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PTSD in the 9-1-1 Dispatcher: Are We Doing Enough to Protect the Silent Eyes

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PTSD IN THE 9-1-1DISPATCHER: ARE WE DOING ENOUGH TO PROTECT THE SILENT EYES

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PTSD IN THE 9-1-1DISPATCHER: ARE WE DOING ENOUGH TO PROTECT THE SILENT EYES

Submitted to the Faculty

of

American Military University

by

Megan Therese Hinkle

In Partial Fulfillment of the

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Charles Town, WV

DEDICATION

I dedicate this thesis to all the dispatchers in the field that struggle with PTSD. It is my hope that this research will help them to gain the needed treatment and services. I also dedicate this thesis to my parents and fiancée, whom without their love and patience this journey would not have been possible.

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I wish to thank the faculty of American Public University for their support and guidance throughout the completion of this educational journey. Without them this would not have been possible. I would especially like to thank Dr. Natalie Fussell who was a guiding light throughout the development and completion of this capstone and was there to answer my plethora of questions making this an enjoyable learning experience.

I would also like to thank my colleagues at the Association for Public Safety Communications Officials for inspiring me to take this direction with my research. Not only did they plant the seed that this topic was a problem that needed to be researched but they also encouraged me to keep going forward.

I have found my work on this research project to be both enjoyable and enlightening.

ABSTRACT OF THE THESIS

PTSD IN THE 9-1-1 DISPATCHER: ARE WE DOING ENOUGH TO PROTECT THE SILENT EYES

By

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The purpose of this research was to determine if the legislation, screening methods, and available treatments are adequate enough to be able identify and heal PTSD in the 9-1-1 dispatcher. This study reviewed the pertinent literature as well as information from the websites of the counties and major cities within the Commonwealth of Pennsylvania. This study found a considerable lack of data and information regarding dispatch-specific legislation as well as information regarding how dispatch centers identify and treat PTSD. The results of the study indicate that PTSD in dispatchers should be treated through a multi-faceted approach and there is applicable legislation that needs to be developed.

TABLE OF CONTENTS

Introduction

Post-traumatic Stress Disorder (PTSD) was first recognized and regularly diagnosed in veterans of the Vietnam War (Hapke, Shumann, Rumpf, John, & Meyer, 2006). During this time, terms such as shell shock, traumatic neurosis, and rape related fear and anxiety were used to describe what is now known and accepted to be PTSD (Galea, Nandi, & Vlahov, 2005). There was substantial research conducted prior to 1980 that had significant influence on the understanding of the psychological background to the disorder. This research also evaluated how symptoms developed and affected certain populations. In 1980, with the release of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), Third Edition (DSM-III) PTSD was recognized as a diagnosable mental health disorder (Galea, Nandi, & Vlahov, 2005). Within this standard diagnosing manual, there were certain symptoms that are required be present for a certain period of time in order for the patient to qualify for a diagnosis of PTSD (Galea, Nandi, & Vlahov, 2005).

In 1994, the DSM-IV was released and the criterion for the diagnosis of PTSD was once again subject to revision and clarification. In the DSM-IV, not only did the patient have to experience a traumatic event, but during that experience the patient also had to believe that there was a real possibility of death, or injury to themselves or others (Bisson, 2007). Through this traumatic experience the patient also had to have feelings of fear, helplessness, or horror that last for a period of at least one month and cause a significant level of impairment in the patient's work or social life.

Substantial research has been conducted regarding the prevalence of the disorder in many different populations throughout time. Hapke, Schumann, Rumpf, John, and Meyer (2006)

examined PTSD risk factors contingent on gender and the presence of co-morbidities. This study specifically examined how exposure to particular types of trauma as well as the presence or absence of particular mental health disorders impacted the development of PTSD and the symptoms displayed. Hammond and Brooks (2001) examined the prevalence of PTSD in healthcare and pre-hospital responders in the aftermath of the attack on the World Trade Center. This study also acknowledges the fact that both responders and victims of a critical incident are at risk for developing PTSD. Dionne (2002) examined the prevalence of PTSD development in FDNY firefighters and emergency medical responders in the months following the attacks on the World Trade Center. The article also reviewed how psychological help provided by the department was perceived by the field responders that were expected to use it.

One population that has been underserved and underrepresented by PTSD research is 9-1-1 dispatchers. Dispatchers in the public safety field are entrusted with a high level of responsibility to coordinate the response of providers to a given incident while at the same time they are isolated from the actual situation. The conflicting high level of responsibility and low level of being able to direct influence on the outcome of the situation creates the opportunity for this population to be highly susceptible to developing PTSD and PTSD-like symptoms (Allen, 2012). Dispatchers are also routinely exposed to incidents that other populations would consider high-stress situations. These situations include those that involve children, where first responders are being sent into a known dangerous situation, suicides, shootings, and line of duty death circumstances (Pierce & Lilly, 2012)

There are established treatment and prevention programs that have proven to be effective not only in the general treatment of PTSD but also in the treatment of PTSD in other aspects of the public safety profession. The process of crisis intervention has been employed over the last

several decades as a way to provide psychological support in a quick and effective manner following an event that is considered especially stressful (Everly, Flannery, & Eyler, 2002). Critical Incident Stress Management (CISM) is one component of this crisis intervention that has proven to be effective in the public safety sphere. CISM utilizes a variety of approaches to assist those that are recovering from a critical incident to do so in a quick and effective manner (Everly, Flannery, & Eyler, 2002).

The concepts that form CISM are rooted in approaches to crisis intervention such as Critical Incident Stress Debriefing (CISD) which represents a technique that focuses on group crisis interventions specifically designed to alleviate the acute symptoms that are associated with psychological crisis and trauma. Jeffery Mitchell (n. d) is the leader in CISM and CISD research and has provided extensive literature regarding the proper process, methods, and proper population for which CISM and CISD is intended. Everly, Flannery, and Eyler (2002) looked at the statistics that helped determine the effectiveness of various aspects that define the CISM/CISD program. This study also considered how effective the principles of CISM and CISD were on the individual symptoms that classify a PTSD diagnosis.

There are a variety of treatments that have been studied for use in PTSD that have been applied to non-specific trauma populations and have shown promising results in alleviating the symptoms that are associated with PTSD. Bisson and Andrew (2009) have one of the most comprehensive studies that examine other psychological treatments shown to be effective in the treatment of PTSD and its associated symptoms. Some of these treatments include exposure therapy, trauma-focused cognitive behavioral therapy (TFCBT), eye movement desensitization (EMDR), and psychodynamic therapy.

Exposure therapy is when the affected person is asked to relive the experience through imagining the ordeal and creating a detailed present tense account of the event (Bisson & Andrew, 2009). In many cases, the reliving experience is done by creating an audio recording and asking the patient to listen to the tape of the event over and over again. Exposure therapy can also be achieved by exposing individuals to reminders that are associated with a given traumatic event.

Trauma-focused cognitive therapy involves helping the individual to identify thinking patterns considered to be distorted regarding themselves, the traumatic event that they experienced, and the world (Bisson & Andrew, 2009). Individuals that undergo this type of treatment are pushed to challenge their distorted thoughts and views by using a variety of established techniques. EMDR involves the individual to focus on a specific traumatic image, thought, emotion, or bodily sensation while also receiving stimulation usually delivered in the form of eye movements (Bisson & Andrew, 2009). Psychodynamic therapy concentrates on integrating the traumatic experience with the life experiences of the individual as a whole (Bisson & Andrew, 2009). Many times individuals that undergo this type of therapy focus on events of the childhood that are considered to be important.

Literature Review

Post-traumatic Stress Disorder (PTSD) is a mental health condition that has been widely studied in various forms and populations over the last 15 years, especially in the aftermath of the September 11th terrorist attacks and the subsequent War on Terror. Through research several screening methods have been developed to determine an individual's risk level. Various treatments have been developed and subsequently evaluated to determine their effectiveness.

Two of the most promising therapies that have been studied, evaluated, and widely implemented are various forms of Cognitive Behavioral Therapy (CBT) and Critical Incident Stress Management (CISM). The risk factors for developing PTSD, its co-morbidities, and related symptoms have also been identified and studied extensively to determine the role they play in the diagnosing of the disorder as well as in the likelihood that and affected individual will have a meaningful recovery.

PTSD has been studied in populations of victims of man-made, technological, and natural disasters. PTSD has also been studied in the populations of responders to disaster events and the general public that were exposed but not directly impacted. However, there is one population that has been exposed to disasters and other situations that are considered to be critical incidents but has not been studied as to the potential long-term psychological impacts. The population that is lacking focused PTSD research is 9-1-1 dispatchers. These individuals are considered to be the eyes that never see because they are the first line of information regarding an event that could be considered especially stressful.

PTSD and the 9-1-1 Dispatcher

Pierce and Lilly (2012) published the only study to examine the relationship between duty-related trauma exposure, peritraumatic distress, and PSTD symptoms that have the potential to be present in 9-1-1 dispatchers. This study sampled 171 active dispatchers from 24 states. Participants were mostly female, and had an average of 11 years of service in the field. They hypothesized that dispatchers would report a heightened level of peritraumatic distress because of the perceived lack of control over a situation that has the potential to be considered traumatic. They further hypothesized a positive correlation between the presence of peritraumatic distress

and the development of PTSD symptoms. Through this research it was discovered that peritraumatic distress occurred in reaction to 32% of different call types that are experienced by the average dispatcher. As expected, there was a significant positive correlation between the presence of peritraumatic distress and the development of PTSD. The researchers concluded that even though 9-1-1 dispatchers are removed from the physical scene of the emergency, they are at the same level of risk for developing PTSD symptoms as field responders.

This area is important because it serves as the foundation for what the study is based off of. The remaining topics are going to build off of this initial content and determine how they can relate back to the 9-1-1 dispatcher and whether or not they are relative. The next topic to be reviewed is the epidemiology of PTSD which researches what trigger factors qualify for a diagnosis of PTSD as well as how these qualifying factors affect various populations of trauma victims.

Epidemiology of PTSD

Galea, Nandi, and Vlahov (2005) reviewed studies on PTSD that have been conducted since 1980 when the disorder was first recognized as a mental health condition in the DSM. In formulating the epidemiology that affects the development of PTSD and its symptoms, researchers considered and compared the following factors: the definition and assessment of exposure, the comparability of assessments of PTSD across a variety of studies, the prevalence and incidence of PTSD, and how PTSD correlates and compares across disasters. The researchers then looked at how these factors compared in different categories of disasters including, man-made, technological, and natural events. The study found that a person who experiences a disaster is at substantially higher risk for developing PTSD especially if they are

injured in the course of that disaster. The study also found that those who are the victims of man-made or technological disasters are also at higher risk for developing PTSD than those individuals who are victims of natural disasters. There is no obvious bias within this study but the study does call for more a more long-term evaluation of how the above factors affect the symptoms of PTSD.

