Trauma Risk Management: A Data-Driven Solution to the Post Traumatic Stress Problem in the United States Fire Service?

Kristen Wheldon Psy.D. and Battalion Chief (Ret.) Robert Avsec

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Background

Over the last decade, the fire service has seen a cultural shift where formally taboo subjects like post-traumatic stress disorder (PTSD) and suicide became safe topics to discuss and a common enemy to fight. As the discussion ensued, there have been many attempts to solve these problems by recognizing the importance of clinical support for those affected by trauma as well as developing peer support and critical incident stress management teams. Peer support teams are often conceptualized as a "catch-all" for all things mental health related. Although research (Bartone P. T. et al., 2018; Carey, T. et al., 2014; Lowery, K., Stokes, M. A., 2005) suggests peer support is effective for addressing grief and loss, identifying potentially suicidal individuals and improving group cohesion, no available research supports the conclusion that by having a peer support program alone, the risk of post-traumatic stress is adequately addressed. Unfortunately, fire service populations have higher Post Traumatic Stress Disorder (PTSD) rates than the general population (United States Fire Administration, 2023.) That said, no peer support model is considered a treatment for Post Traumatic Stress Disorder. As such, the fire service should adopt an evidence-based approach utilizing the foundation of peer support to manage its current post-traumatic stress problem.

The PTSD Problem in the Fire Service Compared to the Military

Research indicates that up to 37% percent of firefighters meet the criteria for PTSD (Hom et al., 2016). That is a striking number compared to law enforcement populations, whose percentages fall around 17% (Chopko & Schwartz, 2012). The US military rates fall between 5.8%- 17.1%, depending on whether the population was considered non-injured or injured (Walker L.E. et al., 2021). Per Pinder RJ et al., 2010, the British military had rates around 4% in deployed personnel, rising to 6% in combat troops, despite the high frequency of operations

around that time. Their authors reported that those lower rates may be due, in part, to the role of Trauma Risk Management (TRiM). In contrast to first responder and military populations, PTSD affects approximately 8% of the general population (Judkins et al., 2020.)

Utilization of Critical Incident Stress Management (CISM)

In 2002, the National Institute of Mental Health (NIMH), U.S. Department of Health and Human Services, Department of Defense, Department of Veteran Affairs, Department of Justice, and the American Red Cross came together after an exhaustive review of world literature on CISM. The panel did not recommend CISM or psychological debriefing as an early intervention practice with its personnel (National Institute of Mental Health, 2002.) The U.S. military has transitioned to using a model called Trauma Risk Management or TRiM. The premise for this model shifts away from the notion suggested by CISM that after a traumatic event, a person needs to essentially make deep meaning of the situation and express all related thoughts and emotions. There is a belief that discussing the situation can lead to a cathartic release. Although this is a theme captured in many therapeutic settings, it is not what the research suggests is the best anecdote for recovery from acute stress or post-traumatic stress.

Introduction to Trauma Risk Management

Trauma Risk Management (TRiM) seeks to follow the natural recovery process of trauma survivors (Figley & Nash, 2015.) Research indicates that eight times out of ten, an exposed individual will have a healthy normal recovery process (Bryant, R. A., & Harvey, A. G. (2000.) The affected individual should be identified through a risk management process and provided clinical intervention services. The model was developed as a peer support system by the British Armed Forces to ensure that those exposed to trauma are adequately supported and encouraged

to seek timely psychological care if they develop mental health challenges that do not spontaneously resolve.

In the US Fire Service, even with the best intentions, we have the potential to pathologize normal recovery and inadvertently exacerbate the very thing we are hoping to resolve. Irvin Yalom said, “I never want to take away something when I don't have anything better to offer him in a way (Yalom, 2013).” Perhaps, the fire service has not transitioned away from methods perceived as intuitively valuable without evidence-based support because we have not offered an alternative data-based solution to the Post Traumatic Stress Disorder (PTSD) problem in the United States.

