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14. ABSTRACT

This project was designed to implement and assess the feasibility of a unique and newly-developed intervention (TEAM: Troop Education for Army Morale). TEAM is designed to meet the specific post deployment needs of Mortuary Affairs (MA) Soldiers through individual training, active engagement in problem solving and accessing care, enhanced buddy care and spouse support. Specific aims include: 1) demonstrating the feasibility of TEAM intervention for care, support and lessening barriers to care for MA Soldiers and 2) assessing the effectiveness of TEAM on disorder (e.g., PTSD, depression), distress, health risk behaviors (e.g., alcohol or tobacco use), work function, marital conflict, and barriers to health care utilization. Nine cohorts (*N* = 129 Soldiers) have been recruited from the 54th and 111th MA companies at Ft Lee, VA. Collected data have been entered into the database. Data cleaning and preparations are ongoing. Preliminary analyses indicate most MA Soldiers find TEAM helpful (e.g., managing stress, reducing arousal) although the intervention has not been found to significantly affect probable PTSD or depression. Subject recruitment is ongoing.

15. SUBJECT TERMS
Mortuary Affairs Soldiers, service members, post deployment, distress, PTSD, assessment, education, training, intervention, social context, buddies, spouse

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INTRODUCTION

This project was designed to implement and assess the feasibility of a unique and newly developed intervention (TEAM: **T**roop **E**ducation for **A**rmy **M**orale: Units and Individuals Working Together). TEAM is designed to meet the specific post deployment needs of Mortuary Affairs (MA) Soldiers for early and follow-up intervention to speed recovery, return to work and limit barriers to care through individual training, active engagement in problem solving and accessing care, enhanced buddy care and spouse support. Short and longer-term outcome in MA Soldiers are assessed. Specific aims include: 1) demonstrating the feasibility of TEAM intervention for care, support and lessening barriers to care for MA Soldiers and 2) assessing the effectiveness of TEAM on disorder (e.g., PTSD, depression), distress, health risk behaviors (e.g., alcohol or tobacco use), work function, marital conflict, and barriers to health care utilization. MA Soldiers are recruited from the 54^{th} and 111^{th} MA companies at Ft Lee, VA. We will recruit the maximum number of available post-deployment MA Soldiers. Approximately 35 MA Soldiers become available to recruit every six months. We expect approximately 12 Soldiers to enroll every 6 months with approximately half randomly assigned to the TEAM intervention and half to the non-intervention comparison group. We estimate N=135 (approximately 67 from each group) will complete the training and assessments. TEAM has two levels of intervention: Module I. Group Training; Module II: Social Context Building. The Module I intervention will be given shortly after return from deployment (approximately 1 month). Module II will be given at 3 months and assessments will be at 1, 2, 3, 6 and 9 months. This two-pronged approach focuses on individual education while altering the social context. Each Module has an evidence informed educational/training component and a stepped care component providing education and outreach as well as resources and interactive multimodal support.

BODY

Below is a summary of the major activities undertaken by the project team during the last year organized by the timeline in the Statement of Work (SOW).

1. **Coordination planning with site/units.** Members of the project remain in frequent contact with the Fort Lee Command and Mortuary Affairs units to maintain support for TEAM and plan for ongoing recruitment and intervention workshops. Institutional regulatory review has been obtained and maintained from the Uniformed Services University and Fort Detrick IRBs. Study clinicians and staff have completed and updated human subjects training.

2. **Personnel recruitment, hiring and training.** The project is fully staffed and members of the project have been trained on the use of the intervention materials (e.g., intervention manual, slides, handouts) as well as means of

delivering the educational content (e.g., conducting workshops, use of the phone line and email service, participant safeguards).

3. **Development of short and long-term intervention and assessment.** Assessments (evaluations) have been developed for all assessment periods for intervention and control groups. Prior to finalization, assessments were reviewed by a project consultant for utility and ease of understanding. Intervention materials for Soldiers in the intervention group and participating spouses have been developed. Materials include a detailed intervention training manual for trainers, Power Point slides, handouts and a dedicated website. The intervention's educational content includes skills for care of self and others (buddy/spouse) and whenever possible is targeted to the special needs of MA Soldiers or spouses. The educational content (e.g., presentation material, handouts) is based on Psychological First Aid and addresses barriers to seeking care, managing resistance and accessing care. The website supports the workshop educational content and allows for viewing copies of workshop slides and handouts. A TEAM email address and a toll free 1-866 telephone line have been established for purposes of educational support of Soldiers in the intervention group and participating spouses.

4. **Develop participant tracking system.** A data base structure for data entry and organization of recruitment and tracking has been built.

5. **Feasibility study and recruitment coordination.** Assessment and intervention materials (e.g., intervention manual, handouts) were reviewed by a consultant prior to finalization. Pilot testing of all aspects of TEAM materials, procedures and logistics is complete. Fort Lee Command and Mortuary Affairs units support the TEAM program and are cooperative in arranging availability of subjects and space for conducting workshops at Fort Lee.

6. **Intervention and assessments, ongoing data preparation.** Recruitment of the first cohort of subjects (*n* = 21; 11 in intervention group, 10 in control group) began in July 2009 and they completed the final assessment in June 2010. TEAM intervention materials, assessments, procedures and logistics were evaluated and optimized throughout cohort 1. Cohort 2 (*n* = 31; 16 intervention, 15 control) was recruited in December 2009 and completed the final survey in September 2010. Cohort 3 (*n* = 23; 12 intervention, 11 control) was recruited in June 2010 and completed the final survey in January 2011. Cohort 4 (*n* = 12; 7 intervention, 5 control) was recruited in November 2010 and completed the final survey in October 2011. Cohort 5 (*n* = 3; 2 intervention, 1 control) was recruited in May 2011 and completed the final survey in April 2012. Cohort 6 (*n* = 4; 4 intervention, 0 control) was recruited

in October 2011 and completed the final survey in July 2012. Cohort 7 (*n* = 11; 7 intervention, 4 control) was recruited in April 2012 and completed the final survey in February 2013. Cohort 8 (*n* = 12; 7 intervention, 5 control) was recruited in January 2013 and is anticipated to complete the final survey in November 2013. Cohort 9 (*n* = 12; 6 intervention, 6 control) was recruited in June 2013 and is anticipated to completed the final survey in March 2014. Spouse participation has been lower than anticipated. To date, 129 Soldiers and 1 spouse have participated in TEAM. Assessment data collected to date have been entered into the subject-tracking database.

7. **Complete subject recruitment, intervention and assessment.** Subject recruitment is ongoing at this time.

8. **Data preparation.** Data collection continues at this time. Preparation of the existing data for statistical analysis including inputting data into the SPSS database, cleaning data, and assessing data quality is in progress.

9. **Preparation for project conference.** To be completed.

10. **Data analysis.** Frequency counts on all measures were conducted as part of data cleaning. The frequency of responses to questions regarding probable PTSD and probable depression as well as the helpfulness of the TEAM program were totaled and used in oral and poster presentations (see appendices O through R). These preliminary findings (e.g., rates of probable PTSD) are consistent with earlier preliminary findings. Linear mixed modeling analyses were used to determine the effect of the intervention on probable PTSD and probable depression. Overall, no significant effect of the intervention was found for PTSD or depression (see appendices O, P, and R).

11. **Final project conference.** To be completed.

12. **Preparation and delivery/distribution of final report.** To be completed.

KEY RESEARCH ACCOMPLISHMENTS

- Development and finalization of a multimodal educational intervention program for Soldiers returning from deployment and their spouses.
- Development of a supportive relationship with Fort Lee Command and Mortuary

Affairs units for recruitment of subjects and delivery of the TEAM program intervention.

- Recruitment of nine cohorts (*N* = 129 Soldiers) to date.

- Development of a database for tracking subjects and statistical analysis.

REPORTABLE OUTCOMES

Posters based on the TEAM study have been presented at professional meetings (see Appendices A-R for abstracts, posters and presentation slides).

Biggs, Q. M., Fullerton, C. S., Benedek, D. M., McCarroll, J. E., Newby, J. H., & Ursano, R. J. Early care for psychological trauma: Innovations in teaching and delivery. 4th Annual Conference on Neurobiology of Amygdala and Stress: Molecules in a Fearful Mind, USUHS, Bethesda, MD, April 2009.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Benedek, D. M., Newby, J. H., & Ursano, R. J. Early intervention for posttraumatic stress disorder in Mortuary Affairs Soldiers. Research Week, USUHS, Bethesda, MD, May 2009.

Biggs, Q. M., Fullerton, C. S., Benedek, D. M., McCarroll, J. E., Newby, J. H., & Ursano, R. J. Early care for psychological trauma: Innovations in teaching and delivery. Education Day 2009, USUHS, Bethesda, MD, June 2009.

