE**			**19b. TELEPHONE NUMBER** *(include area code)*
Unclassified	Unclassified	Unclassified	Unclassified	21	USAMRMC

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Abstract

Increasing Treatment Seeking Among At-Risk Service Members Returning from Warzones

PI: Tracy Stecker, PhD, Co-PI: Kenneth Conner, PsyD

Background: Reducing suicide is a national priority and an urgent concern within the Department of Defense and the Department of Veterans Affairs. Indeed, rates of suicide among active duty service members have increased dramatically since 2005, and there is great concern that elevated risk will carry over following discharge from active service. The goal of the proposed study is to improve initiation of behavioral health (i.e., mental health, substance use) treatment services among untreated, at-risk U.S. military service members. The goal to facilitate behavioral health treatment is consistent with recommendations provided in reports by the Department of Defense, U.S. Army, U.S. Surgeon General, and the Institute of Medicine

Objective/Hypothesis:
Test the effectiveness of the intervention on attitudes toward behavioral health treatment among at-risk service members.
Hypothesis 1a: Participants receiving the cognitive-behavioral (CB) intervention will have significant increases in positive attitudes about treatment at 1-month follow-up compared to controls.
Hypothesis 1b: Participants receiving the CB intervention will have significant increases in the intention to initiate behavioral health treatment compared to controls.

Test the effectiveness of the intervention on the initiation of and adherence to behavioral health treatment.
Hypothesis 2a: Participants receiving the CB intervention will be more likely to initiate behavioral health treatment than participants in control group during 6-month follow-up.
Hypothesis 2b: Participants receiving the CB intervention will attend more behavioral health treatment sessions than participants in the control group over 6-month follow-up.

Study Design: We propose a randomized controlled clinical trial of 1,200 military service members who are at increased risk for suicide but not currently in behavioral health treatment for the purpose of determining if a brief intervention improves the initiation of treatment. Participants assigned to the treatment condition will be presented an individualized CB intervention. The CB intervention takes 45-60 minutes, is delivered by phone, and has been shown to promote treatment-seeking including in a preliminary study of OEF/OIF Veterans with elevated posttraumatic stress disorder (PTSD) symptoms. Participants will be assessed at baseline and at 1-month, 3-month, and 6-month follow-up. Analyses are based on logistic and mixed effect models.

Relevance: Reducing suicide among our service members is a national priority. The passage of the Joshua Omvig Veterans Suicide Prevention Act highlights the importance that stakeholders place on developing and implementing a comprehensive program to reduce suicide among U.S. service members and Veterans.

1. INTRODUCTION

Reducing suicide is a national priority and an urgent concern within the Department of Defense and the Department of Veterans Affairs. The passage of the Joshua Omvig Veterans Suicide Prevention Act highlights the importance that stakeholders place on developing and implementing a comprehensive program to reduce suicide among U.S. service members and Veterans. Rates of suicide among active duty service members have increased dramatically since 2005, and there is great concern that elevated risk will carry over following discharge from active service. ***The goal of this study was to improve initiation of behavioral health (i.e., mental health, substance use) treatment services among untreated, at-risk U.S. military service members.*** The goal to facilitate behavioral health treatment is consistent with recommendations provided in reports by the Department of Defense, U.S. Army, U.S. Surgeon General, and the Institute of Medicine.

We conducted a randomized controlled clinical trial of 841 military service members who were at increased risk for suicide but not currently in behavioral health treatment for the purpose of determining if a brief intervention improved attitudes toward behavioral health treatment and initiation of treatment. Advertisements were used to recruit service members who report current suicidal ideation or a history of suicide attempt on standard screening items, suggesting they were at risk for suicide. Participants assigned to the treatment condition were presented an individualized cognitive-behavioral (CBT-TS) intervention. CBT-TS is a one-session intervention administered by phone, which has an evidence-base from prior trials among OEF/OIF Veterans with elevated posttraumatic stress disorder (PTSD) symptoms and among individuals with alcohol use disorders. Participants were assessed at baseline and at 1-month, 3-month, 6-month, and 12-month follow-up. Analyses included logistic and mixed effect models. **Specific Aims were as follows**:

1) *Test the effectiveness of the intervention on attitudes toward behavioral health treatment among at-risk service members.*
   Hypothesis 1a: Participants receiving the CB intervention will have significant increases in positive attitudes about treatment at 1-month follow-up compared to controls.
   Hypothesis 1b: Participants receiving the CB intervention will have significant increases in the intention to initiate behavioral health treatment compared to controls.