The epidemiology of the disorder is important because the trigger factors may be different in the populations of 9-1-1 dispatchers than they are in other trauma populations. The trigger factors are not only unique to the 9-1-1 dispatcher population but they also may manifest themselves in different ways than they do in other trauma populations. Now that the trigger factors of PTSD have been discussed and it has been determined how these factors affect various trauma populations, a determination needs to be made about the differences within the disorder. There is a difference between PTSD as defined and diagnosed by the DSM and other stress disorders. By studying and identifying these differences, researchers and clinicians have a better chance of making a correct diagnosis and recommending a proper course of treatment.

Acute Stress Disorder vs. PTSD

Bryant, Sackville, Dang, Moulds, and Guthrie (1999) take a different yet none the less interesting approach to the subject of PTSD. They look at Acute Stress Disorder (ASD) as a pre-cursor to the development of chronic PTSD and argue that if early crisis intervention can be performed during the acute stress phase then the development and effects of chronic PTSD can be avoided. ASD is defined as a post-traumatic stress reaction that occurs between 2 days and 4 weeks following a traumatic event. The study specifically reviewed Cognitive Behavioral Therapy (CBT) and supportive counseling techniques as ways to treat acute stress disorder. The

researchers hypothesized that the combination of CBT and supportive counseling techniques would have an additive benefit in the treatment of acute stress disorder. The researchers went on to hypothesize that prolonged exposure coupled with anxiety management would result in fewer PTSD symptoms.

Criteria for inclusion in the study required that individuals were involved in a motor vehicle accident or non-sexual assault in the previous 2 weeks, satisfy the criteria for ASD, are proficient in the English language, and be between the ages of 18 and 60. The results of the study showed that acute stress disorder and PTSD can be treated and/or prevented with brief interventions of cognitive behavioral therapy. The study also showed that supportive counseling methods were also effective in the treatment of both PTSD and ASD.

There are however a few problems with this study. First, the study only looked at two very specific trauma populations, motor vehicle accident and non-sexual assault victims. Second, there was indication within the study if the subjects were prescribed any medications or had any co-morbidities present that could have an impact on the final results. Third, at the time this study was published, there was little research that was done about the validity of acute stress disorder as an independent yet contributing factor of a PTSD diagnosis.

While these differences aid in the proper diagnosis of the stress disorder, they are not the sole basis for a diagnosis. In the 9-1-1 dispatcher population, these subtle differences may prove pivotal not only in determining those individuals who may be suffering from an acute stress event and those that are at risk for a more chronic condition. The clinician or researcher that is examining an individual possibly affected by PTSD also needs to account for the risk factors and

other co-morbidities that a person may be afflicted with that pre-dispose them to being at higher risk for developing the disorder.

Risk Factors and Co-Morbidities for PTSD

Bisson (2007) established a foundation for his research by presenting the criteria for a diagnosis of PTSD according to the DSM-IV which is the current standard for the diagnosing of mental health disorders. He goes on to explain which factors can predict the development of PTSD symptoms as well as what actions can be implemented to prevent PTSD from developing. He continues by describing the variety of treatments and interventions that have been researched to assist in the treatment of PTSD including psychological and pharmacological approaches. Bisson's research was conducted by reviewing pertinent literature concerning the subject; however, no physical testing of any subjects was performed. That being said, the author declared that no biases or conflicts of interest occurred and there was no indication of the contrary.

McNally, Bryant, and Ehlers (2003) create a solid foundation for their research by going into extensive detail regarding the definition of PTSD and its associated risk factors. Using the September 11th terrorist attacks as a focusing point, the researchers are able to provide tangible examples of the not only how prevalent PTSD can be in an affected community but also how easily PTSD can develop in the wake of a national disaster.

The researchers chose to focus quite extensively on two prominent treatment methods; debriefing in the immediate aftermath of a disaster event and cognitive behavioral therapy. For debriefing, the researchers not only presented the intricacies of this treatment method but also presented the pros and cons of utilizing this approach with disaster survivors. McNally, Bryant,

and Ehlers also used an extensive amount of research to support their conclusions; while at the same time providing beneficial suggestions for further research. It was felt further research would support their initial conclusions and perhaps increase the applications of the methods for use in the field setting.

Once the epidemiology, subtleties, risk factors, and co-morbidities have been identified in a population, the members of that population have to be screened. This screening process is pivotal because if individuals at risk of developing PTSD are identified early then treatment services can be provided and the path to recovery can begin. These traditional screening methods may need to be tailored to the population of 9-1-1 dispatchers. While the established screening methods serve as an effective foundation, they need to be personalized to serve this unique PTSD population.

Screening Methods for PTSD

Brewin (2005) reviewed numerous articles published in peer-reviewed journals that presented various screening methods for detecting current PTSD symptoms. In order for a published piece to be included for evaluation, the screening instrument had to be used with adults and had to be applicable as well as being relevant for use in any trauma population. Any screening instrument that was longer than 30 items was excluded from the study because it was considered to be too time-consuming to be of any significant value. Instruments that were geared toward specific populations such as the armed forces were also excluded because they were considered not flexible enough to be of benefit to the overall research.

The study looked at a variety of screening instruments and described their sample and population sizes as well as their characteristics. It was determined that the effectiveness of these screening instruments was between 85 and 89%. Even though these scales and evaluation

methods have proven to be effective tools to aid in the diagnosis of PTSD, there was not a single instrument that was able to meet all of the criteria was presented by the researchers.

Ruggiero, Rheingold, Resnick, Kilpatrick, and Galea (2006) looked at two specific screening instruments that are used to aid in the diagnosis of PTSD, The National Women's Study PTSD Module and The PTSD Checklist. This study utilized 233 participants selected through a method of random digit dialing. Participants were administered the National Women's Study PTSD Module, the PTSD Checklist, and were interviewed for approximately 35 minutes. The findings suggest that the PTSD Checklist has the tendency to yield a higher level of prevalence for the symptoms, clusters, and diagnostic levels. This however doesn't indicate that one screening method should be rejected in support of the other. The National Women's Study PTSD Module and the PTSD Checklist differ in their structure but also in the way and the level at which they detect symptoms. Therefore, each instrument has the potential to illuminate symptoms in different aspects of presentation which suggests that they have the potential to complement each other as diagnostic tools. That being said however, it is suggested that these screening methods be used in different contexts.

Once members of the population have been screened and those at risk for PTSD have been identified, then the treatment process can begin. There are a variety of treatment approaches that a patient diagnosed with PTSD can pursue but care has to be taken in order to make sure that the proper treatment approach is taken with each individual patient. There is no one size fits all approach. Same as the screening methods need to be customized to the 9-1-1 dispatch population, the treatment approach needs to be personalized as well. No two dispatchers react to trigger events the same way and like-wise no two dispatchers are going to react to treatment in the same way either. There are programs such as CISM and CISD that

serve as adequate baseline immediate treatment approaches but long term treatment has to be personalized to the population it is intending to serve.

PTSD Treatments

Bisson and Andrew (2009) evaluated thirty-three studies that focused on various approaches to the treatment of PTSD including trauma-focused cognitive behavioral therapy (TFCBT), eye movement desensitization and reprocessing therapy (EMDR), stress management, group trauma-focused cognitive behavioral therapy, group non-trauma focused cognitive behavioral therapy, and other forms of psychological treatment. Each treatment approach was evaluated on its own merit as well as being compared to other treatment approaches in order to determine which types of treatment were most successful. Bisson and Andrew's research also evaluated the effects that different treatment approaches on patients at various time intervals.

One bias present was the study only looked at those therapy options that were non-pharmaceutical based. There was no indication within the research of whether or not any of the subjects were using pharmaceutical therapy to manage their symptoms in addition to the selected psychological therapy. The study concluded that TFCBT and EMDR showed the most promising results for the treatment of PTSD and its symptoms.

Foa, Hearst-Ikeda, and Perry (1995) looked at the effectiveness of CBT programs on chronic PTSD symptoms in victims of assault. Participants chosen for inclusion were females that had been victims of rape or other forms of aggravated assault and were referred for treatment at the Medical College of Pennsylvania. The participants in the study also had to be fluent in English, between the ages of 16 and 65, sign a consent form, and meet the criteria for a diagnosis of PTSD as defined by the DSM. Participants were excluded from the study if they has been

diagnosed with another mental illness such as schizophrenia, bipolar disorder, depression, suicidal thoughts. Participants were also excluded from the study if they were victims of an assault that was perpetrated by a male with whom they had an intimate relationship or were living with.

Participants were divided into groups and were assessed at various intervals of management in order to determine the effectiveness of treatment on symptoms. Results showed that the form of CBT that was administered and examined in this study showed marked improvement on the development of chronic PTSD symptoms. The therapy had significant impact not only on symptoms in the immediate aftermath of the assault but also on the development of symptoms in the months following attack.

Busttil, Turnbull, Neal, Rollins, West, Blanch, and Herepath (1995) looked at avariety of physiological debriefing techniques that are used in the immediate aftermath of a traumatic experience and the affect they have on the development of symptoms. This study looked at four strategies for symptom management, a comprehensive assessment protocol, structured group therapy, use of medication, and long-term follow-up. In addition, the study also looked at the effectiveness of using a residential course of treatment. This particular part of the study was conducted in a hospital setting that was specifically designed for this symptom management approach.

The population was made up of 35 individuals. Twenty participants were current members of the Royal Air Force, three former members of the Royal Air Force, three former members of the Army, three family dependents of a Royal Air Force member, and six civilians. All

participants had suffered traumatic experiences that were classified into categories of war-related and non- war related experiences.

Traumatic experiences related to war included activities directly related to combat and body handling. Non-war related trauma experiences include post-disaster handling of bodies, terrorist attacks, traffic accidents, hostage situations, and the witnessing of fatal accidents. The results indicate significant and noted improvement in PTSD symptoms both in the immediate aftermath of an event as well as in the long term follow-up. The findings indicate that the use of psychological debriefing does have a significant influence on the chances of the victim of making a meaningful recovery from PTSD symptoms.