Police personnel exposed to potentially traumatic events during their operational duty may develop psychological problems. Many UK Police Forces have used Trauma Risk Management (TRiM) in response. TRiM is a peer-support process that aims to support employees following trauma, reduce stigma, and encourage help-seeking. Research within military populations has provided preliminary support for the beneficial effects and, importantly, no detrimental effects of using TRiM. However, to date, only a few studies have researched the use of TRiM with police populations, and none that the authors are aware of explicitly focuses on fire service personnel.

TRiM with Law Enforcement

In one study involving police officers in the United Kingdom (Greenberg, N. et al., 2010), the use of TRiM as a departmental response to trauma exposure reflected lower levels of PTSD symptoms, less stigmatized views toward experiencing mental health difficulties, and perceived fewer barriers to help-seeking behaviors. Another study written by Watson, L., & Andrews, L. (2018), evaluating the use of TRiM with law enforcement agencies in the United

Kingdom found that those organizations that used the TRiM model had personnel who reported lower levels of psychological distress, and fewer stigmatized views towards experiencing mental health difficulties, perceived fewer barriers to help-seeking, and reported more significant positive psychological change following adversity. However, the research reflected no significant differences between the two groups' attitudes toward PTSD and stress. In addition to TRiM, this study also indicated that additional considerations should be made for addressing the stigma of experiencing emotional distress within the police force.

TRiM Research for Additional Consideration

Per Pupavac, V. (2001), a study was conducted looking at services provided on military ships comparing the standard care model and the TRiM model. The findings indicated no significant change in either group's psychological health or stigma scores. However, the studied group only encountered low numbers of critical incidents. In addition to potentially impacting PTSD rates, other data produced by Greenberg N et al., 2008, found those who participated in TRiM to be significantly more likely to seek help from mental health services than a similar group of those who did not.

Culture Shift

In March 2004, nearly 200 fire service leaders gathered in Tampa, Fla., for an unprecedented event: the first-ever Firefighter Life Safety Summit (Which became more commonly known as TAMPA1). The attendees were united by a common goal: reducing firefighter line-of-duty deaths (LODDs) and injuries. Those attendees represented the major fire service organizations that, included:

• Fire Department Safety Officers Association (FDSOA)

- International Association of Black Professional Firefighters (IABPF)
- International Association of Fire Chiefs (IAFC)
- International Association of Fire Fighters (IAFF)
- International Society of Fire Service Instructors (ISFSI)
- National Association of Hispanic Firefighters (NAHF)
- National Fallen Firefighters Foundation (NFFF)
- National Fire Protection Association (NFPA)
- National Volunteer Fire Council (NVFC)

The group jointly created the 16 Firefighter Life Safety Initiatives (FLSI) from that summit. See Table 1 below (National Fallen Firefighters Foundation, n.d.)

1. Cultural Change	9. Fatality, Near-Miss Investigation
2. Accountability	10. Grant Support
3. Risk Management	11. Response Policies
4. Empowerment	12. Violent Incident Response
5. Training and Certification	13. Psychological Support
6. Medical and Physical Fitness	14. Public Education

7. Research Agenda 8. Technology	15. Code Enforcement and Sprinklers 16. Apparatus Design and Safety

Table 1. The 16 Life Safety Initiatives developed by the major fire service organizations at Tampa I.

The National Fallen Firefighters Foundation (NFFF) was tasked with promulgating the initiatives throughout the fire service and developing material to support their implementation.

Since then, those initiatives have significantly influenced the emerging safety culture in the U.S. fire service. They have become the bedrock foundation for thousands of fire departments and EMS organizations that desire to ensure their firefighters and medics return home safely after every shift.

FLSI Initiative #13: Psychological Support

FLSI states that firefighters, EMS professionals, and their families must have the resources to deal with the various complications that their jobs can bring, especially issues regarding emotional and psychological stress. They must also have help available to deal with the problems in living that all of us sometimes face, regardless of the work we do, especially regarding family, finances, or even drug and alcohol issues. Health and safety standards (like the NFPA 1500: Standard on Firefighter Health and Safety) require that assistance programs be made available to ensure such services are available when needed (National Fallen Firefighters Foundation, n.d.)