2) *Test the effectiveness of the intervention on the initiation of and adherence to behavioral health treatment.*
   Hypothesis 2a: Participants receiving the CB intervention will be more likely to initiate behavioral health treatment than participants in control group during 6-month follow-up.
   Hypothesis 2b: Participants receiving the CB intervention will attend more behavioral health treatment sessions than participants in the control group over 6-month follow-up.

The brief (45-60 min), practical (delivered by phone), and promising nature of the CB intervention (favorable preliminary data in OEF/OIF Veterans with elevated PTSD symptoms) indicate its potential for wider implementation to reduce suicide risk among service members.

2. KEYWORDS

Suicide, mental health treatment engagement, cognitive-behavioral intervention

3. OVERALL PROJECT SUMMARY

This trial was awarded to Dr. Tracy Stecker at Dartmouth Medical School and recruitment began on March 2, 2013. The trial remained at Dartmouth for over a three year period and was very successful in terms of recruitment and study activities. During that time, we recruited 788 participants. Of the 788 participants, 651 of them were separated from the service, 109 were active in the National Guard or Reserves, and 28 were Active Duty.

Transfer to MUSC

The PI, Dr. Stecker, transferred from Dartmouth to the Medical University of South Carolina during the summer of 2016 and due to a restructuring of funding at Dartmouth Medical School, a transfer of the award to the Medical University of South Carolina was requested. The transfer request was approved and the award officially transferred to MUSC in April 2017. In April, we began to hire and train new study staff to serve as research personnel. Active advertising and recruitment activities began in July 2017 and ended in January 2019. Overall at MUSC, an additional 217 participants were recruited (204 Veterans, 10 Guard/Reserves, 3 Active Duty). While 217 participants were recruited at MUSC, we are only able to use data on 53 of these participants. For the other 164 participants, the research team was unable to obtain proper consent (details of this situation under MUSC Personnel Incident).

Overall, the study sample is 841, with a breakdown of 698 Veterans, 113 in the Guard/Reserves and 30 Active Duty status. This N is sufficiently powered to conduct analyses on main objectives of this trial. While we have a healthy sample size, we did not meet our original recruitment goal due to personnel issues at MUSC. Even so, we were powered to conduct main analyses as well as sub-analyses on particular beliefs about treatment reported to interfere with treatment seeking. For example, participants who engage in substance use to medicate symptoms often present with a specific thought process toward help seeking and the modification of this thinking differs from those who resist treatment due to worries over the consequences to their job or security clearance or those with concerns over stigma. For these analyses to occur, we would need adequate numbers for each frequently reported belief. These nuanced analyses provide critical information to improve the uptake of treatment among those in need. We have 419 individuals who received an intervention session, and have sufficient numbers in each of these cells of reported beliefs serving as barriers to treatment seeking to conduct sub-analyses despite not meeting recruitment goals.

MUSC Personnel Incidence

In July, 2018 it was determined that the consent form used to consent participants at MUSC was not the proper legal consent form as mandated by our MUSC IRB. The project coordinator for this trial used a copy of the consent form that, while verbatim, was not the consent form stamped and approved by our IRB. This was discovered during a routine audit. It was determined that the project coordinator had difficulty in her role and struggled when asked to provide data to either the PI or IRB. She was removed from this project as project coordinator and replaced.

This was an unfortunate situation and one taken very seriously. This trial was suspended to new enrollment for a period of one month (July-August 2018). In August, MUSC IRB was satisfied with our investigation and response to the situation and allowed us to reopen to new enrollment. Due to the shift in personnel, extensive time and effort was required to get new personnel trained and approved. The suspension to new enrollment and the release from this suspension were reported to the project officer and HRPO as mandated.