There are a variety of long term treatment approaches that can be utilized for a multitude of PTSD populations including 9-1-1 dispatchers. Just like the screen methods, these treatments need to be personalized to the population to be able to account for the uniqueness of their job demands. In the immediate aftermath of a critical incident, CISM and CISD may be effective tools. These techniques allow for an immediate psychological response to the needs of those affected by an event and also allow for a level of identification of those individuals that may need more long-term focused care.

CISM/CISD

Mitchell (2003) formulates his position on the topic of CISM and CISD by presenting a summary of the pertinent and applicable research and literature on the topic. Mitchell takes this approach to allow for a better understanding of the advantages and disadvantages of each approach as well as their similarities and differences. In his review, he also presents research

and articles from outside scholars and authors that are critical of his methods and goes on to explain not only why these criticisms are unfounded but also the incorrect assumptions and conclusions that may have been made. Mitchell presents the specifics and details of these outside studies so that the reader can understand the parameters of those studies as well as make comparisons between studies that support CISM and those that are CISM-critical.

Mitchell presents numerous articles supporting the principles of CISM as well as their specific details, statistics, and outcomes. There is less perceived bias with this review of literature because articles pertaining to both sides of the CISM argument are presented for evaluation. Some perceived bias could be present simply in the fact that there was substantially more literature presented in support of CISM than against it.

Mitchell (n. d) offers a substantial outline of what CISM is and how it is applied to the pertinent populations for which it was developed. CISM is a multi-faceted, comprehensive, systematic approach to crisis intervention that has been used by a variety of agencies to aid disaster victims and responders (Mitchell, n. d, p.3). Mitchell is aware of the documented and published criticism of his methods including CISM its related subset CISD. As a response to this documented criticism, Mitchell presents randomized controlled trials, controlled studies, meta-analyses, literature reviews, case studies, and other sources of information as well as the specific details and statistics of each. This information was used to show the outcome of CISM and CISD interventions on PSTD symptoms.

By presenting this information, Mitchell is attempting to prove that when used correctly and in appropriate populations, CISM and CISD can be effective in identifying those individuals that are at risk for developing PTSD symptoms as well as working to prevent the development of

PTSD in the community. The only bias that is present in this study is that Jeffery Mitchell is not only a leader in CISM/CISD but he is also responsible for developing the technique.

Bohl (1995) examines the prevalence of PTSD symptoms in treated and untreated firefighters in the aftermath of a critical event. In this study, researchers used objective tests to assess the presence of symptoms in firefighters that were treated with a brief psychological intervention compared to those that were not. The study utilized 65 firefighters, all male that had been directly involved in a critical traumatic event in which there had been a loss of life or other serious injuries. Thirty study participants were the recipients of treatment while the remaining thirty-five were not. Firefighters who received treatment were all members of departments that had mandatory treatment programs in the aftermath of critical events. Those firefighters that were part of the control group were members of departments that did not have mandatory treatment programs.

The treatment group was subjected to a 90 minute debriefing session structured according to the accepted standards developed by Mitchell and conducted within 24 hours of the critical incident. All participants were evaluated for symptoms of depression, anger, anxiety, and long-term stress both immediately following the critical incident and three months post-incident. Results show that the group that underwent the psychological debriefing was less likely to develop the symptoms of anger, anxiety, stress, and depression.

CISM and CISD are effective tools when used correctly in the populations for which they are developed. They are able to provide a level of immediate support in response to a critical stress incident and are also able to help identify those providers that may need more long term focused care. Even though CISM and CISD are intended to be public safety specific, the other

areas that were discussed previously are applicable to other areas as well. Conversely, these other arenas have information and knowledge that public safety and specifically 9-1-1 dispatchers can use to be able to effectively manage the prevalence of PTSD within the profession.

PTSD and Other Arenas

Byron and Peterson (2002) examined the effects that stress factors from outside the workplace can have on an individual. Similarly, stressors that are specific to an employee's job can have a negative effect on that employee's physical and psychological reaction. Byron and Peterson went on to classify these stressors as either acute or chronic. Acute stressors are those situations such as natural disasters, terrorist attacks, or simply the restructuring that an organization can undergo. Chronic stressors are those that are associated with work and home life, socioeconomic status, and daily life. This study specifically looked at traumatic stress and how it related to an acute organizational stressor, the events of 9/11, and how often an employee was absent from work.

This study utilized a population of 108 university students enrolled in either a Masters of Public Administration or a Masters of Business Administration program at universities located in the Midwestern and Southeastern United States. Researchers asked that only those students employed full-time outside the university participate in the study. The researchers administered a survey approximately 10 weeks after the events of 9/11 during a normally scheduled class period. The survey examined exposure to the traumatic event, optimism, global co-worker social support, targeted organizational social support, event-related strain, job dissatisfaction, and absenteeism (Byron & Peterson, 2002). The results of the study indicate that those stress factors

that come from outside the workplace can have an impact on the organization as a whole. The study also suggests that if these stressors are not addressed the impact to the business and the employee can be substantial.

Comfort (2002) evaluated how in the aftermath of the terrorist attacks of 9/11, US businesses had to adapt and redefine crisis and consequence management in order to maintain organizational security. One of the major points that Comfort touches on is the need for improvement of how federal organizations share information especially as it relates to a perceived or identified threat. Comfort goes on to recommend changes that should be made at various levels to ensure organizational security is maintained. For example, formulating a process and procedure for the sharing of information, creating a network for the various structures to be able to communicate in order to maintain the balance between freedom of the individual entities and public security, and investing in the infrastructure that is required for increased amount of information that needs to be shared are all ways to work towards organizational security.

Becker and Spicer (2007) developed the EMS Feasibility Study to examine factors within the EMS workforce that have an impact on the individual employee and contribute to the overall safety of the workplace. Some factors included in the study were obvious such as needle sticks, assault injuries, and back injuries however, the study examined other factors not be obvious such as burnout and situations related to the development of PTSD. The study concluded that there is no single database for the collection of EMS-related data that can sufficiently serve the needs of EMS researchers. The study went on to conclude that creating a system that collects and

monitors data related to injuries and illnesses that happen within the profession can be beneficial to adopting new and innovative programs aimed at reducing the number of reportable cases.

The information that is out in the academic world regarding PTSD in abundant and diverse. There is a plethora of articles and research that examines how to identify PTSD, screen for it, and treat it as well as how to identify how the prevalence of PTSD within a population affects that workforce. This information is easily applicable to the 9-1-1 dispatch field. Even with all of the research that is available for members of the public safety and non-public safety populations to have access to, there has to be support from the government and legislation to make the research feasible. The various pieces of legislation offer support in their own unique aspects but there is no overarching legislation that applies specifically to PTSD or 9-1-1 dispatchers.

Pertinent Legislation

Management Directive 505.22 (2003) outlines the policies, procedures, and responsibilities of departments that utilize the State Employee Assistance Program (EAP). The directive also defined the training, education, and referral process employees need to follow in order to be eligible for the benefits. The purpose of the State EAP is to provide a system that supports employees struggling with various behavioral and mental health issues such as substance abuse and PTSD. The program is also designed to create a system that allows for quick and efficient identification of those employees who may be in need of the services afforded by the EAP program. The state mandate also includes a description of the role that supervisors play in the larger framework of the program as well as making suggestions for what could lead to including referrals as part of standing protocols for state employees that utilize EAP services.

Chapter 81, Title 35 legislation of the Pennsylvania General Assembly (2009), is the primary legislation that oversees Emergency Medical Services (EMS) within the Commonwealth of Pennsylvania. This legislation is more commonly known as the EMS Act. While this legislation primarily governs EMS, it is not the only profession to which the information is applicable. Sections within the legislation outline the role and responsibilities that EMS dispatchers have in the larger EMS system. The limitation of this description is that it only governs those dispatchers that work in the private EMS sector and does not account for those dispatchers that are employed by and dispatch for a county agency.

Title 28 Health and Safety Rules and Regulations of the Pennsylvania Code (2013), is the update and expansion of the 2009 EMS Act. The legislation contains the same basic information as the previous document. The advantage of this revision is that it is far more inclusive and descriptive as far as the roles and responsibilities within the EMS system. This legislation is the only one that describes a certification and training standard for dispatchers as well as creating an expectation that dispatchers are required to uphold. The downside to this legislation, as with the previous version, is that it only applies to those dispatchers that work in the private EMS dispatching sector and is not applicable to dispatchers that are employed by and dispatch for a county entity.

The Federal Fire Prevention and Control Act of 1974 (2013) is the federal legislation that has control and oversight of firefighting activities across the nation. There are actions within this legislation such as the development, enactment, and review of pertinent and future education that could be modified in order to be applicable to dispatchers. Where this document is unique, and other facets of the public safety world such as 9-1-1 communications should take note, is that the

legislation calls for the collection of data related to occupational hazards including those related to injury and illness.

Applications to Public Administration

Katasamunska (2012) explains how the field of public administration has shifted from one that follows a traditional model formed in a stable and static environment unaccustomed to change to one that has created models that allow for change as the profession changes. He goes on to present the model known as New Public Management. New Public Management is an approach to public administration which places importance on certain aspects of society such as the economy, government effectiveness and efficiency, as well improved delivery of government services. This approach to public administration is a transformation of the traditional method which was accepted and practiced for many years and placed a great deal of emphasis on the relationship between the public sector, the government, and society.

Perry (2000) presents his theory of Public Service Motivation which is defined as the inclination of individuals to respond in a way that is based off of public sector organizations or institutions. Studies regarding this model of public administration indicate that employees who are involved in the public sector have a tendency to display a higher level of loyalty to their organizations than those individuals who are involved in private sector organizations. Research in public service motivation has identified four types of individuals that would take part in this model: Samaritans, communitarians, patriots, and humanitarians. Perry makes the suggestion that the development of this new theory within the field of public administration may create a new model related to motivation. The theory is also important because it can help in to identify those individuals best suited for employment in the public sector. This theory also helps public

sector managers and supervisors to be able understand the motivation of their employees as well as helping them to understand the fundamental differences between the public and private sectors.

Mele (2006) presents the works of Mary Parker Follett and her perceptions and insights on the ethical manager. Although Follett was considered to be ahead of her time in the approach that she was suggesting she is a pioneer and trailblazer within the field. Follett believed that there were certain standards a manager should be held to and certain traits a manager should possess in order to make strides within the field. She had a concept of ethics that was unique for her time and she believed that ethics needed to include a level of professional standards and cultural currents.