Fullerton, C. S., Ursano, R. J., Benedek, D. M., McCarroll, J. E., Biggs, Q. M., Zatzick, D. F., Newby, J. H., Kao, T. C., & Karpel, H. M. Mortuary Affairs Soldiers: Early intervention and altering barriers to care for traumatic stress and PTSD. Military Health Research Forum, Kansas City, MO, September 2009.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Benedek, D. M., Newby, J. H., & Ursano, R. J. Early intervention for posttraumatic stress disorder in Mortuary Affairs Soldiers. International Society for Traumatic Stress Studies Annual Meeting, Atlanta, GA, November 2009.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Santiago, P., Gray, C., & Ursano, R. J. Early educational intervention for Mortuary Affairs Soldiers post deployment: Preliminary results. 5th Annual Conference on Neurobiology of Amygdala, Stress and PTSD: How stress shapes the mind, USUHS, Bethesda, MD, April 2010.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Santiago, P., Gray, C., & Ursano, R. J. Early educational intervention for Mortuary Affairs Soldiers post

deployment: Preliminary results. Research Week, USUHS, Bethesda, MD, May 2010.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Gray, C., Santiago, P., Newby, J. H., Benedek, D. M., Kodsy, N. T., Riley, S. N., Spiegel, C. A., & Ursano, R. J. TEAM: an early educational intervention for Mortuary Affairs Soldiers post deployment; preliminary results from the first three cohorts. International Society for Traumatic Stress Studies Annual Meeting, Montreal, Canada, November 2010.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Santiago, P., Gray, C., Benedek, D. M., Newby, J. H., Riley, S. N., Spiegel, C. A., Kodsy, N. T., & Ursano, R. J. Troop Educational for Army Morale (TEAM) post deployment early educational program for Mortuary Affairs Soldiers; results from the first year. 6th Annual Conference on Amygdala, Stress and PTSD: Fear in the Human Mind, USUHS, Bethesda, MD, April 2011.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Santiago, P., Gray, C., Benedek, D. M., Newby, J. H., Riley, S. N., Spiegel, C. A., Kodsy, N. T., & Ursano, R. J. Troop Educational for Army Morale (TEAM) post deployment early educational program for Mortuary Affairs Soldiers; results from the first year. Research Week, USUHS, Bethesda, MD, May 2011.

Gray, C., Fullerton, C. S., Biggs, Q. M., McCarroll, J. E., Santiago, P., Newby, J. H., Riley, S. N., Kodsy, N. T., Spiegel, C. A., & Ursano, R. J. Empirical evidence for a Psychological First Aid-based intervention in soldiers post-deployment. American Psychological Association Annual Meeting, Washington DC, August 2011.

Biggs, Q. M., Fullerton, C. S., Gray, C., McCarroll, J. E., Benedek, D. M., Santiago, P., & Ursano, R. J. Evidence for TEAM: A post deployment Psychological First Aid-based education program for U.S. Army Mortuary Affairs Soldiers. 4th Annual Trauma Spectrum Conference, National Institutes of Health, Bethesda, MD, December 2011.

Cox, D., Fullerton, C. S., Biggs, Q. M., McCarroll, J. E., Stuppy, A., Kansky, J., & Ursano, R. J. Troop Educational for Army Morale (TEAM): A post deployment educational program for Mortuary Affairs Soldiers; results from the first two years. 7th Annual Conference on Amygdala, Stress and PTSD: Recovery From Stress, USUHS, Bethesda, MD, April 2012.

Biggs, Q. M., Fullerton, C. S., Cox, D., McCarroll, J. E., Kansky, J., Stuppy, A., & Ursano, R. J. Troop Educational for Army Morale (TEAM): A post deployment educational program for Mortuary Affairs Soldiers; results from the first two years. Research Days, USUHS, Bethesda, MD, May 2012.

Fullerton, C. S., Benedek, D. M., Zatzick, D., McCarroll, J. E., Biggs, Q. M., Liu, X., Kansky, J., Stuppy, A., & Ursano, R. J. Mortuary Affairs Soldiers: Early intervention and altering barriers to care for traumatic stress and PTSD. Military Operational Medicine Research Program (MOMRP), Stigma/Overcoming Barriers to Care and Access Solutions, Fort Detrick, MD, September 2012.

Biggs, Q. M., Fullerton, C. S., Cox, D. W., McCarroll, J. E., Kansky, J., Stuppy, A., & Ursano, R. J. The impact of TEAM: An innovative post deployment intervention for traumatic stress in U.S. Army Mortuary Affairs Soldiers. International Society for Traumatic Stress Studies Annual Meeting, Los Angeles, CA, November 2012.

Cox, D. W., Fullerton, C. S., Biggs, Q. M., McCarroll, J. E., Kansky, J., Stuppy, A., & Ursano, R. J. Adapting and applying empirically-based principles for acute stress responses to the chronic stress responses of Mortuary Affairs Soldiers. Association of Behavioral and Cognitive Therapies Annual Meeting, National Harbor, MD, November 2012.

Biggs, Q. M., Fullerton, C. S., McCarroll, J. E., Stuppy, A., Kansky, J., & Ursano, R. J. Troop Educational for Army Morale (TEAM): A post deployment educational intervention for Mortuary Affairs Soldiers; preliminary results from the first three years. Research Days, USUHS, Bethesda, MD, May 2013.

CONCLUSION

To date, 9 cohorts (N = 129 Soldiers) have been recruited from the 54th and 111th MA companies at Ft Lee, VA. Collected data have been entered into the project database. Data cleaning and preparations for analysis are ongoing. Preliminary analyses indicate most MA Soldiers find TEAM helpful, for example, in managing stress, reducing arousal, communicating with others, and providing support to a buddy. Preliminary linear mixed modeling analyses have not found a significant effect of the intervention on PTSD or depression. All aspects of the project are progressing as planned and subject recruitment is ongoing.

REFERENCES

No references were cited in this Annual Report.

APPENDICES

Appendix A: Abstract titled Early Care for Psychological Trauma: Innovations in Teaching and Delivery

and Altering Barriers to Care for Traumatic Stress and PTSD

Appendix P: Abstract titled The impact of TEAM: An innovative post deployment intervention for traumatic stress in U.S. Army Mortuary Affairs Soldiers

Appendix Q: Abstract titled Adapting and applying empirically-based principles for acute stress responses to the chronic stress responses of Mortuary Affairs Soldiers

Appendix R: Abstract and poster titled Troop Educational for Army Morale (TEAM): A post deployment educational intervention for Mortuary Affairs Soldiers; preliminary results from the first three years

Appendix A

Early Care for Psychological Trauma: Innovations in Teaching and Delivery

Quinn M. Biggs, Ph.D., M.P.H.
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Abstract

Populations exposed to traumatic events (e.g., war, disaster, terrorism) are at increased risk for posttraumatic distress and adjustment difficulties. It is critical for health care professionals and others who work with trauma-exposed populations to know and apply the current standard of early trauma care. A new educational intervention program based on evidence informed principles of Psychological First Aid (PFA) and Cognitive Behavioral Therapy (CBT) has been developed to address specific post-trauma needs. PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through five key principles: 1) physical and psychological safety, 2) calming, 3) connectedness, 4) self-efficacy and 5) hope/optimism. CBT is an approach to altering the thoughts and beliefs that lead to negative emotions and has been shown to prevent and treat posttraumatic stress disorder when administered early after trauma exposure. The intervention program involves individual skills training, active engagement in problem solving, exploring barriers to healthcare utilization and building and integrating resources within the home (e.g., spouse support) and occupational environment (e.g., coworker support). Spouses and coworkers can be offered an equivalent intervention program to improve their ability to understand and support the needs of the trauma-exposed individual as well as to meet their own specific needs for support. Participants are trained to 1) develop self-care skills and healthy cognitions, 2) recognize when someone needs care, 3) provide early support to foster rapid recovery and adjustment and 4) recognize barriers to care and promote health care utilization when needed. The intervention is delivered through group workshops, handouts, a website and toll-free phone information line. The impact of this new educational intervention program is being assessed with a group of high risk U.S. Army Mortuary Soldiers upon their return from deployment.

Appendix B

Early Intervention for Posttraumatic Stress Disorder in Mortuary Affairs Soldiers

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Abstract

U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan report high rates of posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment and needing but not obtaining health care. A new educational intervention, TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on evidence informed principles of Psychological First Aid (safety, calming, connectedness, self-efficacy, hope/optimism) delivered through workshops, handouts, a website and phone line. Soldiers and their spouses learn to use self-care skills, recognize when soldiers need care, provide support (buddy care, spouse support), identify barriers to care and promote health care utilization when needed. MA Soldiers, randomized to TEAM or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. Significant reductions in arousal, distress and functional impairment as well as increases in healthcare utilization are anticipated. Data are not yet available. Findings will increase our knowledge of PFA based early intervention and PTSD symptomology. Implications include the feasibility of early intervention with all military service members, first responders, disaster workers and others exposed to the dead.

EARLY INTERVENTION FOR POSTTRAUMATIC STRESS DISORDER IN MORTUARY AFFAIRS SOLDIERS

Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., James McCarroll, Ph.D., M.P.H., Dave Benedek, M.D., John H. Newby, Ph.D., M.S.W., Robert J. Ursano, M.D.

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BACKGROUND

U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan report high rates of probable posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment and needing but not obtaining health care.

