

# Suicide in the Fire and Emergency Services

Adopting a Proactive Approach to Behavioral Health Awareness and Suicide Prevention



Supporting Those Who Serve

# Acknowledgements

## **Acknowledgements**

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## **Firefighter Behavioral Health Alliance**

Firefighter Behavioral Health Alliance (FBHA) is a 501(c)(3) nonprofit organization established to directly educate firefighters, emergency medical personnel, and their families about behavioral health issues such as depression, PTSD, anxiety, addictions, and firefighter suicides. The mission of the FBHA is to collaborate, develop, and implement behavioral health awareness, prevention, intervention, and post-crisis strategies to provide firefighters with an easily accessible and confidential source of information. Using best practices and protocols, FBHA promotes awareness, education and training, communication, integration of services, resources, and support to the men and women of the fire and emergency medical services.

## **HOPE Health and Research Institute**

HOPE Health Research Institute (HRI) has done extensive research on fire service health and wellness issues. HOPE HRI Scientists are experts in methodology and statistical analysis who are keenly aware of the special needs of scientists and academicians. They have conducted research in areas such as tobacco control, physical activity and fitness, obesity epidemiology and treatment, dietary interventions, community health interventions, and cardiovascular outcomes.



*Supporting Those Who Serve*

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# Introduction

## Introduction

The heroism America witnessed on September 11, 2001, caused many to reflect on the first responders in their communities that selflessly give their energy, and sometimes their lives, to help and protect on a daily basis. Although most calls for service are not of such mass destruction, the fact is that firefighters routinely risk their lives to help others. The role of modern-day firefighters has changed dramatically over the years. Once organized mainly around fire suppression activities, calls now include a variety of crises such as mental health incidents, family abuse, shootings, traffic accidents, and more.

Experiencing a traumatic event can be overwhelming for anyone. Stress reactions activate both physical and mental defense systems. Some of these reactions are temporary while others are long lasting. The impacts of work-related stressors manifest differently in each firefighter, producing different psychological responses. For a firefighter, prolonged or repeated exposure to such events can be debilitating and increase the risk of behavioral health issues and/or suicide.

Firefighters are faced with emotional needs that are very unique, and many are struggling from work-related stress. When symptoms occur, a firefighter needs a support system in place that is readily accessible from someone who is qualified and truly understands his or her circumstances.

Behavioral health is a very broad term used to describe actions of human beings during situations as related to the mind and body. In this report, behavioral health will be used to understand or define the actions of firefighters and emergency personnel as related to depression, post-traumatic stress, anxiety, addictions, suicidal ideations, and other human behaviors.

This report looks at the impact of ignoring mental health within the fire service, the challenges of breaking the stigma associated with mental health issues, firefighter suicide prevention awareness, the effects of post-traumatic stress disorder (PTSD), and the importance of addressing the psychological health risks facing firefighters that can have dam-



aging effects on their personal relationships. It is designed to be a viable resource for emergency responders as well as a resource for concerned family, friends, and peers seeking to understand and support those struggling with behavioral health challenges. The report also includes data analysis from a survey distributed online by the National Volunteer Fire Council (NVFC). The survey measured behavioral health issues facing firefighters and emergency responders, and the data collected was analyzed by HOPE Health Research Institute. Detailed analysis can be found in the Appendix.

***This guide is not intended to diagnosis individuals. Please seek appropriate medical or psychological care to address emotional or behavioral health issues. This report is solely for informational and educational purposes.***

# Chapter 1

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## Changing the Culture



The public often uses words such as bravery, respect, dedication, and self-sacrifice to describe members of the fire and emergency services. Yet, what happens when one of the bravest falls into the depths of darkness from which they feel there is no return?

When it comes to behavioral health in the fire service, it is important for the entire fire service community to work as a team. National organizations such as the National Fallen Firefighters Foundation, the National Fire Academy, the United States Fire Administration, and the National Volunteer Fire Council have addressed behavioral health issues by creating valuable resources and programs. Additionally, the National Fire Protection Association has set standards focusing on health issues for fire chiefs, firefighters, counselors, chaplains, and Critical Incident Stress Management (CISM) teams. Behavioral health affects the entire fire service, from metropolitan career firefighters to rural volunteers. Every member should be focused on the mutual goals of serving those in need.

The fire service spends a tremendous amount of time, training, and money developing safety procedures for emergency events. Firefighters and emergency personnel train to ensure safety in areas such as driving, seatbelt use, two-in two-out, on-deck, Blue Card Command, Incident Command, fire attack, fire behavior, ventilation, roof work, water supply, and physical health. It is time to add behavioral health to these efforts and focus attention on how firefighting and emergency response affects the mental well-being of firefighters.