The variety of studies, research, and literature suggests that there are a multitude of aspects that need to be considered when trying to formulate a diagnosis of PTSD. What is more challenging is trying to form this diagnosis in a high-stress population such as 9-1-1 dispatchers. It is suggested through the knowledge gained from the above studies, that in order to obtain a proper diagnosis, risk factors and co-morbidities need to be taken into account and appropriate screening methods need to be utilized. Once a diagnosis has been made; treatment methods that have been proven to be effective for PTSD need to be utilized so that the individual has the greatest chance of benefitting from early intervention. The effectiveness of CISM and CISD as immediate interventions in the aftermath of critical incidents cannot be underestimated and should be considered for wide-scale implementation as standard practice.

Theoretical Framework

Gaps in Research

There is a large amount of research that has been done on PTSD in general and approaches to PTSD treatment such as CISM, CISD, and various forms of psychological treatment. Jeffery Mitchell presents multiple studies on the effectiveness of CISM and CISD, the populations for which the methods were intended, and the implications for when the methods should be used. Bisson and Andrew (2009) examine the variety of other psychological treatment approaches that have been found to be effective on PTSD symptoms in the immediate aftermath of an event but have also proven to be effective on the long-term development of PTSD symptoms.

There has also been extensive research done in various populations such police officers, firefighters, emergency medical technicians, and paramedics. However, one population that has not been examined but yet remains at high risk for the development of PTSD and its symptoms are 9-1-1 dispatchers. There is only one study that was conducted that identified these individuals as being an at-risk population. The study was conducted in 2012 by Heather Pierce and Michele Lilly from Northern Illinois University. There have not been any studies conducted that examine whether or not there is a benefit to 9-1-1 dispatchers receiving CISM or CISD services in the aftermath of critical events. Furthermore, there is no study that examines whether or not members of this population that have symptoms of PTSD would benefit from long term psychological treatment methods such as CBT.

How Study Helps Fill Gaps

This study helped to fill the gaps present in the existing research in several ways. The study examined the various treatment methods that have been utilized for PTSD and particularly how treatment methods such as CISM and CISD have benefitted other public safety populations such as firefighters, police officers, and members of emergency medical services. Other long-term psychologically based treatment methods were examined to determine if they are viable options for the 9-1-1 dispatch population. The study presented a checklist that can be used in communications centers for supervisors and managers to be able identify those dispatchers that may be at risk for the development of PTSD symptoms. This checklist aimed to identify those individuals who may benefit from short-term crisis interventions such as CISM and CISD as well as more long-term treatment methods such as Cognitive Behavioral Therapy. The checklist was modeled after and built off accepted PTSD screening tools such as the Impact of Event Scale, the PTSD Checklist-Civilian, The National Women's Study PTSD Module, and Trauma Screening Questionnaire.

Summary of Theory or Model

This study encompassed and examined several theories within the field of public administration. The first theory examined was the theory of New Public Management. This approach became a major part of the field of Public Administration in the 1980s and 1990s. The theory places a great deal of emphasis on the economy, effective and efficient workings of not only the government but also its programs and services, and most importantly being able to deliver a higher level of quality service (Katsamunska, 2012, p. 78). This theory in its practical application focuses on management outcomes and performance management.

The second theory to be employed in this study is the theory of public-service motivation. This theory states that the way an individual chooses to respond to a given situation is based on public institutions and organizations (Perry, 2000, p. 471). It is also believed those employees who work in the public sector are prone to have more motivation than those that work in the private sector. The theory also attempts to identify individuals that are best fitted to work in the public setting as well as what the factors are to motivate those employees.

Justification for Theory or Model

The theory of New Public Management was selected for inclusion in this study because effectiveness within the communications center and an expectation for quality performance, then it leads to the assumption that there will be a level of commitment to the employees to ensure quality performance. In order to do this, there needs to be a commitment to making sure that the employees are receiving the help and services that they need in times of critical stress.

The theory of public-service motivation was chosen for this study because 9-1-1 dispatchers are employees of the public sector. In many cases, dispatchers are employees of the county or city in which they serve and because of that they fall under the rules, regulations, benefits, and services of that city or county government. This theory could help to identify which members of the community are best suited for working in the 9-1-1 communications profession and could also help to identify additional risk factors for the development of PTSD.

Statement of Hypothesis

This study examined several aspects of the hypothesis. First, the study reviewed the applicable literature in order to determine whether or not the treatment methods that have already been developed and are accepted within the field are effective or if there is an alternative that is available that is more appropriate. Second, the study inspected information obtained from the websites of the cities and counties within the Commonwealth of Pennsylvania to determine what mental health services are provided for county employees. Finally, applicable legislation such as the State of Pennsylvania Management Directive 505.22 (State Employee Assistance Program) the EMS Act, and the Federal Fire Prevention and Control Act were reviewed to determine whether or not the wording of these pieces of legislation were effective enough to provide needed services for 9-1-1 dispatchers or if there are gaps that need to be accounted for.

Methodology

Subjects and Setting

The subjects for this study were counties and major cities within the Commonwealth of Pennsylvania. Pennsylvania was selected as the main population for the study because it is the author's home state and therefore there is a level of familiarity with how the 9-1-1 and public safety systems work within that state. This study specifically evaluated the 9-1-1 communications and human resources departments for the cities and counties and investigated information such as call volumes, staffing levels, and employee assistance program benefits that are offered to employees. This population was selected because dispatchers are considered employees of the county or city for which they dispatch and therefore they are eligible the benefits and protections that are afforded to any other employee. There was not a specific

population that was isolated for this study but instead this study looked at the general data and the availability of specific benefit information.

Data Collection Technique

There are several categories of data that will be used to test the hypothesis. First, literature and existing research will be examined to determine the PTSD treatments that have been explored and are considered to be effective. The specific categories that will be looked at include Cognitive Behavioral Therapy, Exposure Therapy, and pharmacological approaches. Second, CISM and CISD will be particularly examined to determine their effectiveness for the identification and initial treatment of PTSD immediately following a critical incident. This information will be used to determine if CISM and CISD should be implemented profession-wide.

Third, information that is gathered from the websites of the counties and major cities within the Commonwealth of Pennsylvania will be examined to determine the availability of mental health and PTSD treatment services. This data will also be scrutinized to determine the transparency of the county and city governments as it relates to the availability of mental health and other employee assistance programs. The specific information that was gathered was population, number of 9-1-1dispatchers per shift, number of supervisors per shift, staffing level (total staff), call volume, published information regarding employee assistance programs, published employee handbook, and if the available mental health services were published within that handbook.

This study specifically inspected the 9-1-1 communications divisions and the human resources division within each county and city. For the 9-1-1 communications division, the

study was specifically looking for information pertaining to overall staffing levels, staffing levels per shift, and overall call volume. The reason for obtaining the call volume data was to be able to determine the workload that the dispatchers are expected to handle. The information pertaining to staffing levels was obtained to assist in determining the amount of people that are available to handle the city or county's call volume. The higher the number of dispatchers, the more easily and evenly the workload is able to be distributed.

The human resources departments of the county and city websites were studied specifically for information regarding the benefits offered to their employees. The benefits the study was specifically assessing were those that related to the Employee Assistance Program; which is the program responsible for the treatment of various conditions including those that are related to mental health. This data was studied to determine the transparency of the information as it relates to the services and benefits that are available to city and county employees.

Statistical Analysis

The analytic method utilized in this project was a qualitative descriptive study. The goal is to interpret the already established and accepted information and approaches and determine how they can best serve the 9-1-1 dispatch community. There are no specific statistical analyses that will be employed in this study to produce results but instead the data will be subjected to simple mathematical actions.

Limitations of the Study

There were a couple limitations to this study. First, the information for this study that pertained to call volume, staffing levels, and benefits was obtained from county and city websites. In several cases, the information that the websites contained had not been updated in

several years. Many of the websites did not have access to information on the communications center or the human resources department. This lack of information was both a blessing and a curse for this study. The advantage to this deficiency is that it helps to prove some of the arguments that are presented in this paper. The lack of credible information from which to draw credible conclusions however, was a distinct disadvantage.

Due to the limitations on time and access to data, there was an inability to contact dispatchers that were working in the communications centers. This led to an inability to be able to access information regarding the availability of benefit information for employees. If this information would have been available for collection it may have created more concrete results rather than just the conclusions that were made from the available data. A consideration for further research would be to see how the results of this study compare to results with data from dispatchers currently working in the field.

A final limitation was that the information collected was restricted to the Commonwealth of Pennsylvania. This was done in order to make the sample manageable due to the time constraints and because Pennsylvania is the home state of the author so there is a level of familiarity with the way that 9-1-1 centers are structured. A consideration for further research would be to compare results obtained from Pennsylvania to results obtained from the rest of the nation.

Results

The results of this study were broken into several categories and organized within an Excel spreadsheet (Figure1). The categories for which data was collected included the following: population, number of dispatchers per shift, number of supervisors per shift, staffing

level, call volume, published information regarding county offered Employee Assistance Program (EAP), a published employee handbook, and published information regarding mental health services within the employee handbook.

As indicated above, data for this study was obtained by examining the city and county websites of jurisdictions within the Commonwealth of Pennsylvania. There were 5 subjects that had no dispatch center listed. These subjects were the cities of Altoona, Harrisburg, Lancaster, Scranton, and State College. The lack of a listed dispatch center could mean that emergency services within that jurisdiction are dispatched by a larger communications center such as the county within which they are located. However, since there was no indication that this was the case, the researcher did not want to make an incorrect assumption and therefore have incomplete or incorrect data. Instead the decision was made to note this separately. There were 5 subjects whose websites indicated that the dispatching of emergency services was handled by the county in which they were located. Those cities were Erie, Lebanon, Norristown, Wilkes-Barre, and York. Because of this, the pertinent information for these jurisdictions was included with the data for the respective counties.

Number of Dispatchers per Shift

The first data category that was examined was the number of dispatchers that counties and cities had on an average shift. Out of the 80 total subjects that were examined, only 11 provided data. This equates to 13.75% of the total subjects providing data related to the number of dispatchers working on a given shift. The lowest number of dispatchers working on a shift was two in Clinton County and the highest number of dispatchers was 81in Philadelphia County which is also the same dispatch center for the City of Philadelphia.

Clinton County which has the lowest number of dispatchers per shift only has a population of 39,954 people but there was no data available regarding the yearly call volume for that particular jurisdiction. Philadelphia County and the City of Philadelphia which has the highest number of dispatchers per shift has a population of 1.5 million people per shift and a yearly call volume of almost 3 million calls. Philadelphia is unique in that the dispatching of emergency services is handled by two communications centers.