An increasing number of firefighters are dying by suicide, suffering from behavioral health issues, including post-traumatic stress, from exposures they have suffered while delivering emergency medical services to the public. There is a lack of culturally competent behavioral health specialists to assist firefighters, and local Employee Assistance Programs are ill-equipped to assist first responders (United States Fire Administration, 2023).

Firefighters and other rescue personnel develop PTSD at a similar rate to military service members returning from combat, according to an August 2016 study from the Journal of Occupational Health Psychology. The report reveals that approximately 20 percent of firefighters and paramedics meet the criteria for PTSD at some point during their careers. This compares to a 6.8 percent lifetime risk for the general population. The connection between PTSD and traumatizing rescue work is evident. The number of firefighter suicides is estimated to be at least 100 annually. According to the "Ruderman White Paper on Mental Health and Suicide of First Responders," the suicide rate for firefighters is 18 per 100,000 compared to 13 per 100,000 for the general public (United States Fire Administration, 2023).

The American fire service has recently been rocked with reports of "suicide clusters" in large, metro fire departments. Chicago, Phoenix, Philadelphia, and other agencies have experienced high-profile suicides in proximity, sparking a dramatic upsurge in concern for understanding the incidence of suicide in firefighters, what factors may leave a firefighter vulnerable, and what avenues are available or can be developed to help firefighters, their coworkers, their departments, and others to help prevent these tragic losses (Gist et al., 2011).

In its efforts to promulgate FLSI #13, NFFF convened the Suicide and Depression Summit in 2011 in Baltimore, Maryland. That conference brought several of the nation's leading

researchers/practitioners in suicide, together with a broad sampling of fire service representatives, to review the current "state of the science" for understanding suicidal behavior and the current "state of the art" concerning prevention and intervention (Gist et al., 2011)

An output of that summit was the publication of a white paper, Suicide Surveillance, Prevention, and Intervention Measures for the US Fire Service Findings and Recommendations for the Suicide and Depression Summit that provides an overview of those discussions. It recommended starting points for strategic action planning (Gist et al., 2011).

The 2nd Firefighter Life Safety Summit

Ten years after TAMPA1, NFFF hosted the second Firefighter Life Safety Summit (TAMPA2). Although the overall goal remained the same, the attendees at TAMPA1 had many discussions about the questions that had evolved in the ensuing years following TAMPA1: Will we–fire service leaders, young and old–go beyond the low-hanging fruit and come to a consensus on what is required to reduce the incidents of death and injury? (FirefighterNation Staff, 2014)

For the past ten years, the "Everyone Goes Home" message of the Life Safety Summit has served as a rallying cry for the fire service–and yet, some of the 16 Life Safety Initiatives (LSIs) that came out of TAMPA1 have proven divisive among our ranks. For example, LSI #1: Define and advocate the need for cultural change within the fire service is a request to evaluate what we do, how we do it, and why we do it. Nevertheless, it has been debated beyond comprehension. Even more troubling, LSI #15: Advocacy must be strengthened to enforce codes, and the installation of home fire sprinklers–which could virtually eliminate fireground LODDs and injuries–has received little attention (FirefighterNation Staff, 2014).

The culture of the fire service has an impact on the individual and department response to trauma exposure. Cultural variables have been identified as impacting the utilization of psychological resources. Research conducted in the UK has demonstrated that TRiM (along with other benefits) has strengthened informal support mechanisms and even increased organizational functioning within the units that utilize the method (Pupavac, V., 2001). The authors of that study went on to hypothesize that TRiM may, in time, lead to a valuable cultural shift.

Research (W. Frappell-Cooke et al., 2010) suggested that TRiM can be an enhanced liaison between mental health clinicians and line managers. Through organizational evaluation, this research demonstrated the potential to reduce absenteeism. Adopting TRiM appears to enhance trauma-exposed personnel's reliance on peer support, and the method was described as both acceptable and sustainable.