This may mean a change in the culture of the fire service, similar to the change that happened when physical health became a priority. Years ago, an emphasis on the physical fitness of firefighters was nearly non-existent. In the late 1980's, physical fitness was just beginning to emerge as a way for firefighters to keep fit for the job. These days the amount of firehouses equipped with physical fitness equipment or with a fitness program in place is at an all-time high, with the equipment in some departments rivaling the best fitness centers in town. The fire service community has come to accept that fact that firefighters need to be physically prepared for the duties they perform.

When it comes to behavioral health, the fire service needs to begin to understand, train, and help firefighters who are not only affected by what they do and see, but from the stress of outside environmental issues such as the economy, relationships, job loss, health, and impending retirements. This will enable firefighters to be mentally prepared for the duties they perform.

One factor the fire service needs to address in regards to mental health is to understand the “new breed” of firefighters entering the fire service. After speaking to hundreds of firefighters and chiefs on this subject, there is a general consensus as to who these new firefighters are. They are more technologically advanced, are less likely to have a family tradition of firefighting, and, most importantly, are able to speak about their feelings. This is a clear difference when comparing them to firefighters who entered the service years ago.

Last but certainly not least, the fire service has to change its perception about mental health and vanquish the myth that firefighters who commit suicide are taking the easy way out or are weak. This sentiment is inaccurate. In fact, suicide victims have overcome, what Dr. Thomas Joiner, Ph.D. refers to in his book *Why People Die By Suicide* as, “mankind's most basic instinct:” survival.

To illustrate this, imagine two different hose lines with Firefighter 1 on one line and Firefighter 2 on the second line. Both are on the nozzles in a room-and-contents fire. Firefighter 1, who isn't suffering from any mental health issues, begins to see the room might flashover and decides to bail out quickly to avoid injury or death. Firefighter 2 sees the same flashover signs but instead of evacuating s/he decides to sit down and see what a flashover really looks like. Overcoming the basic instinct to survive is certainly not an ‘easy’ way out. Granted the cognitive thought process is wrong, but there is no weakness. Rather than dismissing the actions of the victim, the real focus should be on the reasons that drive a person to overcome this instinct and how to stop the situation from reaching a tragic and irreversible conclusion.

# Chapter 2

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## **Identifying Behavioral Health Issues**





This chapter provides an overview of various types of behavioral health issues. Firefighters face the same issues as other members of society - relationship stressors, financial issues, and health concerns - but these challenges can be exasperated by the situations they frequently encounter when responding to emergency calls. These experiences can have significant and lasting effects. The information presented in this chapter will help to navigate through the signs and symptoms of PTSD, depression, substance abuse, anxiety, and stress. An increased understanding of behavioral health within the fire and emergency services is necessary to begin the process of altering existing biases and to help individuals recognize signs of distress while empowering them to seek assistance.

### Post Traumatic Stress Disorder (PTSD)

The fire service has its own distinct culture. Firefighters take risks that few others would ever entertain. Responding to tragedies and seeing people at their worst moments yet acting with professionalism is what symbolizes the strength and lore of the job. A Critical Incident Stress Management (CISM) team is typically called in following a tragic call to help firefighters deal with stress, but even so firefighters often use their own methods to cope on a day-to-day basis.

#### The Hidden Victim

Individuals who are frequently exposed to disastrous events are at risk of developing post-traumatic disturbances. Rescue workers are unique, however, since they are exposed to both sides of the stress: the event itself and their role as the assistance provider. Oftentimes they become the hidden victim. Survivor's guilt is an extremely deep sense of guilt that is often felt by those who have survived some catastrophe. Firefighters are especially vulnerable to this condition due to the nature of their work. They may feel as if they did not do enough to save those who passed away or were seriously injured. While nearly 90 percent of adults have experienced at least one intense traumatic event in their lifetime, firefighters are exposed to traumatic incidences as part of their routine.

Post-traumatic stress disorder (PTSD) can be thought of as the mind fighting the body. The mind is attempting to release all of its pain and memories of a certain event or multiple emergency incidents while the body fights to keep

the memories in. Eventually, firefighters begin to lose control of their daily functional capabilities, resulting in difficulty sleeping, eating, performing basic daily tasks, etc.

PTSD often does not present itself immediately following a traumatic event. As a result the signs and symptoms may go unrecognized or unaddressed. Failure to address PTSD can severely impact a firefighter's quality of life.

Common questions surrounding post-traumatic stress (PTS) and PTSD in firefighters include:

- > How are some firefighters able to shake off the images of painful and deadly emergency calls while others retain those images causing them to develop life-altering behaviors?
- > Why do some turn to addictive vices as a way to cope or relieve/remove their pain and suffering?
- > What makes some firefighters relive an incident scene on a constant basis? Or is it the multiple calls over a career that finally causes the firefighter to succumb to the symptoms of PTSD?

There are many factors that can contribute to PTS in firefighters. These include:

- > Excessive exposure to horrific events
- > Personal level of involvement in a traumatic event
- > Sustaining significant physical injury
- > Strong feeling of personal responsibility for event/intense feelings of guilt

PTSD symptoms vary in intensity from individual to individual. Severe intensity is a very serious condition and can lead to suicidal activity.