The rationale behind selecting this category of data was to explore the number of people that were available during an average shift in which the call volume can be dispersed. The more dispatchers that are available to take calls, the lower the overall amount of stress will be. If the overall stress is reduced, when calls that which have been identified as high stress are received then the dispatcher will have a greater chance of dealing with them in an appropriate manner.

Number of Supervisors per shift

The second category of data that was investigated was the number of supervisors that were working on an average shift. Of the 80 total subjects that were examined, only 9 were able to report data for this category, equating to 11.25% of data available to be tested. Out of the subjects that reported, the average number of supervisors per shift was one however, in Philadelphia, there were as many as 6 supervisors per shift split between 2 communications centers.

The reason for including the data related to the number of supervisors on a given shift was to determine how many people are available to oversee the dispatchers and be able to identify any dispatchers that may be in trouble. The greater the number of supervisors available, the more people that can identify those dispatchers that may be in trouble as well as identifying

potential problems. Another advantage to having a higher number of supervisors per shift is that the supervisors are able to back up the dispatchers which in turn will contribute to the reduction of overall stress within the communications center.

Staffing Level

The third category of data that was examined was the staffing levels of communications centers across the state. This data was selected in order to investigate how many total people are available to work at a given dispatch center at any given time. The larger the staff of a communications center, the fewer shifts that each dispatcher is responsible for working which in turn lessens the overall amount of stress. Having a larger staff also allows for greater availability of colleagues to assist with coping with the level of stress that is inherently present in a communications center because of the demands of the job.

Of the 80 total subjects examined, 20 reported data for this category which equates to 25% of available information. The highest staffing level was again present in Philadelphia which has 357 dispatchers and supervisors to cover 2 communications centers, while the lowest staffing level was Clinton County with 3 supervisors and 8 dispatchers.

Call Volume

The fourth category of data utilized was the total call volume that a given communications center was responsible for. This data was selected because if dispatchers are responsible for a higher call volume, there is higher likelihood that they will have to deal with calls that have been classified as high stress trigger events.

Of the 80 total subjects that were included in this study, 20 were able to report data related to their call volume. This is a data availability of 25%. Elk County had the lowest available call volume at 11,641 calls per year while Philadelphia had the highest call volume at just fewer than 3 million calls per year. This is not surprising considering how the populations of these areas compare. Elk County has a total population of 31, 479 people while the population of Philadelphia is 1.5 million people.

Published County Offered EAP

The fifth category of data investigated was whether the availability of published information regarding county offered EAP services. Only 13 of the 80 total subjects or 16.25% had published information related to whether or not they offered EAP services. EAP services are responsible for providing a variety of treatments for conditions ranging from substance abuse to mental health disorders.

Several counties identified a third party company that they use to facilitate their EAP services. The two major companies that were identified were Mazzitti & Sullivan EAP and the ESI Group. Other counties identified that they offered EAP services as part of their employee benefits package but did not identify if those services were handled within the county or by a third party service. Northampton County was unique in that they identified that they provided an employee benefits package but the information did not indicate if the provided benefits included EAP services. The City of Pittsburgh was also unique in that they are the only major city within the Commonwealth of Pennsylvania to specify the availability of EAP services within their employee benefits package.

Published Employee Handbook

The sixth category of data that was examined was whether or not the cities and counties published their employee handbooks on their website. Of the 80 total subjects, only four subjects, or 5% published this data. All of the subjects that chose to publish their handbooks on their website also chose to publish information related to their EAP services. These handbooks specified the rules and regulations that employees are expected to follow as well as describing the process the employer and employee need to follow should an issue arise. These processes also apply to issues that can arise when the employee is suffering from a mental health issues such as those that occur with PTSD.

Northampton County, which listed their employee benefits but did not specify whether or not they included mental health services, did not publish their employee handbook on the county website. The City of Pittsburgh which was the only city to indicate that they provided EAP services to their employees was also the only city to publish their employee handbook online.

Mental Health Services Published in the Handbook

The seventh and final category of data that was examined was whether or not the information describing the related to county provided mental health services for employees was published within the employee handbook. Four out of the 80 total subjects or 5% published information related to this category. All of the counties that had documented information regarding their mental health services within their employee handbooks, also published their employee handbooks as well as indicating that separately that the offered EAP services.

The City of Pittsburgh was the only major city within the state to indicate that they provided EAP services for their employees and also published their employee handbook.

Pittsburgh was also the only major city within the state to include information regarding mental health services within that handbook. Northampton County which was the only county that listed benefits but did not specify if mental health was included did not publish their employee handbook or indicate whether or not mental health services were included.

Discussion

PTSD Research and Identification

PTSD and PTSD-related research is not a new subject. The field has been studying the signs, symptoms, risk factors, precipitating events and other aspects of the disorder long before it was defined within the DSM. While the study of PTSD is not new, the subjects and populations that have been subjected to research are. For the last ten to fifteen years, there has been an enormous about of research focused on PTSD in returning soldiers and members of the public safety community.

In the aftermath of the September 11th terrorist attacks and the subsequent War on Terror these populations were considered to be prime research subjects. There has also been extensive research conducted on the development of PTSD and its symptoms in survivors of natural disasters. However, with all the research that has been done, the population that has not been studied at an extensive level is 9-1-1 dispatchers. There was one study that was conducted by Pierce and Lilly (2012) which identified PTSD as a problem in 9-1-1 dispatchers and also identified those call types which are considered to be high stress. These high stress calls are considered subsequent trigger events for the development of PTSD.

Where many other studies fall short is that they don't take into account external situational factors that contribute to a PTSD diagnosis. This is especially true of studies that

utilize public safety providers as the prime research population. Dispatchers don't just have to deal with high stress calls; they also have to deal with factors such as staffing shortages, mandatory overtime, a perceived lack of support from administrators and supervisors, and stresses of everyday life independent of their jobs in the communications center. All of these external factors play into the ability of the dispatcher to be able to handle high stress calls and how susceptible that dispatcher is to developing the symptoms associated with PTSD. There is an inherent amount of stress that is present simply because of the demands of being a 9-1-1 dispatcher. The National Emergency Communications Plan (Department of Homeland Security, 2014) does a respectable job of outlining the complexity of the multitude of responsibilities that are required of the 9-1-1 dispatcher. However, as vast and inclusive as this document is, it fails to take into account the outside stressors and mental health needs that is also an integral part of the dispatcher's job.

Acknowledgement of PTSD in Public Safety

Within the community of public safety professionals, there is a level of acknowledgement that the stress that is produced as a result of the demands of the job is a problem (Rynders, 1997). There is also a level of acknowledgement within the public safety field that mental health disorders are challenges that need to be handled appropriately or they have the potential to become career-ending situations. That being said, this acknowledgement of the stress level produced by working in the field of public safety cannot be limited to police officers, firefighters, and EMTs/Paramedics but instead it has to be extended to all members of the public safety profession including 9-1-1dispatchers. Even though there has been a great deal of advancement in identifying and treatment of PTSD and its symptoms within the public safety occupation, there is still an attitude of 'don't ask don't tell' that is widely held with members of

the profession. Even with this widely held attitude of not illuminating mental health disorders, there has been a gradual acceptance of treatment options over the last several years. This acknowledgement of the problem and acceptance of potential treatments needs to be extended into the 9-1-1 dispatch aspect of the larger public safety community.

Rynders (1997) also points out that in the past; it was believed that professional psychological intervention was not required because superiors within departments were available to members that were struggling with a mental health issue. It was also assumed that these department leaders would be able to provide management, leadership, support, and supervision. Throughout the advancements that have been made in the identifying and treating mental health disorders, it has been determined that most appropriate way to handle these types of issues within a department is to transfer their management to a neutral third party agency. This is the suggested approach for a multitude of reasons. One is so that the employee undergoing psychological care has the ability to express their thoughts and feelings regarding a situation in a manner that is comfortable and appropriate. This also allows for the employee to express themselves without the fear of retribution from co-workers or superiors.

Even with allowing a third party to handle the mental health care of employees, supervisors are still required to take an active role. Supervisors have to be able to identify dispatchers that are in need of immediate psychological help as well as dispatchers that may have received initial services but now are in need of more long-term treatment. Supervisors are considered to be first responders when it comes to identifying dispatchers who may be at risk for the developing PTSD or who may already be showing signs and symptoms of the disorder. Because of this expectation, supervisors have to have a level of knowledge and be provided with PTSD education so they are able to properly identify employees in need.

The Department of Homeland Security (Department of Homeland Security, 2014) has developed and implemented their 'See Something, Say Something' initiative for members of the public to be able to report suspicious activities to the proper authorities. Considering the success of that national campaign, one has to wonder if the same amount of attention and publicity within the 9-1-1 communications field, a push for the identification and reporting of dispatchers in mental health trouble would not be just as effective. This would alleviate supervisors from being solely responsible for identifying and reporting dispatchers in distress and instead would shift the responsibility to the department as a whole. For this type of a movement to be successful, is a level of required education. This is so colleagues know what to look for as well as creating an understanding that speaking out about mental health issues whether it be for themselves or their co-workers is acceptable.

The Department of Homeland Security in their National Emergency Communications Plan document (Department of Homeland Security, 2014) has encouraged a changing and evolving level of training and exercises. This is to coincide with the improvement of profession related technology. Considering this expectation for constant improvement, the question needs to be asked as to why the profession is not also improving and advancing training on the identification and treatment of mental health disorders.

PTSD Lessons from Public Administration

Mary Parker Follett (Mele, 2006) provides a great deal of insight as to what characteristics the ideal ethical manager would possess. Follett provides suggestions as to what characteristics a supervisor in the public sector should employ in order to be at the utmost service to their employees. Supervisors and managers should try to display elements of an ethical

manager in order to be successful. Supervisors need to be aware of and engaged with their employees in order to be able to identify those that may be in trouble or in need of extra help. The ideas and characteristics that Follett presents go along with the abolishing of the hush-hush culture that is present within 9-1-1 communications. However, even with the push for supervisors to be engaged with their employees, there is a fine line that needs to be upheld between being overly involved and not being involved enough.

Follett also presents the idea of fostering individual development within an employee. This idea centers around a specific and specialized style of management that focuses on a culture of educating individuals rather than placing blame on them. If this idea can be applied to PTSD research, education, and treatment, then there will be a level of openness to allow for discussion and recognition related to individuals in need of continued or specialized help.