- 19.9% Probable PTSD
- 71.6% Moderate to high stress
- 57.6% Spouse or significant other experiencing moderate to high stress
- 24.6% Seven or more bad mental health days in the past month
- 27.7% In need of medical care but did not obtain help

NEW EDUCATIONAL INTERVENTION

TEAM (Troop Education for Army Morale): TEAM is a new educational intervention program to help MA Soldiers and their spouses and families reduce distress and foster adaptive coping in the initial weeks and months after return from deployment. TEAM is designed to speed recovery, decrease time to return to work and limit barriers to healthcare utilization. TEAM is currently being offered to Mortuary Affairs soldiers and their spouses at Fort Lee, VA. Components of TEAM include:

- Building individual self-care skills and skills for supporting others
- Integrating resources within the social context of home and unit to enhance the natural role of spouse and buddy support
- Education and skills training, active problem solving, engagement in accessing healthcare, and tailoring needs and resources
- Offering spouses an equivalent intervention including all workshops, resources and self-care and support components

Methods and Evaluation: MA Soldiers, randomized to the TEAM intervention or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. Probable PTSD, distress, functional impairment, healthcare utilization and utilization of the TEAM program's resources (e.g., website) are assessed. Spouses are not assessed.

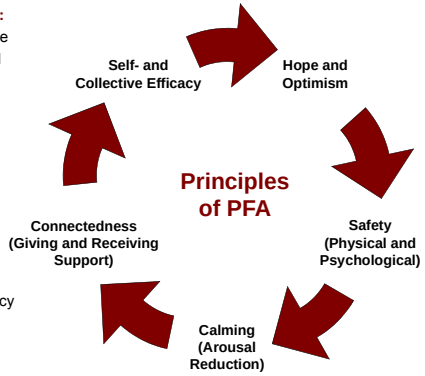
Assessment of TEAM: Outcomes for Soldiers in the intervention group are compared to the non-intervention group. Significant reductions in arousal, distress and functional impairment as well as increases in healthcare utilization are anticipated. Data are not yet available.

EVIDENCE INFORMED PRINCIPLES

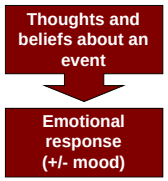
Basis of the Intervention: TEAM is based on the evidence informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4]. TEAM is education-based and NOT mental or physical health treatment.

Psychological First Aid:
PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping by ensuring the following five principles:

- Safety
- Calming
- Connectedness
- Self/Collective Efficacy
- Hope and Optimism



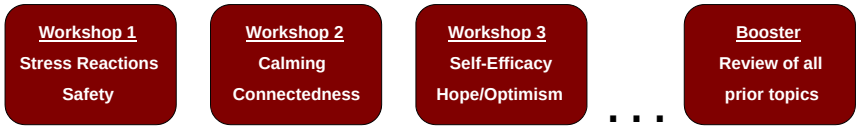
Cognitive-Behavioral Therapy:
CBT is an approach to altering thoughts and beliefs that lead to negative emotions. It has been shown to successfully treat and prevent PTSD when administered early after trauma exposure.



METHODS OF DELIVERY

Methods of Delivery

- Stepped collaborative care model[5] (increase care as needed)
- Concierge-type service (be available when help is wanted)
- Didactic group workshops
- Educational handouts
- Address specific concerns in workshops via index cards
- Informational website (training materials, resources)
- Toll-free telephone information line
- Email service
- Referral resources
- Support through spouse and buddy



Training Timeline: Shortly after return from deployment, Soldiers attend an introduction to the intervention. Workshops 1, 2 and 3 follow at 30, 60 and 90 days from return from deployment and the booster takes place at 6 months. Outcomes including rates of posttraumatic distress and disorders, impaired functioning and healthcare utilization are assessed throughout the intervention.

TRAINING GOALS

Training Goals: TEAM focuses on the education and training of Soldiers and their spouses to:

- Increase adaptive coping in response to symptoms of stress
- Identify when an individual is in need of care
- Develop individual self-care skills and healthy cognitions
- Improve communication skills and build supportive relationships
- Provide early support to foster rapid recovery
- Address health risk behaviors (e.g., use of alcohol or tobacco)
- Promote health care seeking when needed
- Overcome barriers to healthcare utilization

SUMMARY

- Mortuary Affairs Soldiers returning from deployment have high rates risk of psychological distress and adjustment difficulties
- TEAM, a new educational intervention uses evidence informed principles of PFA and CBT therapy as well as a stepped care model of support and a concierge-type service to address recovery and adaptation
- The intervention enhances the natural role of spouse and buddy support and addresses barriers to healthcare utilization
- Interventions of this type are in critical need due to the high number of soldiers returning from Iraq and Afghanistan with psychiatric disorders and the low utilization rate of needed mental healthcare[6]
- Findings will increase our knowledge of PFA based early intervention and PTSD symptomology
- Principles of the TEAM intervention are relevant to other branches of the military, first responders, disaster workers and others exposed to the dead

References:
[1] Benedek DM & Fullerton CS (2007). Translating five essential elements into programs and practice. *Psychiatry, 70*, 345-349.
[2] Hobfoll SE et al. (2007). Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry, 70*, 283-315.
[3] National Child Traumatic Stress Network and National Center for PTSD, *Psychological First Aid: Field Operations Guide, 2nd Ed.* 2006. Available: www.nctsn.org.
[4] Bryant RA (2005). Psychosocial approaches to acute stress reactions. *CNS Spectrums, 10*, 116-122.
[5] Zatzick D et al. (2004). A randomized effectiveness trial of stepped collaborative care for acutely injured trauma survivors. *Archives of General Psychiatry, 61*, 498-506.
[6] Hoge CW et al. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine, 351*, 13-22.

Appendix C

Early Care for Psychological Trauma: Innovations in Teaching and Delivery

Quinn M. Biggs, Ph.D., M.P.H.
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Abstract

Populations exposed to traumatic events (e.g., war, disaster, terrorism) are at increased risk for posttraumatic distress and adjustment difficulties. It is critical for health care professionals and others who work with trauma-exposed populations to know and apply the current standard of early trauma care. A new educational intervention program based on evidence informed principles of Psychological First Aid (PFA) and Cognitive Behavioral Therapy (CBT) has been developed to address specific post-trauma needs. PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through five key principles: 1) physical and psychological safety, 2) calming, 3) connectedness, 4) self-efficacy and 5) hope/optimism. CBT is an approach to altering the thoughts and beliefs that lead to negative emotions and has been shown to prevent and treat posttraumatic stress disorder when administered early after trauma exposure. The intervention program involves individual skills training, active engagement in problem solving, exploring barriers to healthcare utilization and building and integrating resources within the home (e.g., spouse support) and occupational environment (e.g., coworker support). Spouses and coworkers can be offered an equivalent intervention program to improve their ability to understand and support the needs of the trauma-exposed individual as well as to meet their own specific needs for support. Participants are trained to 1) develop self-care skills and healthy cognitions, 2) recognize when someone needs care, 3) provide early support to foster rapid recovery and adjustment and 4) recognize barriers to care and promote health care utilization when needed. The intervention is delivered through group workshops, handouts, a website and toll-free phone information line. The impact of this new educational intervention program is being assessed with a group of high risk U.S. Army Mortuary Soldiers upon their return from deployment.

Appendix D

Mortuary Affairs Soldiers: Early Intervention and Altering Barriers to Care for Traumatic Stress and PTSD

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Abstract

Background and Objectives: U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan have substantial rates of Posttraumatic Stress Disorder (PTSD), depression, psychological distress and health risk behaviors (e.g., alcohol or tobacco use). Exposure to death and combat increases the risk for posttraumatic distress and adjustment difficulties. After deployment, MA Soldiers report high rates of personal and family stress, functional impairment and needing but not obtaining health care. Support from family, co-workers and supervisors has been found to be beneficial in the weeks and months post-deployment. A newly developed educational intervention, TEAM (Troop Education for Army Morale), is designed to address specific post-deployment needs of MA soldiers. TEAM involves individual skills training, active engagement in problem solving, exploring barriers to healthcare utilization and building and integrating resources within the unit (e.g., buddy care) and home (e.g., spouse support). TEAM is based on the evidence informed principles of Psychological First Aid (PFA) and Cognitive Behavioral Therapy (CBT). PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through key principles: 1) physical and psychological safety, 2) calming, 3) connectedness, 4) self-efficacy and 5) hope/optimism. CBT is an approach to altering the thoughts and beliefs that lead to negative emotions and can prevent and treat PTSD when administered early after trauma exposure. Spouses of soldiers participating in TEAM are offered an equivalent intervention tailored to the specific needs of spouses. Soldiers and spouses are trained to 1) develop self-care skills and healthy cognitions, 2) recognize when a soldier needs care, 3) provide early support to foster rapid recovery and adjustment and 4) recognize barriers to care and promote health care utilization when needed. The intervention is delivered through group workshops, handouts, a website and toll-free phone information line.

Methods: TEAM is a longitudinal, randomized controlled trial. MA Soldiers are recruited from the 54th and 111th MA companies at Ft Lee, VA (estimated N=480) within 2 weeks of return from deployment. Questionnaire assessments are conducted at 1, 2, 3, 6, and

9 months post deployment. TEAM participants are compared to MA soldiers not receiving the TEAM intervention. Study goals include demonstrating the feasibility of TEAM for care and support of MA soldiers. Primary outcomes include assessing psychiatric disorder (e.g., PTSD, depression), psychological distress, health risk behaviors, quality of life, work function, marital conflict and barriers to health care utilization.

Results/Conclusions: Not yet available.