The following PTSD symptoms should cause concern.

#### Arousal Symptoms:

- > Restlessness
- > Sleeplessness
- > Hyper activity
- > Inability to relax
- > Jumpiness
- > Difficulty concentrating



**Intrusive Symptoms:**

- > Mental replays or dreams in which a person hears, feels, sees, smells, and/or tastes aspects of a traumatic event

**Avoidance Symptoms:**

- > Shutting off one's emotions
- > Avoiding triggers (places, people, and conversations)

Managing PTSD can be exceptionally difficult if it is paired with any of the following:

- > Multiple traumatic events
- > Traumatic event overlap (emergency service and personal)
- > Alcohol and drug abuse
- > Grief
- > Depression
- > Physical injury
- > Mental disorders
- > Physical disorders
- > Cognitive processing difficulties
- > Loss of confidence in on-the-job skills
- > Intensified stress due to family responsibilities
- > Inability to perform on the fireground
- > Years on the job - Outside of a single event incident, there is a strong likelihood that most firefighters have some form of PTS simply from being on the job for several years. Whether volunteer, paid-on-call, or career, the nature of the job creates memories, images, and potentially some self-doubt as to the outcome of a call or calls.

**Reliving the Event**

Disturbing memories of a traumatic event can surface at any time. One may experience the same feelings of fear and horror as when the event took place over and over again. This is called a flashback. Sometimes there is a trigger - a sound or sight that causes one to relive an event.<sup>1</sup>

Triggers might include:

- > Responding to similar incidents, i.e. motor vehicle accidents or search and rescue missions.
- > Responding to incidents where the victims are similar to those from the traumatic event, i.e. young children.

- > Similar conditions to the traumatic incident, i.e. receiving a call in inclement weather.

To prevent occurrences of flashbacks, one may try to avoid situations or people that trigger memories of the traumatic event or even avoid talking or thinking about the event.

Examples of this include:

- > A person who was in an earthquake may avoid watching television shows or movies in which there are earthquakes.
- > A person who was robbed at gunpoint while ordering at a hamburger drive-in may avoid fast-food restaurants.
- > Some people keep very busy or avoid seeking help. This deflects from having to think or talk about the event.
- > Firefighters have a unique way of adapting to certain situations so feeling numb or emotionless is a way of avoiding traumatic events.
- > One may find it hard to express their feelings. This is another way to avoid memories.
- > One may not have positive or loving feelings toward other people and may stay away from relationships.
- > One may not be interested in activities they used to enjoy.
- > One may forget about parts of the traumatic event or not be able to talk about them.

**Feeling "Keyed Up"**

Someone suffering from PTSD may be alert and on the lookout for danger. This is known as increased emotional arousal. It can cause a firefighter to:

- > Suddenly become angry or irritable
- > Have a hard time sleeping
- > Have trouble concentrating
- > Fear for their safety and always feel on guard
- > Be very startled when surprised

It can also cause unexplained physical symptoms, known as somatic complaints. These can include:

- > Feelings of shame, despair, or hopelessness
- > Difficulty controlling one's emotions
- > Problems with family or friends
- > Impulsive or self-destructive behavior
- > Changed beliefs or changed personality traits

### Treatment

Early and appropriate intervention may make a difference in recovery. Measures that can help include:

- > Participate in crisis and stress management programs
- > Obtain a psychological evaluation to confirm PTSD
- > Learn about PTSD. Self-education is proactive, but do not attempt a self-diagnosis. Always consult with a professional.
- > Accept that help is needed and then find an experienced counselor who specializes in PTSD.

Remember, PTSD can be successfully treated and most people recover. Treatment and support are critical to recovery, and while the memories won't go away, a firefighter can learn how to manage their response to them and the feelings that they generate.

### Depression

Ask any firefighter across America about their job and the general response would likely be that “it’s the greatest job in the world.” Firefighters respond to calls to help others. They have great pride in their work, and people appreciate their courage. Many even use the term “heroes” when speaking of firefighters. So why do so many members of the fire service suffer from depression?

According to the Mayo Clinic, depression is, “a medical illness that causes a persistent feeling of sadness and loss of interest. Depression can cause physical symptoms, too. Also called major depression, major depressive disorder and clinical depression, it affects how you feel, think and behave. Depression can lead to a variety of emotional and physical problems. You may have trouble doing normal day-to-day activities, and depression may make you feel as if life isn’t worth living.”<sup>2</sup>

There are two types of depression: major depression and dysthymia. In major depression, the symptoms interfere with one’s ability to function in all areas of life such as work, family, sleep, etc. In dysthymia, the symptoms are not as severe but still impede one’s ability to function at normal levels.