CISM/CISD as Treatment for PTSD

There has been a great deal of debate over the years about the proper way to treat mental health disorders, particularly PTSD. There has also been a great amount of debate regarding the most effective way to treat PTSD in public safety providers. Furthermore, there has been a great deal of heated debate related to whether or not the accepted treatment methods utilized in the immediate aftermath of a high stress event are helpful or harmful. Two of the areas where the debate has been the greatest are the areas of mandatory required treatment and CISM/CISD.

When it comes to mandated treatment for PTSD and its symptoms, there has been a lot of debate but not a lot of research. Rynders (1997) points out that there are specific types of calls that are determined to be critical incidents are requires that police officers, firefighters, and emergency medical professionals undergo debriefing immediately following the event. It has

been determined that these call types that mandate immediate treatment for the responders in the field are the same type of calls that have been identified as risk factors or trigger events for PTSD and its symptoms in 9-1-1 dispatchers. This leads to the question why we are not following through with mandating the same type of treatment for 9-1-1 dispatchers that we are for field responders.

The second area of debate has to do with CISM/CISD. For a long time there has been discussion within the field if the tactics employed by those that are trained in and utilize the practices of CISM and CISD are helpful or harmful. This debate however may be misguided. Many of the negative results identified in CISM/CISD research are because CISM and CISD methods are being used in incorrect populations. These techniques were developed to be used specifically in public safety professionals and while the principles can be applied to other populations, their use is not recommended and the methods need to be modified appropriately. Rynders (1997) tactfully points out that in order for CISM to have the support that it needs to be effective, there has to be consistency and correctness on how the principles are utilized. If these are not integrated and accepted as standard practice in the profession then how can they be expected to do any sort of good for the dispatcher? Without making these principles part of standard practice and making their acceptance and availability known, the dispatchers who need the services most won't know that they exist.

There needs to be less debate regarding the effectiveness of CISM and CISD. Instead there needs to be an opening of the lines of communication as to how the principles of the treatment can help the dispatcher. Along with acknowledging that PTSD is a problem in 9-1-1 communications, there needs to be the removal of the stigma that is associated with the disorder. There is an established culture that dictates that a person asking for mental health help is weak.

The profession needs to shift towards a culture of acceptance and understanding that there are troubles but that there are also programs and services that can provide treatment. CISM and CISD need to be used as tools in conjunction with the approved and accepted psychological treatment methods to determine if short term care in the immediate aftermath of an event will be sufficient or if the individual is in need of more long-term focused care such as cognitive-behavioral therapy, exposure therapy, etc.

As Rynders (1997) points out, if CISM or CISD are chosen as appropriate treatment approaches for a particular individual or group of individuals then the methods are best conducted by individuals that are not only impartial but are also specially trained to be able to conduct these sessions. The only way that these approaches are going to be effective is if the sessions are conducted in the manner in which they were designed and for populations in which they were intended.

Psychological Treatment for PTSD

Bisson and Andrew (2009) present a comprehensive review of the psychologically based treatments for PTSD and how effective they are considered to be. The researchers looked at individual trauma focused cognitive behavioral therapy, eye movement desensitization and reprocessing, stress management, and group cognitive behavioral therapy to determine if they were effective treatment methods for the disorder. It was discovered in the process of the study that they were all effective methods to treat PTSD but that individual TFCBT and EMDR were the most effective treatment methods. These methods were also shown to have a positive impact on PTSD symptoms in the months following a traumatic experience.

The importance of this research is that it shows that there is not a single approach that has proven to be effective in the treatment of PTSD and its symptoms. Instead, a combination approach needs to be taken. A process of trial and error may be required in order to determine which treatment method is the most appropriate. The fact that these treatments have been shown to be effective long term is promising. This indicates that with the right combination of treatment provided by a trained professional, there is hope that the affected individual has hope of meaningful long-term recovery.

Pertinent Legislation

The pertinent legislation that was examined creates a good starting point for what could be the foundation for future legislation governing 9-1- 1communications. There is no research that was found to solely govern and oversee 9-1-1 communications but there are fragments of existing legislation in other public safety domains that covers portions of 9-1-1 communication regulation. The EMS Act legislation covers a great deal of topics that could be modified in order to be applicable to 9-1-1 communications but the one area that is not covered is mental health disorders.

The Pennsylvania EMS Act of 2009 recognizes the importance of having coordinated and effective emergency services. The legislation also recognizes that emergency services need to be able to adapt and evolve in order to meet the ever changing needs of the community in which the service operates. The question that arises out of this realization is that if EMS and other public safety organizations are expected to continuously adapt and overcome as new technology and information arises then why 9-1-1 communications is not doing the same thing especially when it comes to the topic of mental health disorders. Furthermore, the legislation calls for a

community-based approach for the promotion of health and well-being. If this same drive was applied to communications centers then progress could be made on tackling the issues of mental health disorders not only within dispatchers but also within 9-1-1 communications centers as a whole. Finally, EMS is acknowledged, promoted, and supported as an essential public safety entity but the same recognition is not applied to dispatchers. Dispatchers are considered to be the eyes and ears for EMS before they arrive on a scene and end up being the guiding light to the responders. If even a partial level of the same promotion and support could be given to dispatchers, there is the potential of tackling the growing problem of PTSD and other mental health disorders.

The Pennsylvania EMS Act of 2009 establishes system of peer review in which providers in the field are able to review and critique each other, provide constructive feedback and criticism, and provide suggestions for improvement. This peer review system also allows for providers in the field to be able to bring to the attention of their superiors, comments and concerns regarding fellow providers that may be in need of help or may be a danger to themselves, their patients, or their co-workers. This peer review system however is not only to be used by field providers. The system also can be utilized by managers and supervisors so they are able to critique and provide constructive criticism to their subordinates. Similarly, field users are able to identify to upper management those individuals that are in need of mental health help. Through this system supervisors and managers are also able to identify those subordinates that may require treatment services. Currently, there is no published information as to whether or not this type of system exists within 9-1-1 communications and the information as to how this system exactly works within the EMS field is limited. It can be deduced from the limited

information that is available, that a similar system would be of benefit to 9-1-1 centers and should be considered as a possible option.

The EMS Act also includes specifications for how peer reviews can be done in a committee format. When dealing with issues related to mental health, a committee format may be preferred. In developing this type of system, the responsibility is taken off a single supervisor (in the absence of an immediate and time sensitive threat) and allows for a panel to be able to review the situation and come up with a suitable solution that is of benefit to the employee and the organization. A similar system should be considered for 9-1-1 communications. By utilizing this type of review system, all supervisors and managers no matter what platoons they are assigned to work are aware of the situations and circumstances a dispatcher may be dealing with, may be able to better assess the situation, and therefore provide a suitable solution for the dispatcher and the employer. This format also allows for there to be an equal spreading of the responsibility so that one single supervisor or manager is not solely responsible for the situation which also lessens the fear of the employee for retaliation.

Within the peer review process that the EMS Act describes, there is built-in protection. The Peer Review Protection Act preserves the integrity and confidentiality of the peer review process and ensures that the same protections and expectations are present in that process as they are in other kinds of legal proceedings. The precedent has been set and the framework has been laid for a similar process to take place in other arenas of public safety, namely 9-1-1 communications. Considering this process has been previously established, it is now simply a matter of modification to make sure that the established process fits 9-1-1 communications in a way that is effective and efficient.

EMS organizations have the State Advisory Board that is able to guide them on a variety of situations as well as aiding in the development of pertinent policies for the profession. The field of 9-1-1 communications has APCO to be able to help in the development of policies and procedures as well as upholding certification and training standards. Where APCO, like most other professional oversight organizations, falls short is it does not meet all the needs of the dispatcher. There is minimal training on PTSD in the 9-1-1 dispatcher and the majority of that is limited to PTSD recognition. There is no literature that was found in relation to PTSD resources that dispatchers, managers, supervisors, or administrators would be able to utilize in their communications centers to be able to ensure that dispatchers have access to mental health services should they need them.

The EMS Act also has a section regarding how EMSOF funding can be used in areas such as public education programs, information, health promotion, and prevention as it relates to EMS. There was nothing found in the research to indicate that a similar funding source exists for 9-1-1 communications centers and it is assumed that since most communications centers are controlled by the county in which they serve, the county budget is also their primary source of funding. The question then needs to be asked if these communications centers should be creating line items within their budgets to be able to cover similar programs for which the EMSOF funds cover or if there is another funding source that can be utilized for such programs. EMSOF funds can also be used to collect and analyze data related to the establishment of quality assurance programs and processes. Implementation of a similar system may be useful in order to be able to identify problem areas within the communications center as it relates to mental health identification and treatment.

The Title 28 legislation which is an expansion of the EMS Act of 2009 is unique in its field in that it is the only legislation that was found that covers the initial certification and subsequent re-certification requirements for EMS dispatchers. The problem that comes with this legislation is that it only covers those dispatchers that operate for a privately owned EMS service and does not expand to those dispatchers that operate for a county owned agency. Where the shortfall comes in is that dispatchers that are certified under the same certifying agency (i.e APCO) but work for different entities may not be held to the same standard. If there was a piece or pieces of legislation that governed 9-1-1 dispatchers than some of these discrepancies would be rectified and there would be a more efficient process for establishing and expanding needed programs.

The Title 28 legislation also looks at how the state reduces instances of morbidity and mortality when the EMS system is involved. The legislation also describes the process and procedures that need to take place in order for the state to be able to collect the information that is pertinent to this category. It can be concluded that there needs to be a similar process put in place in order to be able to collect data related morbidity and mortality as well as burnout related to PTSD in the 9-1-1 dispatcher. The Title 28 legislation also goes on to describe the appropriate use of EMSOF funding for programs that are related to health promotion for the wellness and safety of the EMS workforce. This indicates that there is a precedence that has been set in a similar field of public safety and it can be concluded that a modification can and should take place so that the already established principles can be applied to 9-1-1 communications.

The EMS feasibility study is the only research that was found that specifically spells out the impact that PTSD can have on a field provider. It was interesting to see how this factor compared in prevalence and occurrence to other factors that are considered to be normal hazards

of the job such as assault injuries, back injuries, and needle sticks. This report brings to light that PTSD in the provider is a real issue that needs to be dealt with quickly and efficiently but it also brings attention to the fact that if PTSD can be that prevalent in field providers those same factors can lead to PTSD in the 9-1-1 dispatcher. It was also noted that the same factors that lead to burnout, stress, and put field providers at a higher risk for PTSD development are also the same factors that can lead to burnout in a 9-1-1 dispatcher and can also lessen the dispatcher's ability to deal with the high stress environment in which they work on a regular basis.