As the consent form used for consenting was improper, the study team was asked to properly reconsent MUSC participants. While this suspension resulted in a change in study personnel, it also created an opportunity to require additional mandatory training, ongoing supervision and management of personnel, a thorough investigation of each of the processes of the trial, including the process of consenting, recruitment of new participants, communication with participants, conducting assessments, and participant renumeration. We have ongoing supervision and twice weekly meetings. Even with that, we were only able to properly consent 53 participants. Investigation of this loss suggests that several factors played a role including: general loss to follow up, incomplete and/or not current contact information, lack of study staff during the personnel crisis, incompetent personnel, and two fakers were identified and removed from the trial.

No SAE's have occurred during this trial period.

Baseline characteristics.

Characteristics of the participant sample that have been entered into the data management system are presented in Tables 1-4 in the Appendix. The mean age of participants is approximately 31 years old, and 90% of the sample is male. The majority of participants (66%) identify their race as white, non-Hispanic. The majority (68%) reported service in the Army. Baseline symptom severity scores indicate that both the intervention and control groups reported moderately severe symptoms of depression (mean score = 18) as measured by the PHQ9, and insomnia (mean score = 18) as measured by the ISI. Further, PTSD (mean score = 62) as measured by the PCL, were well above suggested clinical cutoffs. The mean pain severity score, as measured by four items from the BPI was 3 which indicates that while this sample reports extensive symptoms of depression, sleep disturbance and ptsd, they are not reporting physical pain.

Alcohol and substance use characteristics are also presented in Table 1 in the Appendix. Most participants (75%) reported drinking at least once over the past 30 days. Of those who reported drinking, 71% reported consuming five or more drinks on at least one occasion. The average number of days that participants who consumed alcohol reported having five or more drinks was 7. Individuals who reported drinking spent on average $120 on alcohol during the past 30 days. Finally, of those who consumed alcohol, 20% reported having problems with alcohol.

In our sample, 39% reported using marijuana at least once over the past 30 days (*M* days using = 20) and 6% reported their use as causing a problem. Outside of marijuana, the class of drugs most used was opiates. Over the past 30 days, 2% reported using heroin at least once, 1% reported using methadone, and 16% reported using other opiates. For those using opiates, the average number of days using was 15. Further, 14% reported opiates were causing problems for them.

Suicidality

During the baseline assessment, 46% reported current suicidal ideation, 24% reported a wish to be dead, 10% reported nonspecific active suicidal thoughts, 13% reported active suicidal ideation without a plan and without intent to act, 4% reported active suicidal ideation with some intent to act but without specific plan, and 2% reported active suicidal ideation with specific intent and plan.

In our sampling, 43% reported having at least one prior suicide attempt and 61% of attempters reported multiple attempts. While the number of attempts ranged from zero to 100, only one person reported 100 suicide attempts. The next highest number of lifetime attempts was 30. The average number of lifetime suicide attempts for previous attempters was 3.

We have had five participants die during the trial. One participant died from heart failure related to the use of fentanyl, four died as a result of drug overdose. One of these overdoses was categorized as a suicide. All of these outcomes were reported to all IRB's involved and were judged to be unrelated to study participation.

Treatment utilization and suicidal ideation

At month 1, in the CBT-TS intervention condition, 36% of the sample had scheduled a treatment session, 23% had attended a session within the FIRST MONTH, and those who attended a session attended an average of 3 sessions. In the control condition, 27% of the sample had scheduled a treatment session, 11% had attended a session, and those who attended a session attended an average of 2 sessions. ***This data suggests that the intervention is effective to modify treatment seeking behavior.*** Treatment initiation rates were significantly higher among the CBT-TS group at all follow-up time points (as shown in Table 3). Additionally and importantly, participants receiving the intervention had statistically significant reductions in suicidal ideation within the first month as compared to participants in the control condition. Analyses of this data suggests that the intervention may serve to differentiate individuals in need of treatment. Among those who attend treatment, symptoms remain; however, among those who do not attend treatment, a statistically significant reduction in suicidality emerges. This pattern is not observed among participants in the control condition.