Firefighters experiencing the following symptoms of depression should raise concern:

- > Isolation around the firehouse or at training events

- > Changes in sleeping patterns (insomnia or hypersomnia) or eating habits (significant weight loss or gain, or decrease or increase in appetite)
- > Unusual sadness after calls or perhaps frustration at the outcome
- > Unusual or out of character anger (some firefighters may have anger issues not directly related to depression)
- > Fatigue or loss of energy when compared to a firefighter’s past history during training, on calls, or even activities around the station
- > Depressed mood (e.g. feeling sad or empty)
- > Lack of interest in previously enjoyable activities
- > Agitation, restlessness, irritability
- > Feelings of worthlessness, hopelessness, and/or guilt
- > Inability to think or concentrate or indecisiveness on or off the fireground
- > Recurrent thoughts of death, recurrent suicidal ideation, suicide attempt, or plan for completing suicide

If left untreated, depression can lead to compounding mental disorders such as alcohol and substance abuse, recurrent episodes, and higher rates of suicide.

### Substance Abuse

The World Health Organization defines substance abuse as the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs.<sup>3</sup> Substance abuse is just one form of addiction; other forms can include eating, smoking, pornography, extreme exercising, shopping, gambling, and sex or love addiction.

Alcohol use in the fire service is common. The NVFC behavioral health survey found that 42.5 percent of male survey respondents and 60 percent of female survey respondents have engaged in binge drinking activities in the past 30 days. The fire service must be vigilant when it comes to the excessive consumption of substances such as alcohol. Social drinking is often harmless, but increased use and changes in behavior could indicate that there are deeper issues involved.

The National Council on Alcoholism and Drug Dependence, Inc. (NCADD) has created an excellent checklist to assist those who think a firefighter might be suffering from substance abuse.

Substance Abuse Symptoms Checklist<sup>4</sup>**1. FREQUENT INTOXICATION**

- > Does the person report or appear to be frequently high or intoxicated?
- > Does recreational activity center around drinking or other drug use, including getting, using, and recovering from use?

**2. SOCIAL SETTINGS**

- > Does the immediate peer group of the individual suggest that substance abuse may be encouraged?
- > Is the person socially isolated from others and is substance abuse occurring alone?
- > Is the person reluctant to attend social events where chemicals won't be available?

**3. INTENTIONAL HEAVY USE**

- > Does the person use "social drugs" with prescribed medications?
- > Does the person use more than is safe in light of other medications they may be using, or because of compromised tolerance due to illness or disability?
- > Does the person have an elevated tolerance as evidenced by the use of large quantities of alcohol or other drugs without appearing intoxicated?

**4. SYMPTOMATIC DRINKING**

- > Are there predictable patterns of use that are well known to others?
- > Is there a reliance on chemicals to cope with stress?
- > Has the person made lifestyle changes (e.g. changed friends or moved to another area) yet the drug use has stayed the same or increased?

**5. PSYCHOLOGICAL DEPENDENCE**

- > Does the person rely on drugs or alcohol as a means of coping with negative emotions?
- > Does the person believe that pain can't be dealt with without medication?
- > Does the person obviously feel guilty about some aspect of their use of alcohol or other drugs?

**6. HEALTH PROBLEMS**

- > Are there medical conditions that decrease tolerance or increase the risk of substance abuse problems?

- > Are there medical situations that are aggravated by repeated alcohol or other drug use?
- > Did the person ever suffer an accident or disability while under the influence, even if the person denies it?

**7. JOB PROBLEMS**

- > Is the person underemployed or unemployed?
- > Has the person missed work or gone to work late due to alcohol or drug use?
- > Does the person blame the drinking on work-related problems?

**8. PROBLEMS WITH SIGNIFICANT OTHERS**

- > Has a family member or friend expressed concern about the person's use?
- > Have important relationships been lost or impaired due to chemical use?

**9. PROBLEMS WITH LAW OR AUTHORITY**

- > Has the person been in trouble with authorities or arrested for any alcohol or drug related offenses?
- > Have there been instances when the person could have been arrested but wasn't?
- > Does the person seem angry at "the system" and at authority figures in general?

**10. FINANCIAL PROBLEMS**

- > Is the person spending money not easily accounted for?
- > Does the person frequently miss making payments when they are due?

**11. BELLIGERENCE**

- > Does the person appear angry or defensive but doesn't know why?
- > Is the person defensive or angry when confronted about chemical use?

**12. ISOLATION**

- > Does increasing isolation suggest heavier substance abuse?
- > Is the person giving up or changing social and family activities in order to use?

If you have answered yes to any of these symptoms, the NCADD offers services and referrals that can help. Visit their web site at [www.ncadd.org](http://www.ncadd.org) for contact information.

## Anxiety

Generalized Anxiety Disorder (GAD) is a mood disorder that is characterized by multiple and/or nonspecific worries. GAD interferes with a person's ability to sleep, think, or function normally in other basic capacities.<sup>5</sup>

Firefighters can suffer from anxiety every time the tones go off. What is the call, what are the dangers, what will be the actions, and what will be the outcomes are just some of the anxieties firefighters face throughout their career. Anxiety can result in issues that may be difficult to handle.