The federal fire legislation allows for the awarding of grants, contracts and funding in order for members of the fire service to be able to introduce and encourage the acceptance of new technologies, ideas, and education resources to be able to better advance the profession. Both EMS and the fire service have provisions in their respective pieces of legislation to be able to advance education and technology and in turn advance their respective professions. The question needs to be asked as to why similar provisions cannot be expanded to the field of emergency communications so that similar advancements can be made in that field as well.

Federal fire legislation also allows for research and data collection specifically related to the occupational hazards that are faced by firefighters in the execution of their duties. PTSD can be considered an occupational hazard not only to firefighters but to all professionals within the public safety community including 9-1-1 dispatchers. The advantage that comes with this piece of legislation is that similar to the EMS legislation in Pennsylvania, there is a process that is spelled out that regulates what information is collected and how it is collected. The federal fire legislation also goes on to indicate the requirement that members of the federal fire administration compile and submit an annual report that is subject to review by the federal government. It is specified that this report can and should include recommendations for

additional legislation as deemed appropriate. It seems that in this ever-changing and ever-stressful world that a provision that covers PTSD in the public safety provider, particularly the 9-1-1 dispatcher, be included for future consideration.

Where to Go From Here

The only place that the field of PTSD research can go from here is up. There have been substantial amounts of improvement and advancement that have been made in the field of PTSD research since its beginnings following the Vietnam War. The research has discovered effective treatment methods, proper medications, and effective legislation in order to be sure that those individuals that suffer from PTSD and its symptoms can not only learn how to cope and deal with them but can also have hopes at a meaningful long-term recovery.

The field of public safety has come a long way as well in acknowledging that PTSD is not only a problem for providers in the field but it is also an occupational hazard that can lead to burnout. The fire service and EMS have enacted legislation that govern the major operational aspects of the service but the applicable legislation fails to specify how the respective services deal with the issue of PTSD in their providers. There is no specific plan of action as to how upper management of the respective services is going to deal with those providers that develop the symptoms of PTSD throughout the course of their job duties. Some services have tried to implement mandatory protocols as it relates to CISM/CISD in the immediate aftermath of a critical incident but there is a lack of consistent and up to date research to indicate if this approach has actually proven to be effective.

Emergency communications is in an even tougher spot than other public safety fields. Emergency communications has to deal with an ever-growing amount of stress as well as ever-

growing job demands from both managers and field providers and a lack of support for their needs especially as it relates to their mental health. The other big challenge that 9-1-1 communications has to deal with is a lack of legislation that is able to govern them. Emergency dispatchers are not governed under the same legislation as other public safety providers and because of that, if a provision is made within legislation, there is a good chance that the benefits and protections that the legislation provides will not extend to 9-1-1 dispatchers. There are a few suggestions for how the fields of public safety and 9-1-1 communications can improve in order to be sure that future advancements of PTSD research in the field can be applied in the most efficient and effective ways possible.

The first suggestion for improvement is that emergency communications needs to be included in public safety legislation and regulation. This is so that when improvements and advancements are made in public safety legislation especially as it relates to PTSD, the improvements and advancements can be applied to 9-1-1 dispatchers as well. Along those same lines, there needs to be legislation developed that can specifically deal with the uniqueness of 9-1-1 communications and can oversee not only normal processes, procedures, and protocols but can also provide insight and guidance for how the profession should deal with those dispatchers that suffer from PTSD and its symptoms.

The second suggestion for improvement is that there needs to be a greater level of transparency within the field of emergency communications. As was seen in the results from the data collection, there was very little information available as to the availability of mental health services for county employees even though there is a state mandate from the Governor that oversees it. The argument can be made that if the general public cannot find the information, there is a chance that the employee does not know about the services either. The ability to have

access regarding mental health services is importance because some employees do not want to access the information at work for fear of retribution from supervisors or managers. Making the information readily available and having a level of transparency is only going to benefit the employees and employer alike.

The third suggestion for improvement goes along the same line as transparency. There needs to be a level of acceptance within the emergency communications profession that PTSD is a problem and it is something that needs to be dealt with. If a dispatcher has PTSD or any of its related symptoms, it does not make that dispatcher weak nor does it make that dispatcher any less of a professional. Instead it indicates that the dispatcher is affected by something that has happened within the confines of their job and if the situation is not dealt with in an effective and timely manner then the dispatcher runs the risk of having those symptoms bleed over into other aspects of their life.

The next suggestion for improvement is that 9-1- 1 dispatch centers need to develop a system to be able to identify PTSD in a dispatcher and have a process in place to be able to provide treatment in the immediate aftermath of an incident as well as a process for referral of more long term treatment should the situation warrant that approach. There needs to be a system of education of what PTSD and its symptoms looks like as well as education about what to do if someone thinks that a co-worker is in need of immediate psychological help. This education should be done on at least a yearly basis, if not more frequently and should also be included as part of the orientation process for new hires. Along with that there should be education about what the process is for the Employee Assistance Program as well as what the indications are for referral to that program. Again this is something that should not only be part of new hire orientation but should also be reviewed on an annual basis.

There needs to be a level of responsibility that should be placed on managers and supervisors to be able to identify those dispatchers that are in need of mental health services. Supervisors need to develop a relationship with their subordinates in which they are able to quickly identify those dispatchers that have been through an especially difficult situation and are at risk for the development of PTSD and its related symptoms. Supervisors should also promote within their dispatch centers that the use of CISM and CISD is acceptable and that it is a service that is of benefit to all the employees. Supervisors and managers also need to work with their respective administrations to develop a standard accepted process for how they are going to approach a particularly stressful situation and screen dispatchers for risk factors for PTSD development. Supervisors and managers also need to work with their administrations to develop a referral process for how they are going to identify those individuals that are in need of more long-term focused care and then there needs to be a process in place for how they are going to refer the employee for that treatment. In order to make ensure that referrals for mental health are done with the best interest of the employee in mind and not done out of retaliation or vindictiveness, counties should consider using a peer review and referral process. This system would allow employees to make suggestions for referrals but would also create a panel that could review the individual cases and make a collective suggestion for the best course of action for the employee.

The final suggestion for improvement that will be made is the utilization of a risk assessment checklist that is tailored specifically to the emergency communications profession so that it could adequately identify those 9-1-1 dispatchers that are at risk and in need of more specialized help. A sample of what the checklist realistically should look like is described in Figure 2. This checklist would be built off of the checklists that are already in use in the field of

PTSD identification and treatment and have proven to be effective. Where this checklist is different is that it is specifically tailored to and designed for being able to identify the presence of PTSD and its symptoms in the 9-1-1 dispatcher. The hope is that this checklist or something similar to it can be part of the standard practice in identification of PTSD and its symptoms in the 9-1-1 dispatchers.

Conclusion

PTSD identification and research has come a particularly long way since the Vietnam War era when it was first identified as an issue and even greater advancement has been made since it was included in the DSM as a diagnosable mental health disorder. In the years that have followed, PTSD has been studied and identified in a variety of populations including soldiers returning from war, survivors of natural disasters and terrorist events, and public safety responders. In most of these populations, risk factors have been identified and treatment plans have been developed so that these individuals are able to make meaningful recoveries and return to some resemblance of a normal life.

Even with all of the advancements that have been made, there is still a lack of legislation, transparency, and establishment of protocols for referral and treatment when it comes to 9-1-1 dispatchers. There is still a long way to go but with a continued commitment to research and advancement there is substantial headway that can be made. It is owed to the dispatchers in the field that have struggled with PTSD and its symptoms for any period of time to be able to have a plan of action for how to return to something that resembles normal as well as having the protections that come with applicable legislation.

From all the research and literature review that was done, it can be concluded that there is no singular straight-forward approach that can be taken when it comes to treating PTSD in the 9-1-1 dispatcher. There is no one treatment that has been proven to be more effective or more beneficial to the patient and because of that, none of the treatments that have been proven to be effective can be discounted. It can also be concluded that the best approach to identifying and treating PTSD in the 9-1-1 dispatcher is to have a multi-faceted approach. The most efficient approach would be to do CISM/CISD in the immediate aftermath of any incident that is determined to be critical or high stress, complete a risk assessment checklist on all dispatchers that were involved in the incident in the immediate aftermath of the incident and then at 3, 6, 9, and 12 months following the incident, and finally refer those dispatchers that are determined to be in need of specialized long-term treatment through the EAP process.

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Figure 1: City and County Information

Name of City/County	Population	# of Dispatchers per shift	# of Supervisors per shift	Staffing Level
Adams County	101,546	unknown	unknown	unknown
Allegheny County	1.232 mill	unknown	unknown	251 telecommunicators
Armstrong County	68,107	unknown	unknown	4 sup, 4 FT disp, 5 PT disp
Beaver County	170,115	unknown	unknown	unknown
Bedford County	49,055	unknown	unknown	unknown
Berks County	413,521	varies	one (2 at the most)	unknown
Blair County	126,314	unknown	unknown	unknown
Bradford County	62,316	unknown	unknown	1 sup, 8 FT disp, 3PT disp
Bucks County	626,976	unknown	unknown	125 (sup and disp)
Butler County	185,476	unknown	unknown	unknown
Cambria County	140,499	seven	one	unknown
Cameron County	4,886	unknown	unknown	unknown
Carbon County	64,786	unknown	unknown	unknown
Centre County	155,403	unknown	unknown	unknown
Chester County	509,468	twenty-one	one	80 FT disp, 18 PT disp
City of Allentown	118,577	unknown	unknown	unknown
City of Altoona	45,796	No 9-1-1 center listed		
City of Bethlehem	75,018	unknown	unknown	unknown
City of Erie	100,671	Dispatched by the County of Erie		
City of Harrisburg	49,188	No 9-1-1 center listed		
City of Lancaster	59,325	No 9-1-1 center listed		
City of Lebanon	25,524	Dispatched by Lebanon County		
City of Norristown	34,432	Dispatched by Montgomery County		
City of Philadelphia	1.5 mill	eighty-one	six	357 (sup & disp)

City of Pittsburgh	305,842	unknown	unknown	unknown
City of Reading	87,893	unknown	unknown	unknown
City of Scranton	75,806	No 9-1-1 center listed		
City of State College	41,757	No 9-1-1 center listed		
City of Wilkes-Barre	41,108	Disatched by Luzerne County		
City of York	43,935	Dispatched by York County		
Clarion County	39,155	unknown	unknown	unknown
Clearfield County	81,174	five	unknown	25 disp