Past year

During the past year, we finalized follow up assessments with the MUSC participants; cleaned all data to prepare for analysis; analyzed data for two main outcome papers; and analyzed data from the CBT-TS sessions. Follow up assessments were completed in February 2020. We achieved a 70% follow up rate for 1 month assessments with the MUSC participants and a 62% follow up rate for the 12 month assessments. Two main outcome papers have been prepared detailing the evidence for this intervention improving treatment seeking and the impact of the intervention on suicidality and depression.

Additionally, we assessed intervention session sheets from the 400+ participants who received the cognitive-behavioral intervention. To do this, we had three coders assess the intervention session sheets prepared by the therapists administering the intervention. A total of 1,005 beliefs about seeking mental health treatment were elicited by the therapists and these were coded into 9 themes. These themes included: general thoughts about treatment (i.e., I don't want a medicine); internal obstacles (i.e., it's too hard to talk about); thoughts about the VA; stigma/self-stigma; logistical issues; ideas about help (i.e., I don't need help); external consequences, a preference for other ways to cope; and a preference for peer support. Further analysis indicated that treatment seeking occurred for approximately 50% of participants regardless of theme; however there was a vast difference in the amount of treatment received and some variation in suicidal behavior depending on theme.

We continue work to prepare multiple publications from this data. Additionally we are focused on identifying strategies for implementation and dissemination; which differ depending on

whether we are focused on Veteran or active duty populations. We have secured funding to implement CBT-TS for Veterans located in rural areas in 4 VISNS in the VA. This study started in October, 2020.

4. RESEARCH KEY ACCOMPLISHMENTS

- We recruited 841 participants. Of the 841 participants, 698 are Veterans, 113 are active in the National Guard or Reserves, and 30 are Active Duty.

- Of those participants receiving the intervention to improve treatment seeking behavior, 23% sought treatment within THE FIRST month of participating in the trial versus only 11% of the control condition. This provides evidence that the intervention improves the uptake of treatment among those reporting suicidal thoughts and behaviors not in treatment.

- Hierarchical linear regression models show that the intervention led to statistically significant reductions in suicidal ideation among those who do not seek treatment, indicating that the intervention may serve well to differentiate among those who need treatment and those who do not. Among those who do not, dramatic symptom reduction is observed.

- Ten manuscripts have been published thus far from this trial. None of the publications involve the main outcome criteria of treatment seeking. Instead, because this is one of the few datasets that contain information about military personnel and Veterans outside of treatment systems who are suicidal, data have been used to better understand this population of high risk individuals not in treatment. The main outcome manuscripts are currently being prepared.

5. CONCLUSION

Data from this trial provides evidence that a cognitive-behavioral intervention (CBT-TS) focused on the decision to seek treatment can improve the uptake of treatment use among suicidal Veterans and military personnel.

6. PUBLICATIONS, ABSTRACTS, AND PRESENTATIONS

Publications

We have had the following ten manuscripts published in peer reviewed journals.