Impact Statement: This study has implications for development, assessment and feasibility of early intervention with MA soldiers post-deployment. Our findings will increase our knowledge of resilience and the contribution of soldier education and the environment (i.e., spouse and buddy care) to recovery and adjustment post-deployment. Our study has broader implications for intervention with first responders and other disaster workers exposed to the dead. Findings from this study and principles of the TEAM intervention are relevant to all branches of the military and the community that must sustain first responders in high stress environments including deployments and disasters.

Appendix E

Early Intervention for Posttraumatic Stress Disorder in Mortuary Affairs Soldiers

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Abstract

U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan report high rates of posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment and needing but not obtaining health care. A new educational intervention, TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on evidence informed principles of Psychological First Aid (safety, calming, connectedness, self-efficacy, hope/optimism) delivered through workshops, handouts, a website and phone line. Soldiers and their spouses learn to use self-care skills, recognize when soldiers need care, provide support (buddy care, spouse support), identify barriers to care and promote health care utilization when needed. MA Soldiers, randomized to TEAM or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. We present preliminary data on the impact of TEAM to specific PTSD criteria, work function and health care utilization. Significant reductions in arousal, distress and functional impairment are anticipated. Findings will increase our knowledge of PFA based early intervention and PTSD symptomology. Implications include the feasibility of early intervention with all military service members, first responders, disaster workers and others exposed to the dead.

EARLY INTERVENTION FOR POSTTRAUMATIC STRESS DISORDER IN MORTUARY AFFAIRS SOLDIERS

Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., James McCarroll, Ph.D., M.P.H., David M. Benedek, M.D., John H. Newby, Ph.D., M.S.W., Robert J. Ursano, M.D. **

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BACKGROUND

U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan have substantial rates of posttraumatic stress disorder (PTSD), depression, psychological distress, and health risk behaviors (e.g., alcohol or tobacco use). Exposure to death and combat increases the risk for posttraumatic distress and adjustment difficulties. After deployment, MA Soldiers report high rates of personal and family stress, functional impairment and needing but not obtaining health care. Support from family, co-workers and supervisors has been found to be beneficial after deployment.

NEW EDUCATIONAL INTERVENTION

TEAM (Troop Education for Army Morale): TEAM is a new education and skills training intervention to help MA Soldiers and their spouses and families reduce distress and foster adaptive coping in the initial weeks and months after deployment. TEAM training includes building skills for self-care and support of others (e.g., buddy care), active problem solving, engagement in accessing healthcare, and tailoring needs and resources. TEAM integrates resources in the social context of home and unit to enhance the natural role of spouse and buddy support (i.e., spouses are offered an equivalent intervention and all training support).

Methods and Assessment: TEAM is currently being offered to MA Soldiers (estimated N=480) and their spouses at Fort Lee, VA. MA Soldiers, randomized to the TEAM intervention or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. Primary outcomes include assessing psychiatric disorder (e.g., PTSD, depression), psychological distress, health risk behaviors, quality of life, work function, marital conflict and barriers to healthcare utilization. Participants' use of the TEAM program's resources (e.g., website, phone line) are also assessed. Spouses are not assessed.

Goals: The training of Soldiers and spouses to:

- Develop self-care skills and healthy cognitions
- Increase adaptive coping in response to stress
- Identify when an individual is in need of care
- Provide early support to foster rapid recovery

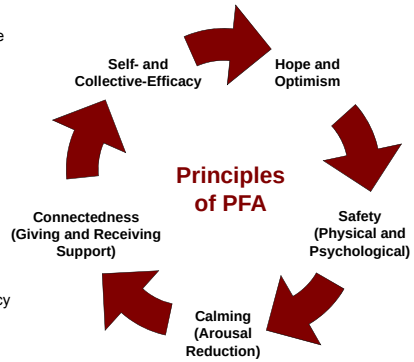
- Build supportive relationships
- Improve communication skills
- Promote health care seeking when needed
- Overcome barriers to healthcare utilization
- Address health risk behaviors (e.g., alcohol use)

EVIDENCE INFORMED PRINCIPLES

Basis of the Intervention: TEAM is based on the evidence informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4]. TEAM is education-based and NOT mental or physical health treatment.

Psychological First Aid:
PFA is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping by ensuring the following five principles:

- Safety
- Calming
- Connectedness
- Self/Collective Efficacy
- Hope and Optimism



Cognitive-Behavioral Therapy:
CBT is an approach to altering thoughts and beliefs that lead to negative emotions. It has been shown to successfully treat and prevent PTSD when administered early after trauma exposure.

Thoughts and beliefs about an event → **Emotional response (+/- mood)**

DELIVERY AND TIMELINE

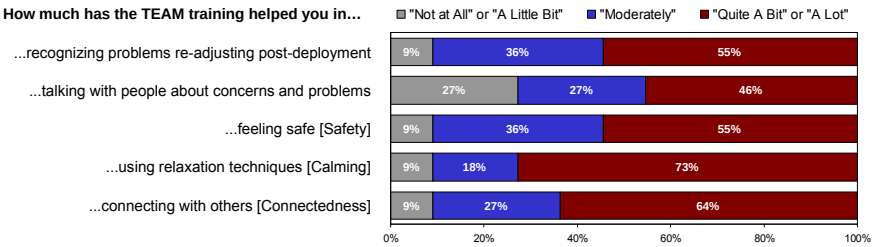
Methods of Delivery:

- Stepped collaborative care model[5] (increase care as needed)
- Concierge-type service (be available when help is wanted)
- Didactic group workshops
- Educational handouts
- Informational website (training materials, resources)
- Toll-free phone information line and email service
- Referral resources
- Support through spouse and buddy

Workshop 1 — Stress Reactions, Safety (1 mo. post-deploy)
Workshop 2 — Calming, Connectedness (2 mo. p.d.)
Workshop 3 — Self-Efficacy, Hope/Optimism (3 mo. p.d.)
Booster — Review of all prior topics (6 mo. p.d.)

PRELIMINARY RESULTS

Assessments: All Soldiers reported that "Overall, the TEAM training was helpful" (N=11). Talking with others (fellow Soldiers), learning about stress and coping, relaxation training, and the educational handouts were among the most helpful components.



Observations: Soldiers show interest in participating in TEAM (e.g., a Soldier came in to participate in TEAM during his leave; another requested to continue in TEAM after her separation from the Army). Anecdotal feedback has been positive (i.e., "The [calming exercise] helped me and my family by reducing my anger"). Command at Fort Lee has been very supportive of TEAM.

SUMMARY AND IMPACT

- Mortuary Affairs Soldiers returning from deployment have high rates of psychological distress and adjustment difficulties
- TEAM, a new educational intervention, uses evidence informed principles of PFA and CBT therapy as well as a stepped care model of support and a concierge-type service to address recovery and post-deployment adaptation
- The intervention enhances the natural role of spouse and buddy support and addresses barriers to healthcare utilization
- Interventions of this type are in critical need due to the high number of soldiers returning from Iraq and Afghanistan with psychiatric disorders and the low utilization rate of needed mental health care[6]
- Findings will increase our knowledge of PFA-based early intervention and PTSD symptomology
- Principles of the TEAM intervention are relevant to other branches of the military, first responders, disaster workers and others exposed to the dead

** *We wish to acknowledge additional members of our Intervention Team: LCDR Patcho Santiago, M.D., M.P.H., Christine Gray, M.P.H., Stephanie N. Riley, B.S., and Natalie T. Kodsy, M.A.*

References:
[1] Benedek DM & Fullerton CS (2007). Translating five essential elements into programs and practice. *Psychiatry, 70,* 345-349.
[2] Hobfoll SE et al. (2007). Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry, 70,* 283-315.
[3] National Child Traumatic Stress Network and National Center for PTSD, *Psychological First Aid: Field Operations Guide, 2nd Ed.* 2006. Available: www.nctsn.org.
[4] Bryant RA (2005). Psychosocial approaches to acute stress reactions. *CNS Spectrums, 10,* 116-122.
[5] Zatzick D et al. (2004). A randomized effectiveness trial of stepped collaborative care for acutely injured trauma survivors. *Archives of General Psychiatry, 61,* 498-506.
[6] Hoge CW et al. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine, 351,* 13-22.

Funded by U.S. Army Medical Research & Materiel Command, Congressionally Directed Medical Research Program Award W81XWH-08-2-0180

Appendix F

Early Educational Intervention for Mortuary Affairs Soldiers Post Deployment: Preliminary Results

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Abstract

U.S. Army Mortuary Affairs Soldiers (MA) returning from Iraq and Afghanistan report high rates of posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment and needing but not obtaining health care. A new educational intervention, TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on evidence informed principles of Psychological First Aid (safety, calming, connectedness, self-efficacy, hope/optimism) delivered through workshops, handouts, a website and phone line. Soldiers and their spouses learn to use self-care skills, recognize when soldiers need care, provide support (buddy care, spouse support), identify obstacles to seeking care and promote health care utilization when needed. MA Soldiers, randomized to TEAM or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. We present preliminary data on TEAM's impact on feelings of safety, use of calming techniques, and Soldiers ability to recognize problems and seek help. Findings from this study will increase our knowledge of PFA based early intervention. Implications include the feasibility of early intervention with all military service members, first responders, disaster workers and others exposed to the dead.