Common symptoms and signs of anxiety can include:

- > Restlessness or feeling edgy
- > Becoming tired easily
- > Trouble concentrating
- > Feeling as if the mind is going "blank"
- > Irritability
- > Muscle tension
- > Sleep problems (trouble falling or staying asleep, or having sleep that is not restful)

Ironically, anxiety can be interpreted as a necessary evil for firefighters. With anxiety comes increased adrenaline, which

can heighten awareness when faced with dangerous situations. The negative issue with anxiety is the continuation of the heightened level of awareness long after the call is completed. This can be detrimental to both mind and body and affect daily functions. Someone suffering from anxiety symptoms should seek help from a doctor or a counselor. Professionals will be able to decide what course of action is needed to alleviate or minimize stress levels.

## Stress

Everyone feels stress in their life due to careers, relationships, health, or other situations faced on a daily basis. Stress response is the body's form of protection. When working properly, it helps one stay focused, energetic, and alert. In emergency situations, stress can save one's life and provide the extra strength necessary for defense.<sup>6</sup>

Stress can allow a firefighter to be at the top of his or her game, keeping their skills sharp and their minds alert in emergency situations. Yet, that same stress can play a very different role if the body doesn't come down from the adrenaline rush it produces. Too much negative stress can cause health issues, mood swings, lack of productivity on the job, relationship difficulties with friends and family, and ultimately adversely affect the quality of a firefighter's life.



# Chapter 3

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## Breaking the Stigma



A limited amount of research has been done to understand the nature and extent of rescue workers' psychological responses to trauma and the exact mediators of their stress. However, many firefighters experience manifestations of stress including, but not limited to, serious sleep disturbances, nightmares, loss of appetite, reduction of libido, anxiety, and in many cases anger and hostility directed toward inappropriate targets. Because of the fire service's "closed society" – with its inherent symbols, norms, and structures that encourage a commitment to a life of danger – firefighters have many tools to cope with stress. Unfortunately, when stress becomes too much to handle, it is rarely disclosed because of fear that expression of "feelings" will be looked upon by their peers as weakness or inadequate ability to "cope."

Too often first responders keep things bottled up. It is entrenched within the fire service culture not to show personal weakness. Firefighters will call a Mayday when they are in trouble in a building but are often silent when they are suffering internally. There is a perception that asking for help will make one appear weak. This is a perception that needs to be changed. If a firefighter can ask for help on the fireground, he or she should feel comfortable asking for help at the firehouse.

In March 2004, the National Fallen Firefighters Foundation hosted a Firefighter Life Safety Summit, which produced 16 Life Safety Initiatives designed to give the fire service a blue print for making changes. The importance of behavioral health is emphasized in Initiative 13: "Firefighters and their families must have access to counseling and psychological support."

In response to calls for help from our nation's firefighters and their families, Counseling Services for Firefighters, LLC developed the Triangle of Hope™ behavioral health support system. Each point of the triangle represents a support system for a firefighter in need.

**Point I** – Clinicians: Educate professionals on the unique lifestyle and emotions of firefighters and their families.

**Point II** – Senior Fire Officers: Train officers to recognize the warning signs of a firefighter in behavioral distress and how to assist them.

**Point III** – Peer Group: Educate designated non-officers to watch for signs of turmoil and offer an in-house support system for fellow firefighters.

It is time to break down behavioral health barriers and build a relationship between the clinicians and firefighters. Depression, suicide, anxiety, anger, PTSD, and other mental health issues all have signs and symptoms that closely relate to each other. A licensed professional is needed to sort through these issues, make an accurate diagnosis, and develop an appropriate treatment plan.

The following is a recommended action plan for assisting a department and its firefighters if they decide to seek counsel. It is not intended to replace any standard operating policies that are already in place.

- > Assure the firefighter that anything said will be kept confidential, with only a few exceptions.
- > Explain those exceptions – physical abuse (to themselves or others) and thoughts of suicide – and that there is an obligation to inform the proper authorities.
- > Understand the vital importance of the ability to listen. Allow a firefighter to talk – opening up emotionally is often a big step forward. Communication is a key factor: Let the firefighter talk, and listen to what they are saying. Stay in the moment with the firefighter. Avoid jumping in with responses or solutions. Through open discussion a firefighter may be able to develop their own solutions for dealing with the issues in their lives.
- > Most importantly, be sure to show compassion.

As Wayne Amore, retired chief of the McHenry Township (IL) Fire Protection District, once said, "To be in this business, everybody thinks you have to have thick skin and be tough. The main thing I always tell people is, you have to have compassion."