Conclusion

As the fire service evolves, so must our approach to the psychological needs of the firefighters. The TRiM model has shown vast benefits amongst military and police force populations. It is time for the fire service to consider enhancing its peer support teams with the practical tools to manage post-traumatic stress. Trauma risk management could directly benefit the firefighters, fire service organizations, and the ancillary partners such as insurance agencies who may have been dramatically affected by the increase in stress injury claims. Similarly, it can cost the agencies much more money to remain insured and financially strain organizations that may already need help providing necessary resources to their communities. It is in the best interest of firefighters, departments, and stakeholders to develop a way to manage the inherent psychological risks associated with a career in fire and EMS services. We would like the USFA to invest in piloting a TRiM program here in the United States. FSPA would like to partner in the

research and development of a trauma risk management system to serve the needs of the United States Fire Service.

References

Bartone, P. T., Bartone, J. V., Gileno, Z., & Violanti, J. M. (2018). Exploration into best practices in peer support for bereaved survivors. *Death Studies*, 42(9), 555–568. https://doi-org.ezp.pasadena.edu/10.1080/07481187.2017.1414087

Bryant, R. A., & Harvey, A. G. (2000). Acute stress disorder: A handbook of theory, assessment, and treatment. American Psychological Association. https://doi.org/10.1037/10346-000

Carey, T., Gallagher, J., & Greiner, B. A. (2014). Post-traumatic stress and coping factors among search and recovery divers. *Occupational Medicine*, 64(1), 31–33. https://doi-org.ezp.pasadena.edu/10.1093/occmed/kqt125

Chopko, B. A., & Schwartz, R. C. (2012). Correlates of Career Traumatization and Symptomology Among Active Duty Police Officers. *Criminal Justice Studies*, 25, 83–95.

FirefighterNation Staff. (2014, February 1). *Making the Commitment to the Life Safety Initiatives*. Retrieved from FirefighterNation: https://www.firefighternation.com/firerescue/making-the-commitment-to-the-life-safety-initiative

Figley, C. R., & Nash, W. P. (2015). *Combat stress injury: Theory, research, and Management.* Routledge.

Frappell-Cooke, W., Gulina, M., Green, K., Hacker Hughes J., Greenberg N., Does Trauma Risk Management Reduce Psychological Distress in Deployed Troops?, *Occupational Medicine*, Volume 60, Issue 8, December 2010, Pages 645–650, https://doi.org/10.1093/occmed/kqq149

Gist, R., Taylor, V. H., & Raak, S. (2011, July 11-12). *Suicide Surveillance, Prevention, and*

Intervention Measures for the US Fire Service. Retrieved from First Responder Center for Excellence: https://www.firstrespondercenter.org/wp-content/uploads/2020/09/suicide_whitepaper.pdf

Greenberg N., Langston V., Jones N. (2008). Trauma Risk Management (TRiM) in the UK Armed Forces. *BMJ Military Health,*154,124-127.

Greenberg, N., Langston, V., Everitt, B., Iversen, A., Fear, N. T., Jones, N., & Wessely, S. (2010). A cluster randomized controlled trial to determine the efficacy of Trauma Risk Management (TRiM) in a military population. *Journal of Traumatic Stress*, 23(4), 430–436. https://doi-org.ezp.pasadena.edu/10.1002/jts.2053

Greenberg, N., Langston, V., Everitt, B., Iversen, A., Fear, N. T., Jones, N., & Wessely, S. (2010). A cluster randomized controlled trial to determine the efficacy of Trauma Risk Management (TRiM) in a military population. *Journal of Traumatic Stress*, 23(4), 430–436. https://doi-org.ezp.pasadena.edu/10.1002/jts.20538

Hom, M. A., Stanley, I. H., & Joiner, T. E. (2016). A systematic review of suicidal thoughts and behaviors among police officers, firefighters, EMTs, and paramedics. *Clinical psychology review*, *44*, 25–44. https://doi.org/10.1016/j.cpr.2015.12.002

Jones, N., Burdett, H., Green, K., & Greenberg, N. (2017). Trauma Risk Management (TRiM): Promoting Help Seeking for Mental Health Problems Among Combat-Exposed U.K. Military Personnel. *Psychiatry: Interpersonal & Biological Processes*, *80*(3), 236–251. https://doi-org.ezp.pasadena.edu/10.1080/00332747.2017.1286894

Judkins, J. L., Moore, B. A., Collette, T. L., Hale, W. J., Peterson, A. L., & Morissette, S. B.