Appendix G

Early educational intervention for Mortuary Affairs Soldiers post deployment: preliminary results

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Appendix H

TEAM: an early educational intervention for Mortuary Affairs Soldiers post deployment; preliminary results from the first three cohorts.

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Appendix I

Troop Educational for Army Morale (TEAM) post deployment early educational program for Mortuary Affairs Soldiers; results from the first year.

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TROOP EDUCATION FOR ARMY MORALE (TEAM) POST DEPLOYMENT EARLY EDUCATION PROGRAM FOR MORTUARY AFFAIRS SOLDIERS; RESULTS FROM THE FIRST YEAR

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BACKGROUND

U.S. Army Mortuary Affairs Soldiers (MA) recover, identify, and evacuate the remains of deceased military personnel and their personal effects from Iraq and Afghanistan. Exposure to death and the combat environment increases the risk for posttraumatic distress and adjustment difficulties.

NEW EDUCATIONAL INTERVENTION

TEAM (Troop Education for Army Morale): TEAM is a new education and skills training intervention to help MA Soldiers and their spouses reduce distress and foster adaptive coping in the months after deployment. TEAM integrates resources in the social context of home and unit to enhance the natural role of spouse and buddy support. Spouses are offered an equivalent intervention.

Basis of the Intervention: TEAM training is based on the evidence-informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4].

Psychological First Aid:
PFA is designed to reduce the distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through the principles of Safety, Calming, Connecting, Self-Efficacy, and Hope/Optimism.

Cognitive-Behavioral Therapy:
CBT is an approach to altering thoughts and beliefs that lead to emotions. It has been shown to treat and prevent PTSD successfully when administered early after trauma exposure. However, TEAM is education-based and NOT therapy or mental health treatment.

Delivery of Intervention:
- Interactive group workshops
- Educational handouts
- Toll-free phone line and email service
- Website (resources, training materials)
- Referral resources
- Concierge-type service
- Stepped collaborative care model[5]
- Support through spouse and buddy

Goals: The training of Soldiers to:
- Develop self-care skills and increase adaptive coping in response to stress
- Identify when an individual is in need of care
- Provide early support to foster rapid recovery
- Build supportive relationships
- Improve communication skills
- Promote health care seeking when needed
- Overcome barriers to health care utilization
- Address health risk behaviors (e.g., alcohol use)

METHODS

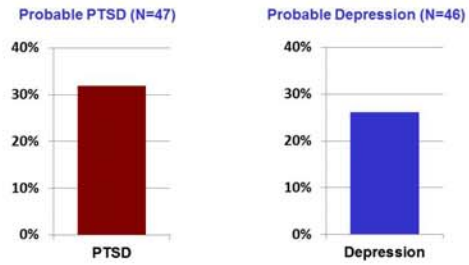
Procedures: MA Soldiers at Fort Lee, Virginia were randomized to receive either the TEAM intervention (Workshop) or no intervention (Usual Services). Workshops were held at 1, 2, 3 & 6 months post deployment. Questionnaires were completed at return from deployment and 1, 2, 3, 6 & 9 months. Outcomes included psychiatric disorder (PTSD, depression), psychological distress, functional impairment, and impact of TEAM on post deployment readjustment.

Participants: 75 MA Soldiers (Workshop Group N=39; Usual Services N=36)
- **Gender:** 73.1% male; 26.9% female
- **Age:** range 19-50 years (M=28.58)
- **Education:** 1.5%<HS; 43.3% HS/GED; 50.7% some college; 4.5% bachelors
- **Rank:** 16.4%≤Private or Private First Class; 65.7% Specialist or Corporal; 17.9%≥Sergeant (all enlisted)
- **Race:** 63.6% White; 16.7% Black; 12.1% Hispanic; 4.5% American Indian or Alaskan Native; 3.0% Asian or Pacific Islander
- **Marital Status:** 68.7% married; years M=4.76; 73.3% live with their spouse

Measures:
- **Probable PTSD:** PTSD Checklist (PCL-17): "How much you have been bothered by each problem in the past month" (1="not at all" to 5="extremely"). Probable PTSD if total symptom score ≥50 (range 17-85) and 1 intrusion, 3 avoidance, 2 hyperarousal symptoms scored moderately or higher.
- **Probable Depression:** Patient Health Questionnaire (PHQ-9): Positive if 5 or more of 9 symptoms present "more than half the days" or "most days" in the past 2 weeks and at least 1 symptom is depressed mood or anhedonia.

PRELIMINARY RESULTS

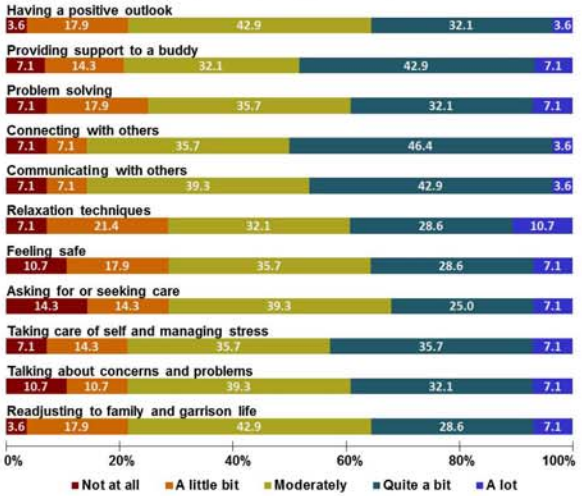
PTSD and Depression *(1 month post deployment)*



Work-Related Impairment *(reported at least half of the time, 1 mo. post deploy.; N=47)*
- 70.2% Felt fatigued
- 53.2% Lost concentration
- 40.4% Worked more slowly than usual

PRELIMINARY RESULTS (CONT.)

Helpfulness of TEAM: *(2-9 mos. post deployment; N=28)*



Limitations
- Self-selection to study and attendance
- Self-report measures
- Preliminary data (2 cohorts completed, 1 in progress, 2 more cohorts expected)

SUMMARY AND IMPACT

- These preliminary data suggest Mortuary Affairs Soldiers returning from Iraq and Afghanistan have high rates of PTSD and depression.
- Soldiers returning from deployment report benefit from Psychological First Aid and Cognitive Behavioral Therapy-based early educational intervention.
- Most participants described TEAM as being "Moderately" or "Quite a bit" helpful.
- TEAM enhances the natural role of spouse and buddy support and addresses barriers to health care utilization.
- Interventions of this type are needed due to the high number of Soldiers returning from deployment with psychiatric disorders and low mental health care utilization[6].
- Findings have implications for use of this intervention with Soldiers in other military branches, first responders, disaster workers and others exposed to the dead.

References
[1] Benedek DM & Fullerton CS (2007). Translating five essential elements into programs and practice. *Psychiatry, 70*, 345-349.
[2] Hobfoll SE et al. (2007). Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry, 70*, 283-315.
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Appendix J

Troop Educational for Army Morale (TEAM) post deployment early educational program for Mortuary Affairs Soldiers; results from the first year.

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Appendix K

Empirical evidence for a Psychological First Aid-based intervention in soldiers post-deployment.

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Abstract

Statement of the Problem

The development of interventions for returning soldiers and their families is critical to the mental and behavioral health of soldiers returning from deployments to Iraq and Afghanistan. Mortuary Affairs (MA) soldiers in the U.S. Army perform duties involving recovery, identification and evacuation of the dead are at increased risk for development of distress, disorder and health risk behaviors such as increased use of alcohol and tobacco. Studies suggest that regardless of profession, training, or past experience, duties involving recovery and identification of human remains are associated with acute and long-term psychological distress and psychiatric disorders. Mortuary Affairs soldiers report high rates of probable posttraumatic stress disorder (PTSD), psychological distress, personal and family stress, functional impairment. They report needing health care but not obtaining needed care, suggesting the importance of better understanding barriers to health care utilization. To our knowledge, there are no post-deployment interventions designed specifically for MA soldiers, spouses and buddies. We report preliminary findings of a randomized controlled intervention study using the principles of Psychological First Aid as an intervention in the first 9 months post-deployment in Mortuary Affairs Soldiers.

Subjects

Mortuary Soldiers are recruited into the study within a month of return from deployment to Iraq or Afghanistan. Participation is voluntary and IRB-approved Informed Consent is obtained from all participants. Participants are enlisted US Army personnel. Thus far, 86 soldiers have been recruited into the study across 4 cohorts. Study participants are 70.9% male, 29.1% female, age 19-50 years old (M=28.58). They are 63.6% White; 16.7% Black; 12.1% Hispanic; 4.5% Native American; 3.0% Asian. The majority (68.7%) are married; the mean number of years married is 4.76.

Procedures

This longitudinal, controlled intervention study randomizes MA soldiers into intervention and control groups within a month of return from deployment. All study participants complete questionnaires at 1, 2, 3, 6, and 9 months that include questions about deployment experiences, mental health including PTSD (PCL-17) and depression (PHQ-9), health care utilization, barriers to care, social support, health risk behaviors, and evaluation of aspects of the intervention. The intervention, TEAM (Troop Education for Army Morale), is based on evidence-informed principles of Psychological First Aid (safety, calming, connectedness, self-efficacy, and hope/optimism), and is delivered through workshops conducted at 1, 2, 3, and 6 months post-deployment, as well as handouts, a website and phone line. Spouses of intervention-group soldiers are also provided the opportunity to attend separate workshops with similar educational content. Both soldiers and their spouses are taught to use self-care skills, recognize when soldiers need care, provide support (buddy care, spouse support), identify barriers to care and promote health care utilization when needed.