1. Allan, N. P., Conner, K. R., Pigeon, W. R., Gros, D. F., Salami, T. K., & Stecker, T. (2017). Insomnia and suicidal ideation and behaviors in former and current U.S. service members: Does depression mediate the relations? *Psychiatry Research, 252*, (296-302).
2. Allan, N. P., Gros, D. F., Hom, M. A., Joiner, T. E., & Stecker, T. (2016). Suicidal ideation and interpersonal needs: Factor structure of a short version of the Interpersonal Needs Questionnaire in an at-risk military sample. *Psychiatry: Interpersonal and Biological Processes, 79,* 249-261.
3. Gómez, J. M., Allan, N. P., Santa Ana, E. J., & Stecker, T. (2018). Depression and intention to seek treatment among Black and White suicidal military members who are not engaged in mental health care. *Military Behavioral Health, 6,* 290-299.
4. Allan, N. P., Gros, D. F., Lancaster, C. L., Saulner, K. G., & Stecker, T. (2019). Heterogeneity in short-term suicidal ideation trajectories: Predictors and projections to suicidal behavior. *Suicide and Life-Threatening Behavior, 49,* 826-837.
5. Short, N. A., Allan, N. P., Oglesby, M. E., Moradi, S., Schmidt, N. B., & Stecker, T. (2019). Prospective associations between insomnia symptoms and alcohol use problems among former and current military service personnel. *Drug and Alcohol Dependence, 199,* 35-41.
6. Law, K. C., Allan, N. P., Kolnogorova, K. & Stecker, T. (2019). An examination of PTSD symptoms and their effects on suicidal ideation and behavior in non-treatment seeking veterans. *Psychiatry Research, 274,* 12-19.
7. Allan, N. P., Holm-Denoma, J., Conner, K. R., Zuromski, K. L., Saulnier, K. G., & Stecker, T. (2020). Profiles of risk for suicidal behavior: Latent profile analysis of current risk factors. *Archives of Archives of Suicide Research, 24*(1), 1-17.
8. Gros, D. F., Silva, C., Allan, N. P., Lancaster, C. L., Conner, K. R., & Stecker, T. (2018). Relations between thwarted belongingness, perceived burdensomeness, and acquired capability and readiness for mental health treatment in high risk veterans. *Military Behavioral Health, 6*(4), 326-333.
9. Raines, A. M., Allan, N. P., Franklin, C. L., Huet, A., Constans, J. I., & Stecker, T. (in press). Correlates of suicidal ideation and behaviors among former military personnel not enrolled in the Veterans Healthcare Administration. *Archives of Suicide Research.*
10. Allan, N. P., Ashrafioun, L., Kolnogorova, K., Raines, A. M., Hoge, C. W., & Stecker, T. (2019). Interactive effects of PTSD and substance use on suicidal ideation and behavior in military personnel: Increased risk from marijuana use. *Depression and Anxiety, 36*(11), 1072-1079.

Publications under Review

We have the following one manuscript under review in a peer reviewed journal. Several manuscripts are also in preparation, including the effects of the intervention on the primary outcomes.

1. Kolnogorova, K., Allan, N. P., Moradi, S., & Stecker, T. Perceived Burdensomeness, but not Thwarted Belongingness, Mediates the Impact of PTSD Symptom Clusters on Suicidal Ideation Modeled Longitudinally. *Second Revise and Resubmit.*

2. Stecker, T., Allan, N. P., Hoge, C., Ashrafioun, L., & Conner, K. R. Efficacy of Cognitive-Behavioral Therapy for Treatment Seeking (CBT-TS) in Untreated Adults at Risk for Suicidal Behavior.

Presentations

1. Stecker: Increasing Treatment Seeking Among Suicidal Military Members. HSRD VA Conference, February 2014
2. Stecker: Increasing Treatment Seeking Among Suicidal Military Members. Psychiatric Research Center, Dartmouth Medical School, March 2014
3. Stecker: Increasing Treatment Seeking Among Suicidal Veterans. VA cyberseries, September 2015
4. Stecker: Increasing Treatment Seeking Among Suicidal Military Members. Ralph H Johnson VA Grand Rounds, September 2015
5. Stecker: Increasing Treatment Seeking Among Suicidal Military Members. Ralph H Johnson VA COIN presentation, September 2015
6. Allan, N. Insomnia and suicidal ideation and behaviors in former and current U.S. service members: Does depression mediate the relations? Annual Anxiety and Depression Association of America conference, San Francisco, CA, April 2017
7. Gros, D. Predictors of treatment discontinuation during prolonged exposure for PTSD. Annual Anxiety and Depression Association of America conference, San Francisco, CA. April 2017
8. Saulnier, K. Suicidal ideation in high-risk veterans: Using growth mixture modeling to identify heterogeneous trajectories. Annual Anxiety and Depression Association of America conference, San Francisco, CA. April 2017
9. Zuromski, K. Insomnia and suicidal ideation among military personnel: Exploring joint symptom trajectories. Annual Associated Professional Sleep Societies, Boston, MA, June 2017
10. Allan, N. Examining longitudinal relations between PTSD symptoms and risk factors for suicide in at-risk military personnel. Annual Association for Behavioral and Cognitive Therapies, San Diego, CA. November 2017
11. Huet, A. The interactive effects of insomnia and substance use on suicidal ideation and behavior on an at-risk military population. Annual Anxiety and Depression Association of America, Washington, DC. April 2018