# Chapter 4

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## Out of the Shadows



Suicide. Just mentioning the word creates uneasiness in most individuals. The stigma and tragedy associated with suicide only intensifies that uneasiness. The fire service has turned a blind eye to the issue of suicide for decades. Suicide seems to contradict the very essence of what it takes to be a firefighter: courage, resilience, self-sacrifice, confidence, and the ability to handle the most difficult of situations. It's not surprising that the prevalence rate of suicide among firefighters is unknown since most fire departments tend to avoid the topic. Yet firefighter suicide shakes the very core of the fire service, and its impact can be emotionally and mentally debilitating for those who are left behind to grieve. Nationally, 70 percent of suicides are committed by white males - a population group that mirrors the dominant demographic of the American fire service.

Suicide means killing oneself. The act constitutes a person willingly, or perhaps ambivalently, takes his or her own life. Several forms of suicidal behavior fall within the self-destructive spectrum:

- > **Suicidal Ideation** is the thought of committing suicide and even developing a plan, but there is no actual attempt or act.
- > **Suicidal Threat** is expressing the desire to end one's life. It may range from a casual reference to death, usually expressed in conjunction with disgust about the conditions of their situation, to a specific planned method, time, and place for the event to occur.<sup>7</sup>
- > **A Suicide Gesture** is an apparent attempt by a person to cause self-injury without lethal consequences and generally without actual intent to commit suicide. A suicide gesture serves to attract attention to the person's disturbed emotional status but is not as serious as a suicide attempt, although it may result in suicide, intentional or not.<sup>8</sup>
- > **A Suicide Gamble** is when a person takes a potentially lethal action and gambles that they will be found in time and will be saved. For example, an individual ingests a fatal amount of drugs with the belief that family members will be home before death occurs.<sup>9</sup>
- > **A Suicide Attempt** involves a serious act, such as taking a fatal amount of medication, with someone accidentally intervening. Without the accidental discovery, the individual would have passed away.

According to the counseling field's Diagnostic and Statistical Manual IV, 90 percent of all suicide victims had an AXIS I disorder. These disorders include:

- > Depression/stress
- > Alcohol/substance abuse
- > Schizophrenia-psychotic-hallucinations, delusions
- > Bi-polar, anxiety disorders
- > Mood disorders
- > Phobias

According to National Institute of Mental Health, the percentages of those who die by suicide accompanied by an AXIS I disorder include:

- > 5% Major Depression
- > 20% Bi-polar
- > 5% Schizophrenia

The NVFC behavioral health survey found direct correlations between the likelihood of suicide and PTSD, stress, depression, and substance abuse. Thirty-six percent of respondents have considered suicide and had developed a plan to take their life. It is important to recognize that these issues are often connected and to be aware of warning signs and symptoms.

There are many warning signs that may indicate a person is suicidal. These include:

- > Appearing depressed or sad most of the time (untreated depression is the number one cause for suicide)
- > Talking or writing about death or suicide
- > Withdrawing from family and friends
- > Feeling hopeless
- > Feeling helpless
- > Feeling strong anger or rage
- > Feeling trapped, like there is no way out of a situation
- > Experiencing dramatic mood changes
- > Abusing drugs or alcohol
- > Exhibiting a change in personality
- > Acting impulsively
- > Experiencing a change in sleeping habits
- > Experiencing a change in eating habits
- > Losing interest in most activities



- > Performing poorly at work or in school
- > Giving away prized possessions
- > Writing a will (in conjunction with other warning signs)
- > Feeling excessive guilt or shame
- > Acting recklessly

The following statements are common warnings from those with suicidal ideations. Those who hear these statements need to take action to provide assistance.

- > Feelings of helplessness - “I can’t do it”
- > Feelings of hopelessness - “I won’t get better”
- > Feelings of worthlessness - “I don’t deserve,” “The world will be better off without me,” “No one will miss me”

There are many myths and misconceptions surrounding suicide that must be addressed and debunked. These include:

- > Suicide is a sign of weakness.
- > People who commit suicide have no “guts.”
- > The family of the deceased should be ashamed or embarrassed.
- > Someone who committed suicide took the “easy way out.”
- > The person should have asked for help.
- > The person was/is looking for attention.

These myths and misconceptions contribute to the ignorance surrounding behavioral health issues and the unwillingness of those suffering to ask for help. There is nothing “easy” or “weak” about deciding to commit suicide. Often-times their cries for help go unnoticed or are ignored. The fire service needs to cultivate an environment of compassion and understanding. Those suffering from behavioral health issues should be able to seek help without the fear of being ridiculed or ostracized, and members should be able to identify the warning signs and symptoms and take necessary action.

### The Impact of Suicide: Personal Stories

Those in the fire service have two families. One is at the station, where emotions range from excitement, frustration, anger, sadness, depression, content, and pride with those who share the same values. This is a family that any firefighter would risk his or her life for at the fire scene. The other family is the one at home. Firefighters often need to balance the

commitment to their fire service family with their personal family and show the same dedication and respect to loved ones as on the job. This seems like a simple task, but most firefighters would agree it is a difficult balancing act. For career firefighters who live close to a third of their life away from home and volunteer and paid-on-call firefighters that are required to drop everything they are doing when the pager goes off, missing or leaving family events can take its toll.