(2020). Incidence Rates of Posttraumatic Stress Disorder Over a 17-Year Period in Active Duty Military Service Members. *Journal of Traumatic Stress*, 33(6), 994–1006. https://doi-org.ezp.pasadena.edu/10.1002/jts.22558

Lowery, K., & Stokes, M. A. (2005). Role of Peer Support and Emotional Expression on Posttraumatic Stress Disorder in Student Paramedics. *Journal of Traumatic Stress*, 18(2), 171–179. https://doi-org.ezp.pasadena.edu/10.1002/jts.20016

National Institute of Mental Health. Mental Health and Mass Violence: Evidence-Based Early Psychological Intervention for Victims/Survivors of Mass Violence—A Workshop to Reach Consensus on Best Practices. NIH Publication No. 02-5138, Washington, DC: U.S. Government Printing Office, 2002, www.nimh.nih.gov/research/massviolence. pdf.

National Fallen Firefighters Foundation. (n.d.). *13. Psychological Support*. Retrieved from Everyone Goes Home: https://www.everyonegoeshome.com/16-initiatives/13-psychological-support/

National Fallen Firefighters Foundation. (n.d.). *Firefighter Life Safety Initiatives*. Retrieved from Everyone Goes Home: https://www.everyonegoeshome.com/16-initiatives/

Pinder R., Fear N., Wessely S., Reid G., Greenberg N., Pinder, R., Fear, N., Wessely, S., Reid, G., & Greenberg, N. (2010). Mental health care provision in the U.K. armed forces. *Military Medicine*, 175(10), 805–810. https://doi-org.ezp.pasadena.edu/10.7205/milmed-d-10-00208

Pupavac, V. (2001). Therapeutic Governance: Psycho-social Intervention and Trauma Risk Management. *Disasters*, 25(4), 358. https://doi-org.ezp.pasadena.edu/10.1111/1467-7717.00184

United States Fire Administration. (2023). *U.S. Fire Administrator's Summit on Fire Prevention*

and Control: Executive Summary. Emmitsburg, Maryland: United States Fire Administration. https://www.usfa.fema.gov/downloads/pdf/publications/fire-administrators-summit-executive-summary.pdf

Walker, L. E., Watrous, J., Poltavskiy, E., Howard, J. T., Janak, J. C., Pettey, W. B. P., Zarzabal, L. A., Sim, A., Gundlapalli, A., & Stewart, I. J. (2021). Longitudinal mental health outcomes of combat‐injured service members. *Brain & Behavior*, 11(5), 1–12. https://doi-org.ezp.pasadena.edu/10.1002/brb3.2088

Watson, L., & Andrews, L. (2018). The effect of a Trauma Risk Management (TRiM) program on stigma and barriers to help-seeking in the police. *International Journal of Stress Management*, 25(4), 348–356. https://doi-org.ezp.pasadena.edu/10.1037/str0000071

Whybrow, D., Jones, N., Greenberg N. (2015). Promoting organizational well-being: a comprehensive review of Trauma Risk Management, *Occupational Medicine*, Volume 65, Issue 4, Pages 331–336. https://doi.org/10.1093/occmed/kqv024

Watson, L. B. (2013). The Effect of a Trauma Risk Management (TRiM) Programme on Stigma and Attitudes to Stress and Trauma in the Police Service (Doctoral dissertation, University of Essex).

Yalom, I. D. (2013). *Love's executioner: and other tales of psychotherapy*. Penguin.