Results

Preliminary results from the first 4 cohorts will be presented. Data to date indicate rates of probable PTSD and probable depression to be 31.9% and 26.1%, respectively, in soldiers one month post-deployment. Among participants, 14.9% reported obtaining medical care for emotional or family problems, and 34.0% felt in need of medical care but did not obtain any. Of the participants, 28.9% reported that they drank more alcohol than usual or re-started after quitting, 22.2% consume 5 or more alcohol drinks at one time, and 40.5% increased tobacco use or re-started after quitting. Longitudinal data on 4 cohorts of Mortuary Affairs soldiers will be presented. There is a trend indicating the effectiveness of the TEAM intervention. Specifically, findings are presented on disorder, distress and health risk behaviors (e.g., increases in alcohol and tobacco use) for the intervention and control groups at 1, 2, 3 and 6 months post-deployment in order to evaluate the effectiveness of our TEAM intervention. Multivariate logistic analyses are used to examine the mediating effects of variables such as social support. Barriers to health care utilization will also be examined and reported.

Conclusions

Preliminary results suggest that MA soldiers are at increased risk for development of post-deployment disorders, distress and health risk behaviors. Preliminary results also suggest a trend that the TEAM program utilizing principles of Psychological First Aid may be an effective intervention for soldiers returning from deployment. This study potentially provides a model for reducing stress and increasing adaptive functioning that can be adapted to other soldiers and disaster workers.

Appendix L

Evidence for TEAM: A post deployment Psychological First Aid-based educational program for U.S. Army mortuary affairs soldiers

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Abstract

U.S. Army Mortuary Affairs Soldiers (MA) who serve in Iraq and Afghanistan are at high risk for post-deployment psychological distress and psychiatric disorder. A new educational intervention, TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on evidence informed principles of Psychological First Aid and delivered through workshops, handouts, a website, and phone line. Soldiers learn to use self-care skills, provide support (buddy care), and identify barriers to care. MA Soldiers, randomized to TEAM or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. TEAM workshops are held at 1, 2, 3, and 6 months. At one month post-deployment, probable PTSD and probable depression were 27.8% and 24.5%, respectively; health risk behaviors were high (23.1% drank more alcohol than usual, 31.5% increased tobacco use); and barriers to seeking mental health care were considerable. On average, TEAM was rated as helpful in important coping areas (recognizing problems, connecting and communicating with others, seeking help, feeling safe, using calming techniques to reduce arousal). Implications include the feasibility of early intervention with all military service members, first responders, disaster workers and others exposed to the dead.

TROOP EDUCATION FOR ARMY MORALE (TEAM): A POST DEPLOYMENT EDUCATIONAL PROGRAM FOR MORTUARY AFFAIRS SOLDIERS; RESULTS FROM THE FIRST TWO YEARS

Daniel Cox, Ph.D., Carol S. Fullerton, Ph.D., Quinn M. Biggs, Ph.D., M.P.H., James E. McCarroll, Ph.D., M.P.H., Allison Stuppy, B.A., Jessica Kansky, B.A., and Robert J. Ursano, M.D.

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BACKGROUND

U.S. Army Mortuary Affairs Soldiers (MA) recover, identify, and evacuate the remains of deceased military personnel and their personal effects from Iraq and Afghanistan. Exposure to death and the combat environment increases the risk for posttraumatic distress and adjustment difficulties.

NEW EDUCATIONAL INTERVENTION

TEAM (Troop Education for Army Morale): TEAM is a new education and skills training intervention to help MA Soldiers and their spouses reduce distress and foster adaptive coping in the months after deployment. TEAM integrates resources in the social context of home and unit to enhance the natural role of spouse and buddy support. Spouses are offered an equivalent intervention.

Basis of the Intervention: TEAM training is based on the evidence-informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4].

Psychological First Aid:
PFA is designed to reduce the distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through the principles of Safety, Calming, Connecting, Self-Efficacy, and Hope/Optimism.

Cognitive-Behavioral Therapy:
CBT is an approach to altering thoughts and beliefs that lead to emotions. It has been shown to treat and prevent PTSD successfully when administered early after trauma exposure. However, TEAM is education-based and NOT therapy or mental health treatment.

Delivery of Intervention:

- Interactive group workshops
- Educational handouts
- Toll-free phone line and email service
- Website (resources, training materials)
- Referral resources
- Concierge-type service
- Stepped collaborative care model[5]
- Support through spouse and buddy

Goals: The training of Soldiers to:

- Develop self-care skills and increase adaptive coping in response to stress
- Identify when an individual is in need of care
- Provide early support to foster rapid recovery
- Build supportive relationships
- Improve communication skills
- Promote health care seeking when needed
- Overcome barriers to health care utilization
- Address health risk behaviors (e.g., alcohol use)

METHODS

Procedures: MA Soldiers at Fort Lee, Virginia were randomized to receive the TEAM intervention (Workshop) or no intervention (Usual Services). Workshops were held at 1, 2, 3 & 6 months post deployment. Questionnaires were completed at return from deployment and 1, 2, 3, 6 & 9 months. Outcomes included psychiatric disorder (PTSD, depression), health risk behaviors, barriers to seeking mental health care, and impact of TEAM on post deployment readjustment.

Participants: 86 MA Soldiers (Workshop Group N=46; Usual Services N=40)

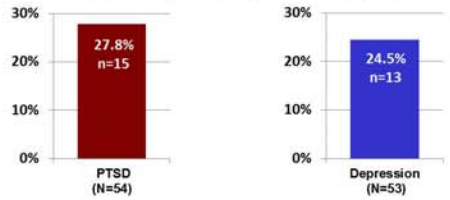
- **Gender:** 70.1% male; 29.9% female
- **Age:** range 19-50 years (M=28.26)
- **Education:** 0%<HS; 37.7% HS/GED; 55.8% some college; 6.5% bachelors
- **Rank:** 10.4%≤Private or Private First Class; 81.1% Specialist or Corporal; 7.8%≥Sergeant (all enlisted)
- **Race:** 60.5% White; 15.8% Black; 13.2% Hispanic; 6.6% American Indian or Alaskan Native; 3.9% Asian or Pacific Islander
- **Marital Status:** 64.9% married; years M=4.27; 73.1% live with their spouse

Measures:

- **Probable PTSD:** PTSD Checklist (PCL-17): Probable PTSD if total symptom score ≥50 (range 17-85).
- **Probable Depression:** Patient Health Questionnaire (PHQ-9): Positive if 5 or more of 9 symptoms present and at least 1 symptom is depressed mood or anhedonia.

PRELIMINARY RESULTS

Probable PTSD and Depression *(1 month post-deployment)*



Health Behaviors *(1 month post-deployment)*

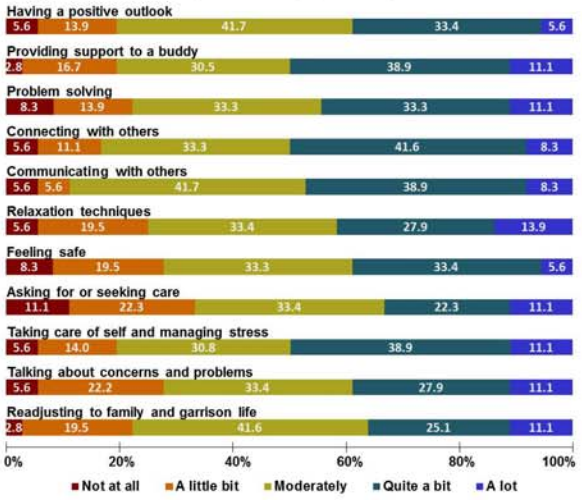
- 31.5% Increased tobacco use in the past month
- 23.1% Drank more than usual in the past month
- 19.2% Usually have 5 or more drinks at one time
- 33.3% Felt in need of medical care, but did not obtain it

Barriers to Care *(1 month post-deployment, % that agree or strongly agree the concern listed might affect the decision to receive mental health care)*

- 24.1% Believe unit members would lose confidence in them
- 18.6% Would be too embarrassed
- 18.5% Don't trust mental health professionals
- 31.5% Worry they would be seen as weak

PRELIMINARY RESULTS (CONT.)

Helpfulness of TEAM: *(2-9 mos. Post-deployment; N=28)*



Limitations

- Self-selection to study and attendance
- Self-report measures
- Preliminary data (3 cohorts completed, 2 in progress, 1 more cohort expected)

SUMMARY AND IMPACT

- These preliminary data suggest Mortuary Affairs Soldiers returning from Iraq and Afghanistan have high rates of PTSD and depression.
- Soldiers returning from deployment report benefit from Psychological First Aid and Cognitive Behavioral Therapy-based early educational intervention.
- Most participants described TEAM as being "Moderately" or "Quite a bit" helpful.
- TEAM enhances the natural role of spouse and buddy support and addresses barriers to health care utilization.
- Interventions of this type are needed due to the high number of Soldiers returning from deployment with psychiatric disorders and low mental health care utilization[6].
- Findings have implications for use of this intervention with Soldiers in other military branches, first responders, disaster workers and others exposed to the dead.