When a firefighter takes his or her life, the impact ripples through these two families. There are several surveys of the general public that show that each suicide has a deeply emotional impact on an average of six people. But how many people are significantly affected when a firefighter takes their life? Would that number double? Triple?

Since its inception, the Firefighter Behavioral Health Alliance (FBHA) has been collecting firefighter suicide data. Confirmed firefighter suicides are gathered through confidential reports, e-mails, phone calls, and research. As of August 2012, FBHA has confirmed 260 firefighter suicides across the U.S. The earliest included by FBHA is 1880.

Over this past year the number of families who have reached out to express their stories, their loss, and their pain to FBHA in hopes of educating firefighters about behavioral health has been tremendous. Following are a few of these stories.

#### Jackie’s story:

Jack (“Jackie”) Slivinski, Jr. was a bright, intelligent, charismatic young man who was a firefighter for the Philadelphia Fire Department. He loved his work, especially since he was riding on the elite Rescue 1 with his father Jack Slivinski, Sr. His mother, Gerry Slivinski, described his smile as one that would light up a room when he entered it. Looking back, Gerry now realizes that Jackie’s smile was gone during the time leading up to his death.

Sadly, Jackie decided to take his life. Gerry was asked by FBHA founder Jeff Dill to write a statement about the impact of Jackie’s suicide. Here are her words:

*I have been asked by Jeff Dill to write an impact letter regarding the death of my son, fireman Jack Slivinski, Jr.*

*We called our son Jackie. He took his own life on June 25, 2011. If you could, close your eyes and think of the worst nightmare that you could possibly have, one that has a horrible monster in it and the monster is chasing you. You are holding a person, one that you love so tightly, and then the monster just rips the person you love most in the world out of your arms. You did not stop the horrible monster. You just froze in fear. You never see the person that you love again. You immediately try and wake up from this horrible nightmare. I live this nightmare every day. This is how I feel every day. There is no waking up and telling that person that you love them or just hold them. How could this happen to me? I do not want it to happen to you. Can you, just for a second, feel my fear, pain, and apprehension to go to sleep and then wake up and live it all over again, every day? It is just being so scared you want it to end. I live this nightmare every day. This is how I feel every day.*

*I took my son's strength for granted. He was a Marine, a firefighter, he was my strong son. I knew he was going through a tough time in his life. I just did not know he was being chased by this horrible monster. But as his mother I did not save him from the monster. I did not know how scared he must have been, being chased all day every day by this monster. He needed to be saved and I did not know how badly he was suffering until he lost his smile. Now, we all lost his smile, his laugh, his way of having everyone in the room totally entertained and loving him for his gift of life. He brought so much laughter and love to others, why did the monster take him? Why didn't I save my son or fight for my son's life. I live this nightmare every day. This is how I feel every day.*

#### **Scott's story:**

Firefighter Scott Charles Bellucci was a 24-year-old firefighter who took his life in February 2012.

Here is a portion of the letter his father Joseph read on the day he buried his son. (The complete letter can be found at [www.ffbha.org](http://www.ffbha.org) under the story Dare to Dream.)

*The loss of a life is a tragic experience for anyone to endure. The loss of a talented life adds additional sorrow and grief. The loss of a young life leaves us questioning as to why, while the loss of a loved one causes us to grieve and hurt deeply. However, when this lost life consisted of all the aforementioned and is also your child; no words of sorrow can begin to describe the pain.*

*Scott had one of the most loving and caring souls that I have ever been blessed to know. Day in and day out, he would constantly ask questions as to my wellbeing and profess his love of me more times in one day than I could ever count. Whether face-to-face during normal*

*conversations or walking up behind me, squeezing my right shoulder, and saying, "Love you dad;" it is something I will miss immensely.*

Suicide leaves many questions for the families, friends, and fellow firefighters. Besides wondering "why," survivors are sometimes left with the guilt of questioning what they missed that could have helped their loved one. They suffer from constant thoughts of why their loved one didn't ask for help.

When educating firefighters on behavioral health, it is important to focus both on their own well-being while helping them recognize signs and symptoms. They must also be taught how to communicate with those who are suffering while emphasizing that they are human beings first and firefighters second.

Firefighters respond to those in crisis on a daily basis and need to know that it is okay to get help as well. If firefighters feel they can't ask for help, the situation may continue to deteriorate until the result becomes tragic.

#### **Tim's story:**

Retired firefighter/paramedic Tim Casey couldn't bring himself to ask for the help he needed. His story illustrates the danger of suffering alone.