7. INVENTIONS, PATENTS, AND LICENSES

Nothing to report.

8. REPORTABLE OUTCOMES

Treatment utilization and suicidal ideation

At month 1, in the intervention condition, 36% of the sample had scheduled a treatment session, 23% had attended a session within the FIRST MONTH, and those who attended a session attended an average of 3 sessions. In the control condition, 27% of the sample had scheduled a treatment session, 11% had attended a session, and those who attended a session attended an average of 2 sessions. ***This data suggests that the intervention is effective to modify treatment seeking behavior.*** CBT-TS condition had significantly higher treatment initiation rates at all time points of follow up.

Additionally and importantly, participants receiving the intervention had statistically significant reductions in suicidal ideation within the first month as compared to participants in the control condition. Analyses of this data suggests that the intervention may serve to differentiate individuals in need of treatment. Among those who attend treatment, symptoms remain; however, among those who do not attend treatment, a statistically significant reduction in suicidality emerges. This pattern is not observed among participants in the control condition.

Two manuscripts detailing these findings are being prepared.

Barriers to treatment seeking

Nine themes were identified as cognitive barriers to treatment seeking. These include:

1. General thoughts about treatment (i.e., I don't want a medicine)
2. Internal obstacles (i.e., it's too hard to talk about)
3. Thoughts about the VA (i.e., there are too many obstacles)
4. Stigma/self-stigma
5. Logistical issues (i.e., no time)
6. Ideas about help (i.e., I don't need help)
7. External consequences (i.e., confidentiality)
8. Preference for other ways to cope (i.e., prefer drugs or alcohol)
9. Preference for peer support.

Further analysis indicated that treatment seeking occurred for approximately 50% of participants regardless of theme; however there was a vast difference in the amount of treatment received and some variation in suicidal behavior depending on theme.

A manuscript detailing these findings is currently under preparation.

9. OTHER ACHIEVEMENTS

Study activities have prompted a critical understanding of risk factors among service members and Veterans that contribute to suicidal thoughts and behaviors as well as treatment utilization. One of the most commonly reported symptoms that emerge during the cognitive-behavioral intervention session is sleep disturbance. Likewise, sleep treatment is reported as the treatment most preferred by those who otherwise would resist seeking help. This knowledge has resulted in subsequent intervention refinement for those most in need of help, and key investigators are currently seeking additional funding to test whether a combination of a brief cognitive behavioral therapy for insomnia along with the treatment intervention session would help improve sleep disturbance, mental health symptoms, decision making, and treatment utilization.

Implementation strategies for the intervention are also being evaluated. We have received funding to implement CBT-TS to improve treatment initiation at the VA among rural veterans. The intervention is being implemented through telehealth in 4 VISNs.