References
[1] Benedek DM & Fullerton CS (2007). Translating five essential elements into programs and practice. *Psychiatry, 70*, 345-349.
[2] Hobfoll SE et al. (2007). Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry, 70*, 283-315.
[3] National Child Traumatic Stress Network. *Psychological First Aid: Field Operations Guide, 2nd Ed.* 2006. Available: www.nctsn.org.
[4] Bryant RA (2005). Psychosocial approaches to acute stress reactions. *CNS Spectrums, 10*, 116-122.
[5] Zatzick D et al. (2004). A randomized effectiveness trial of stepped collaborative care for acutely injured trauma survivors. *Archives of General Psychiatry, 61*, 498-506.
[6] Hoge CW et al. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine, 351*, 13-22.

Funded by U.S. Army Medical Research & Materiel Command, Congressionally Directed Medical Research Program Award W81XWH-08-2-0180

Appendix N

Troop Education for Army Morale (TEAM): A post deployment educational program for mortuary affairs soldier: Results from the first two years

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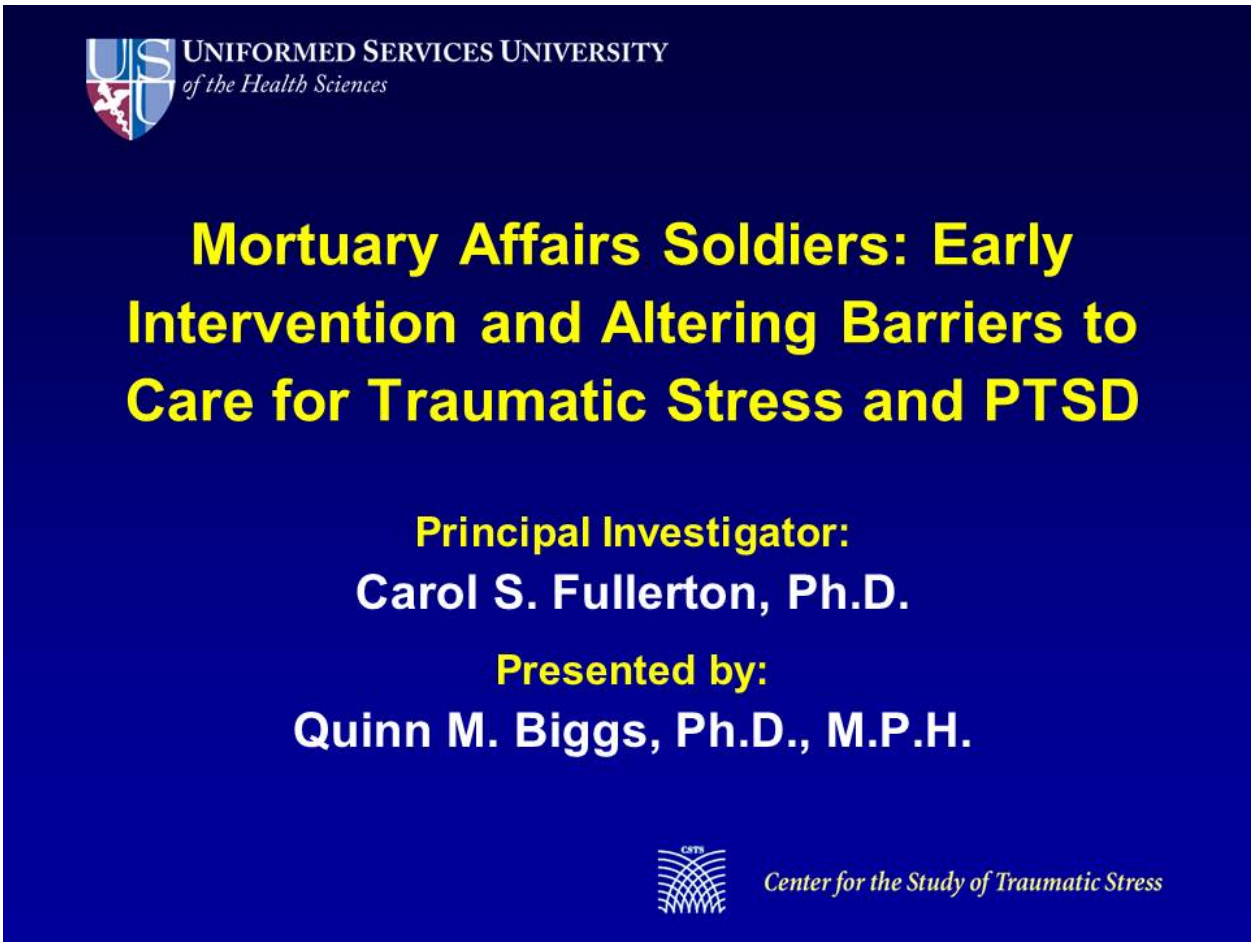
Abstract

U.S. Army Mortuary Affairs Soldiers (MA) who serve in Iraq and Afghanistan are at high risk for post-deployment psychological distress and psychiatric disorder. A new educational intervention, TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on evidence informed principles of Psychological First Aid and delivered through workshops, handouts, a website, and phone line. Soldiers learn to use self-care skills, provide support (buddy care), and identify barriers to care. MA Soldiers, randomized to TEAM or no intervention, complete questionnaires upon return from deployment and at 1, 2, 3, 6, and 9 months. TEAM workshops are held at 1, 2, 3, and 6 months. At one month post-deployment, probable PTSD and probable depression were 27.8% and 24.5%, respectively; health risk behaviors were high (31.5% increased tobacco use, 23.1% drank more alcohol than usual); and barriers to seeking mental health care were considerable. On average, TEAM was rated as helpful in important coping areas (recognizing problems, connecting and communicating with others, seeking help, feeling safe, using calming techniques to reduce arousal). Implications include the feasibility of early intervention with all military service members, first responders, disaster workers and others exposed to the dead.

Appendix O


UNIFORMED SERVICES UNIVERSITY
of the Health Sciences
Mortuary Affairs Soldiers: Early Intervention and Altering Barriers to Care for Traumatic Stress and PTSD
Principal Investigator:
Carol S. Fullerton, Ph.D.
Presented by:
Quinn M. Biggs, Ph.D., M.P.H.
Center for the Study of Traumatic Stress

Appendix P

The Impact of TEAM: An Innovative Post Deployment Intervention for Traumatic Stress in U.S. Army Mortuary Affairs Soldiers

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Abstract

U.S. Army mortuary affairs soldiers (MA) returning from Iraq and Afghanistan report high rates of posttraumatic stress disorder (PTSD), personal and family stress, functional impairment and needing but not obtaining health care. TEAM (Troop Education for Army Morale), an innovative educational intervention, is designed to foster adaptive functioning and reduce distress, stigma, and barriers to care. Based on evidence informed principles of Psychological First Aid (safety, calming, self-efficacy, hope/optimism, connectedness), TEAM is delivered through workshops, handouts, a website and phone line. Soldiers and spouses learn skills for self-care, supporting others (buddy care, spouse support), and promoting health care utilization. MA soldiers, randomized to TEAM or a no intervention control group, completed questionnaires approximately 10 days, 1, 2, 3, 6 and 9 months post deployment. We present data on the impact of the TEAM intervention (vs. no intervention) on symptoms of PTSD and depression, morale, personal functioning, quality of life, social interactions, safety, and the helpfulness of specific components of TEAM (e.g., managing stress, relaxation, obtaining support). These data increase our knowledge of PFA-based early interventions. Implications include tailoring TEAM's components to high risk groups including other military populations, first responders, disaster workers, and others exposed to the dead.

Appendix Q

Adapting and Applying Empirically-Based Principles for Acute Stress Responses to the Chronic Stress Responses of Mortuary Affairs Soldiers

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Abstract

Statement of the Problem: Mortuary Affairs (MA) soldiers in the U.S. Army perform duties involving evacuation of the dead from the theater of war. Regardless of profession, training, or past experience, recovery and identification of human remains have been associated with acute and long-term psychological distress. The development of post-deployment interventions for MA soldiers and their families is critical to their mental and behavioral health. To our knowledge, there are no post-deployment interventions designed specifically for this population.

Purpose: TEAM (Troop Education for Army Morale), is designed to reduce distress and foster adaptive functioning. TEAM is based on the evidence informed principles of Psychological First Aid (PFA) (safety, calming, connectedness, self-efficacy, hope/optimism) and Cognitive-Behavioral Therapy (CBT). It is delivered through workshops, handouts, a website, and a toll-free phone line. Soldiers and their spouses learn skills for care of self and others including how to (a) recognize soldiers in need, (b) provide support, (c) identify barriers to care, and (d) promote health care utilization.

Aims:

I. Describe how we adapted an intervention for acute stress (PFA) for a population recovering from chronic stress (post-deployment MA soldiers).
II. Present the components of TEAM that soldiers found most and least helpful.

Participants: MA soldiers were recruited into the study approximately one month following their Middle East deployment. Ninety-four soldiers were recruited into the study across 6 cohorts. Study participants were 67.8% male, 32.2% female, and 19-50 years old (M = 26.79). They were 63.8% White; 15.5% Black; 10.3% Hispanic; 5.2% Native American; and 5.2% Asian. The majority were married (58.6%) and the mean number of years married was 3.86.