Name of City/ County	Call Volume	County offered EAP (published)	Employee handbook published	MH services in Handbook
Adams County	228,014	Not published	Not published	Not published
Allegheny County	1,314,721	Yes	Not published	Not published
Armstrong County	unknown	Not published	Not published	Not published
Beaver County	unknown	Not published	Not published	Not published
Bedford County	unknown	Not published	Not published	Not published
Berks County	unknown	Yes	Not published	Not published
Blair County	unknown	Not published	Not published	Not published
Bradford County	54,000	Not published	Not published	Not published
Bucks County	941,529	Not published	Not published	Not published
Butler County	unknown	Not published	Not published	Not published
Cambria County	332,000	Yes	Not published	Not published
Cameron County	unknown	Not published	Not published	Not published
Carbon County	unknown	Not published	Not published	Not published
Centre County	unknown	Yes-Mazzitti and Sullivan EAP	Not published	Not published
Chester County	328,500	Yes	Not published	Not published
City of Allentown	158,660	Not published	Not published	Not published
City of Altoona	No info	Not published	Not published	Not published
City of Bethlehem	200,000	Not published	Not published	Not published
City of Erie	County	Not published	Not published	Not published
City of Harrisburg	No info	Not published	Not published	Not published
City of Lancaster	No info	Not published	Not published	Not published
City of Lebanon	County	Not published	Not published	Not published
City of Norristown	County	Not published	Not published	Not published
City of Philadelphia	2,998,840	Not published	Not published	Not published
City of Pittsburgh	unknown	Yes	Yes	Yes

City of Reading	unknown	Not published	Not published	Not published
City of Scranton	No info	Not published	Not published	Not published
City of State College	No info	Not published	Not published	Not published
City of Wilkes-Barre	County	Not published	Not published	Not published
City of York	County	Not published	Not published	Not published
Clarion County	unknown	Not published	Not published	Not published
Clearfield County	60,000	Not published	Not published	Not published

Name of City/County	Population	# of Dispatchers per shift	# of Supervisors per shift	Staffing Level
Clinton County	39,954	2 (minimum)	one	3 sup, 8 disp
Columbia County	66,797	unknown	unknown	unknown
Crawford County	87,376	unknown	unknown	4 sup, 7 FT disp, 2 PT disp
Cumberland County	241,212	unknown	unknown	4 sup, unknown disp
Dauphin County	270,937	unknown	unknown	4 sup, unknown disp
Delaware County	561,973	unknown	unknown	unknown
Elk County	31,479	unknown	unknown	unknown
Erie County	280,294	unknown	unknown	unknown
Fayette County	134,999	unknown	unknown	unknown
Forest County	7,631	unknown	unknown	unknown
Franklin County	152,085	unknown	unknown	19 FT disp, 11 PT disp
Fulton County	14,670	unknown	unknown	unknown
Greene County	37,838	unknown	unknown	1 sup, 13 disp
Huntingdon County	45,694	unknown	unknown	unknown
Indiana County	87,745	unknown	unknown	unknown
Jefferson County	44,966	unknown	unknown	unknown
Juniata County	24,768	unknown	unknown	unknown
Lackawanna County	213,931	unknown	unknown	unknown
Lancaster County	529,600	unknown	unknown	unknown
Lawrence County	89,333	unknown	unknown	unknown
Lebanon County	135,486	unknown	unknown	unknown
Lehigh County	355,092	unknown	unknown	unknown
Luzerne County	320,103	unknown	unknown	unknown
Lycoming County	116,754	four	one	unknown
McKean County	42,979	unknown	unknown	10 FT, 5 PT disp
Mercer County	115,195	unknown	unknown	unknown
Mifflin County	46,616	unknown	unknown	unknown
Monroe County	167,148	up to 7 per shift	unknown	5 sup, 35 FT disp, 3 PT disp

Montgomery County	812,376	unknown	unknown	unknown
Northampton County	299,791	unknown	unknown	unknown
Northumberland County	94,076	unknown	unknown	unknown
Perry County	45,562	unknown	unknown	unknown

Name of City/ County	Call Volume	County offered EAP (published)	Employee handbook published	MH services in Handbook
Clinton County	unknown	Not published	Not published	Not published
Columbia County	unknown	Not published	Not published	Not published
Crawford County	unknown	Not published	Not published	Not published
Cumberland County	unknown	Yes	Not published	Not published
Dauphin County	unknown	Not published	Not published	Not published
Delaware County	unknown	Not published	Not published	Not published
Elk County	11,641	Not published	Not published	Not published
Erie County	unknown	Yes-Mazzitti and Sullivan EAP	Yes	Yes
Fayette County	unknown	Yes	Not published	Not published
Forest County	unknown	Not published	Not published	Not published
Franklin County	68,000	Not published	Not published	Not published
Fulton County	unknown	Not published	Not published	Not published
Greene County	unknown	Yes-Mazzitti and Sullivan EAP	Yes	Yes
Huntingdon County	unknown	Not published	Not published	Not published
Indiana County	unknown	Not published	Not published	Not published
Jefferson County	unknown	Not published	Not published	Not published
Juniata County	unknown	Not published	Not published	Not published
Lackawanna County	unknown	Not published	Not published	Not published
Lancaster County	407,077	Not published	Not published	Not published
Lawrence County	unknown	Not published	Not published	Not published
Lebanon County	unknown	Not published	Not published	Not published
Lehigh County	unknown	Not published	Not published	Not published
Luzerne County	474,500	Yes-Mazzitti and Sullivan EAP	Yes	Yes
Lycoming County	unknown	Not published	Not published	Not published
McKean County	unknown	Yes-ESI Group	Not published	Not published
Mercer County	140,750	Not published	Not published	Not published
Mifflin County	unknown	Not published	Not published	Not published
Monroe County	unknown	Not published	Not published	Not published
Montgomery County	unknown	Not published	Not published	Not published
Northampton County	unknown	Not listed with benefits	Not published	Not published
Northumberland County	49,260	Not published	Not published	Not published
Perry County	unknown	Not published	Not published	Not published

Name of City/County	**Population**	**# of Dispatchers per shift**	**# of Supervisors per shift**	**Staffing Level**
Philadelphia County	1.5 mill	eighty-one	six	357 (sup & disp)
Pike County	56,591	unknown	unknown	unknown
Potter County	17,497	unknown	unknown	unknown
Schuylkill County	146,920	unknown	unknown	unknown
Snyder County	39,865	unknown	unknown	unknown
Somerset County	76,520	unknown	unknown	unknown
Susquehanna County	42,286	unknown	unknown	unknown
Tioga County	42,463	unknown	unknown	unknown
Union County	44,867	unknown	unknown	unknown
Venango County	53,907	unknown	unknown	13 disp
Warren County	40,885	unknown	unknown	unknown
Washington County	208,206	nine (2 call taking, 7 dispatch)	one	unknown
Wayne County	51,548	unknown	unknown	9 FT & 4 PT disp
Westmoreland County	362,437	nine	one	5 sup, 48 disp, 12 temp dis
Wyoming County	28,003	unknown	unknown	unknown
York County	438,965	unknown	unknown	8 sup, 71 FT, 10 PT disp

Name of City/ County	**Call Volume**	**County offered EAP (published)**	**Employee handbook published**	**MH services in Handbook**
Philadelphia County	2,998,840	Not published	Not published	Not published
Pike County	unknown	Not published	Not published	Not published
Potter County	unknown	Not published	Not published	Not published
Schuylkill County	unknown	Not published	Not published	Not published
Snyder County	unknown	Yes- Mazzitti & Sullivan EAP	Not published	Not published
Somerset County	29,289	Not published	Not published	Not published
Susquehanna County	unknown	Not published	Not published	Not published
Tioga County	unknown	Not published	Not published	Not published
Union County	unknown	Not published	Not published	Not published
Venango County	unknown	Not published	Not published	Not published
Warren County	unknown	Not published	Not published	Not published
Washington County	146,000	Not published	Not published	Not published
Wayne County	unknown	Not published	Not published	Not published
Westmoreland County	unknown	Not published	Not published	Not published
Wyoming County	unknown	Not published	Not published	Not published
York County	400,000	Not published	Not published	Not published

Figure 2
PTSD Risk Assessment Checklist

Demographic Information

1. Age _____
2. Gender (Circle One) Male Female
3. Has the individual experienced any of the following call types in the course of their job in the last 30 days? (Circle all that apply)
    a. Unexpected injury or death of a child
    b. Suicidal caller
    c. Officer involved shooting
    d. Unexpected death of an adult
    e. Homicide
    f. Motor Vehicle Accident involving serious injury or fatality
4. Does the individual have any previous history of psychiatric disorder? (Circle One)
    Yes No
    If yes, describe_____
5. Does the individual have any family history of psychiatric disorder? (Circle One)
    Yes No
    If yes, describe_____
6. Does the individual have any pervious history of trauma?
    Yes No
    If yes, describe_____

Event Specific Information

7. Does the individual have upsetting thought or memories about the event that seem to occur without their control? (Circle One)
    Yes No
8. Does the individual have feelings as if the event is happening again? (Circle One)
    Yes No
9. Does the individual feel upset when remembering the event? (Circle One)
    Yes No
10. Does the individual have any of the following body reactions when remembering the event? (Circle all that apply)
    a. Fast heartbeat
    b. Sweating
    c. Dizziness
    d. Churning/ upset stomach
11. Does the individual have trouble falling asleep or staying asleep?
    Yes No

12. Does the individual have outburst of anger or irritability?
    Yes No
13. Does the individual have difficulty concentrating?
    Yes No
14. Does the individual display a heightened awareness of potential dangers to themselves or others?
    Yes No
15. Does the individual display characteristics of being jumpy or startled unexpectedly?
    Yes No

If the individual has experienced any of the critical call types that are described in Question 3, has two of the risk factors described in Questions 4-6, and has indicated yes on at least 4 of the 9 event specific questions, the consideration needs to be made to refer the individual for specialized long-term treatment.

List of Acronyms

PTSD- Post Traumatic Stress Disorder

APCO- Association of Public Safety Communications Officials

FDNY- Fire Department of New York

CISM- Critical Incident Stress Management

CISD- Critical Incident Stress Debriefing

TFCBT- Trauma Focused Cognitive Behavioral Therapy

EMDR- Eye Movement Desensitization and Reprocessing

CBT- Cognitive Behavioral Therapy

ASD- Acute Stress Disorder

EAP- Employee Assistance Program

EMS- Emergency Medical Services