10. REFERENCES

None

11. APPENDIX

Table 1: Baseline characteristics of the sample

Characteristic	Intervention Participants (*n* = 419)		Control Participants (*n* = 417)	
	n	%	*n*	%
Male	374	89.3	370	88.7
Female	44	10.5	41	9.8
Ethnicity				
White, non-Hispanic	278	66.3	267	64.0
White, Hispanic	30	7.2	39	9.4
Black, non-Hispanic	52	12.4	47	11.3
Black, Hispanic	4	1.0	3	0.7
Native American	5	1.2	10	2.4
Asian/Pacific Islander	13	3.1	11	2.6
Other/or mixed race/ethnicity	33	7.9	32	7.7
Branch of Service				
Army	282	67.3	288	69.1
Navy	40	9.5	41	9.8
Airforce	41	9.8	30	7.2
Marine	71	16.9	63	15.1
Coast Guard	0	0	1	0.2
Other/Refused	3	0.7	1	0.2
Drug Use (past 30 days)				
Alcohol	313	74.7	305	73.1
Marijuana	159	37.9	156	37.4
Barbituates	1	0.2	1	0.2
Sedatives	38	9.1	37	8.9
Cocaine/Crack	13	3.1	18	4.3
Stimulants	28	6.7	17	4.1
Hallucinogens	9	2.1	8	1.9
Heroin	5	1.2	9	2.2
Methadone	3	0.7	1	0.2
Other Opiates	65	15.5	64	15.3
Inhalants	1	0.2	0	0.0
	Mean	Range	Mean	Range
Age	31.81	21-58	31.51	21-67
PHQ-9 score *at Baseline*	17.78	4-27	18.42	4-27
PCL score *at Baseline*	61.74	18-85	62.13	21-85
ISI score *at Baseline*	18.43	0-28	18.35	0-28
BPI score *at Baseline*	3.37	0-10	3.47	0-10

*Participants with missing data are not included in percentages.

Table 2: Suicidal Ideation and Behavior at baseline

	Intervention Participants (*n* = 419)		**Control Participants (*n* = 417)**	
	n	Percentage (%)	*n*	Percentage (%)
Prior Suicide Attempt	179	42.2	179	42.9
Nonsuicidal Self Injury	123	28.9	99	23.7
Current Suicidal Ideation				
No current suicidal ideation	192	45.0	193	46.3
Wish to be Dead	102	23.8	99	23.7
Nonspecific active thought	44	10.3	42	10.1
Active Ideation, no plans/intent	53	12.3	57	13.7
Active ideation with some intent	16	3.7	15	3.6
Active ideation, intent and plan	9	2.1	3	0.7
Lifetime Suicidal Ideation				
No suicidal ideation	6	1.4	4	1.0
Wish to be Dead	52	12.0	67	16.1
Nonspecific active thought	62	14.2	46	11.0
Active Ideation, no plans or intent	69	15.8	69	16.5
Active Ideation with some intent	74	16.9	86	20.6
Active ideation, intent and plan	154	35.1	137	32.9

Table 3.

Rates of Treatment Initiation Following the Intervention

	Intervention Participants		Control Participants					95% CI	
Initiated	*n*	%	*n*	%	*B*	*p*	OR	LL	UL
1-month	65	22.9	30	10.5	.93	< .001	2.53	1.59	4.05
3-month	112	35.9	75	22.7	.64	< .001	1.90	1.35	2.69
6-month	130	40.1	109	31.4	.38	.02	1.46	1.07	2.01
12-month	150	46.3	135	38.7	.31	.05	1.37	1.01	1.86
Sessions Attended[a]	*M*	*SD*	*M*	*SD*			*F*	*p*	*d*
1-month	2.57	3.59	1.84	1.32			1.20	.28	.24
3-month	6.96	14.71	4.24	11.36			1.87	.17	.20
6-month	11.46	19.81	7.26	11.96			3.77	.053	.25
12-month	18.67	35.09	11.88	19.20			4.01	.05	.23

Note. CI = Confidence interval. OR = Odds ratio. LL = Lower limit. UL = Upper limit. *N* = 570 at 1 month, 642 at month 3, 671 at month 6 ,and 673 at month 12. [a]Sessions attended means reflect mean scores for those who attended at least one treatment session.

Table 4: Hierarchical Linear Regression Examining Month 1 Suicidal Ideation

Predictors	**Month 1 SI**		
Step One	B	SE	R^2
Baseline SI	.46	.04	.19
Step Two			ΔR^2
Condition	-.15	.11	.003

Note. SI = Suicidal Ideation. Suicidal ideation was reported ideation over the past 7 days. Condition 1 = Intervention (N = 288), 2 = Control (N = 277).