Analyses: Descriptive data will be presented (quantitative and qualitative) and non-parametric statistics will be employed to evaluate which components of TEAM MA soldiers perceived as most and least helpful.

Implications: Findings will increase our knowledge of soldiers' perceptions of TEAM. We can then adjust TEAM based on these perceptions to potentially increase potency and effectiveness.

Appendix R

Troop Education for Army Morale (TEAM): A Post Deployment Educational Intervention for Mortuary Affairs Soldiers: Preliminary Results from the First Three Years

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Abstract

U.S. Army mortuary affairs soldiers (MA) perform duties involving identification, processing, and evacuation of the dead from the theater of war. Such exposures to death and the dead have been associated with acute and long-term psychological distress and psychiatric disorder. TEAM (Troop Education for Army Morale) is an innovative educational intervention designed to reduce distress and foster adaptive functioning after return from deployment. TEAM is based on evidence informed principles of Psychological First Aid: safety, calming, connectedness, self-efficacy, and hope/optimism, and the intervention is delivered through workshops, handouts, a website, and phone line. Soldiers learn skills for self-care as well as support of others. A total of 89, MA soldiers, randomized to TEAM or a no intervention control group, completed questionnaires approximately 1, 2, 3, 4, 7 and 10 months post deployment. We present data on demographics, probable post traumatic stress disorder and depression, and preliminary multivariate models of the impact of the TEAM intervention (vs. no intervention). These data increase our knowledge of PFA-based early interventions. Implications include tailoring TEAM's components to high risk groups including other military populations, first responders, disaster workers, and others exposed to the dead.

TROOP EDUCATION FOR ARMY MORALE (TEAM): A POST DEPLOYMENT EDUCATIONAL INTERVENTION FOR MORTUARY AFFAIRS SOLDIERS: PRELIMINARY RESULTS FROM THE FIRST THREE YEARS

Quinn M. Biggs, Ph.D., M.P.H., Carol S. Fullerton, Ph.D., James E. McCarroll, Ph.D., M.P.H., Allison Stuppy, B.A., Jessica Kansky, B.A., and Robert J. Ursano, M.D.

Center for the Study of Traumatic Stress, Department of Psychiatry, Uniformed Services University of the Health Sciences, Bethesda, MD

BACKGROUND

U.S. Army Mortuary Affairs Soldiers (MA) recover, identify, and evacuate the remains of deceased military personnel and their personal effects from Iraq and Afghanistan. Exposure to death and the combat environment increases the risk for posttraumatic distress and adjustment difficulties.

NEW EDUCATIONAL INTERVENTION

TEAM (Troop Education for Army Morale): TEAM is a new education and skills training intervention to help MA Soldiers and their spouses reduce distress and foster adaptive coping in the months after deployment. TEAM integrates resources in the social context of home and unit to enhance the natural role of spouse and buddy support. Spouses are offered an equivalent intervention.

Basis of the Intervention: TEAM training is based on the evidence-informed principles of Psychological First Aid (PFA)[1-3] and Cognitive Behavioral Therapy (CBT)[4].

Psychological First Aid: PFA is designed to reduce the distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping through the principles of Safety, Calming, Connecting, Self-Efficacy, and Hope/Optimism.

Cognitive-Behavioral Therapy: CBT is an approach to altering thoughts and beliefs that lead to emotions. It has been shown to treat and prevent PTSD successfully when administered early after trauma exposure. However, TEAM is education-based and NOT therapy or mental health treatment.

Delivery of Intervention:

- Interactive group workshops
- Educational handouts
- Toll-free phone line and email service
- Website (resources, training materials)
- Referral resources
- Concierge-type service
- Stepped collaborative care model[5]
- Support through spouse and buddy

Goals: The training of Soldiers to:

- Develop self-care skills and increase adaptive coping in response to stress
- Identify when an individual is in need of care
- Provide early support to foster rapid recovery
- Build supportive relationships
- Improve communication skills
- Promote health care seeking when needed
- Overcome barriers to health care utilization
- Address health risk behaviors (e.g., alcohol use)

METHODS

Procedures: MA Soldiers at Fort Lee, Virginia were randomized to receive the TEAM intervention (Workshop) or no intervention (Usual Services). Workshops were held at 2, 3, 4 & 7 months post deployment. Questionnaires were completed at return from deployment and 2, 3, 4, 7 & 10 months. Outcomes included PTSD symptom severity.

Participants: 89 MA Soldiers (Workshop Group N=48; Usual Services N=41)

- **Gender:** 69.7% male; 30.3% female
- **Age:** range 19-50 years (M=28.2)
- **Education:** 50.6% High School/GED; 49.4% some college, tech school, bachelors
- **Rank:** 20.2%≤Private or Private First Class; 64.0% Specialist or Corporal; 15.7%≥Sergeant (all enlisted)
- **Race:** 58.4% White; 18.0% Hispanic; 23.6% Non-White/Non-Hispanic
- **Marital Status:** 64.0% married; 49.4% live with spouse

Measures:

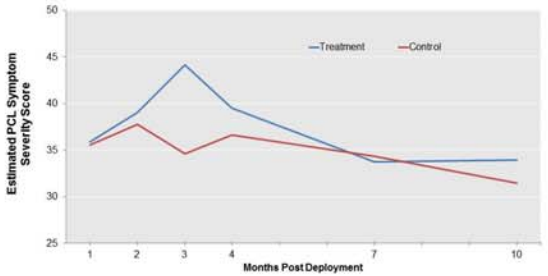
- **PTSD Symptoms:** PTSD Checklist (PCL-17) severity score (total score; range 17-85) and standardized intrusion, avoidance, and hyperarousal subscale scores.

Analyses:

- **Linear Mixed Modeling:** The longitudinal effect of treatment on PCL-17 scores was derived from a linear mixed model using the PCL score as the dependent variable and time (six time points: baseline and five follow-ups), treatment (two groups: treatment and control), and the interaction between time and treatment as independent variables. Baseline assessment scores for gender (male vs. female) and having children (yes vs. no) were used as controls to adjust for potential confounding effects in estimating the mixed model. The two control variables were rescaled to be centered about their means

PRELIMINARY RESULTS

Linear Mixed Model of Longitudinal Trajectories of PCL-17 Total Score (N = 69)

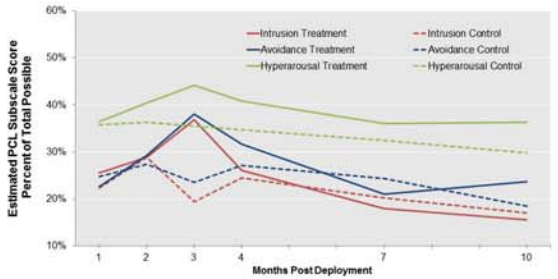


- Treatment Group scores trend higher than Control Group scores during the first months of the intervention. The direction of this trend is contrary to expectation.

PRELIMINARY RESULTS (CONT.)

- There is no overall effect of treatment, time, or treatment*time on PCL total score.
- At month 3, PCL scores of the Treatment Group were significantly higher (9.5, *SE* = 4.1) than the Control Group $t(179) = 2.33$, $p = .02$.

Linear Mixed Model of Longitudinal Trajectories of Standardized PCL-17 Intrusion, Avoidance, and Hyperarousal Subscale Scores (N = 69)



- Intrusion – Time by treatment interaction ($p < .01$). Groups were significantly different at month 3 ($p = .01$).
- Avoidance – Groups were significantly different at month 3 ($p = .03$).
- Hyperarousal – When the subscale scores are standardized, hyperarousal symptoms are the highest. However, there were no group differences.

Limitations: self-selection to study and attendance, self-report, and preliminary data.

SUMMARY AND IMPACT

- These preliminary data indicate that Mortuary Affairs Soldiers returning from deployment to the Middle East have high rates of PTSD symptoms.
- There was no overall effect of treatment, time, or a treatment-by-time interaction on the PCL-17 score.
- Treatment group scores trend higher in early months then return to level of Controls.
- Longer-term studies are needed to determine if there are benefits beyond 10 months.
- Further analyses will determine TEAM's effect on other measures of health and well-being.
- Findings have implications for adaptation of this intervention for other military branches, first responders, disaster workers and others exposed to the dead.

References:
[1] Benedek DM & Fullerton CS (2007). Translating five essential elements into programs and practice. *Psychiatry, 70*, 345-349.
[2] Hobbit SE et al. (2007). Five essential elements of immediate and mid-term mass trauma intervention. Empirical evidence. *Psychiatry, 70*, 283-315.
[3] National Child Traumatic Stress Network. *Psychological First Aid: Field Operations Guide, 2nd Ed.* 2006. Available: www.nctsn.org.
[4] Bryant RA (2005). Psychosocial approaches to acute stress reactions. *CNS Spectrums, 10*, 116-122.
[5] Zatzick D et al. (2004). A randomized effectiveness trial of stepped collaborative care for acutely injured trauma survivors. *Archives of General Psychiatry, 61*, 498-506.

Funded by U.S. Army Medical Research & Materiel Command, Congressionally Directed Medical Research Program Award W81XWH-06-2-0180