*I was a badass firefighter, a seasoned veteran, even looked up to. How could I be seen as weak? Simply put I couldn't, so I pushed on, I drank more, worked more, and everything around me began to crack and fall apart.*

*My inability to seek help had real consequences. My family life was in tatters, my finances were in ruin, my health declined, and my madness grew.*

*Finally, on a warm July night, drunk again I crawled into the cab of my pickup truck, closed the garage door, found an appropriately sad song, and passed out with the truck running. Only by chance did my wife discover my suicide attempt; without her intervention my effort would have been a success.*

Suicide can be prevented, and most suicidal people desperately want to live. They are often just unable to see alternatives to their problems. This is why a change in fire service culture is imperative; firefighters need to feel comfortable asking for help, not only at the scene but also in their

personal lives without being seen as weak. The fire service community must understand the implications of someone asking for help and how to respond to the signs that something might be horribly wrong.

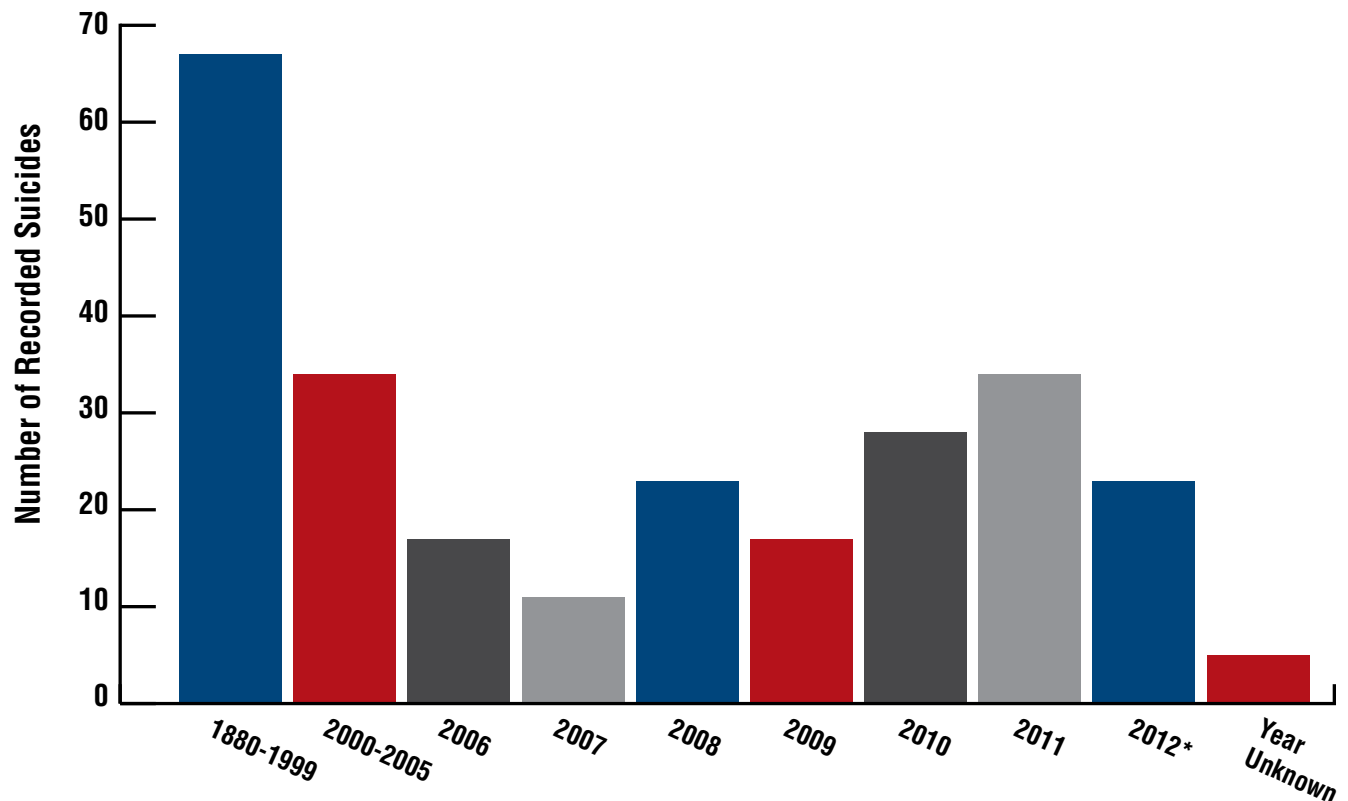
To better serve the needs of the fire service family, FBHA set out to gather information on firefighter suicide. By understanding the scope of the problem, effective resources and training can be developed. FBHA created its National Data Collection Form so individuals could report when they hear about or are affected by a firefighter suicide. By gathering this information, FBHA has been able to create a profile that helps to identify at-risk firefighters before tragedy strikes. Being mindful that some agencies prohibit the release of information by their departments, and that some family members may not be aware that there is a way to make notifications, FBHA has developed a “blind form” that provides anonymity for the submitting party.

The template for this form was provided to FBHA by Robert E. Douglas, Jr. of the National Police Suicide Foundation. FBHA uses statistical information gathered from the form, research, and interviews to keep its training proactive and current. FBHA's firefighter suicide form can be found on their web site at [www.ffbha.org](http://www.ffbha.org)

### FBHA Data

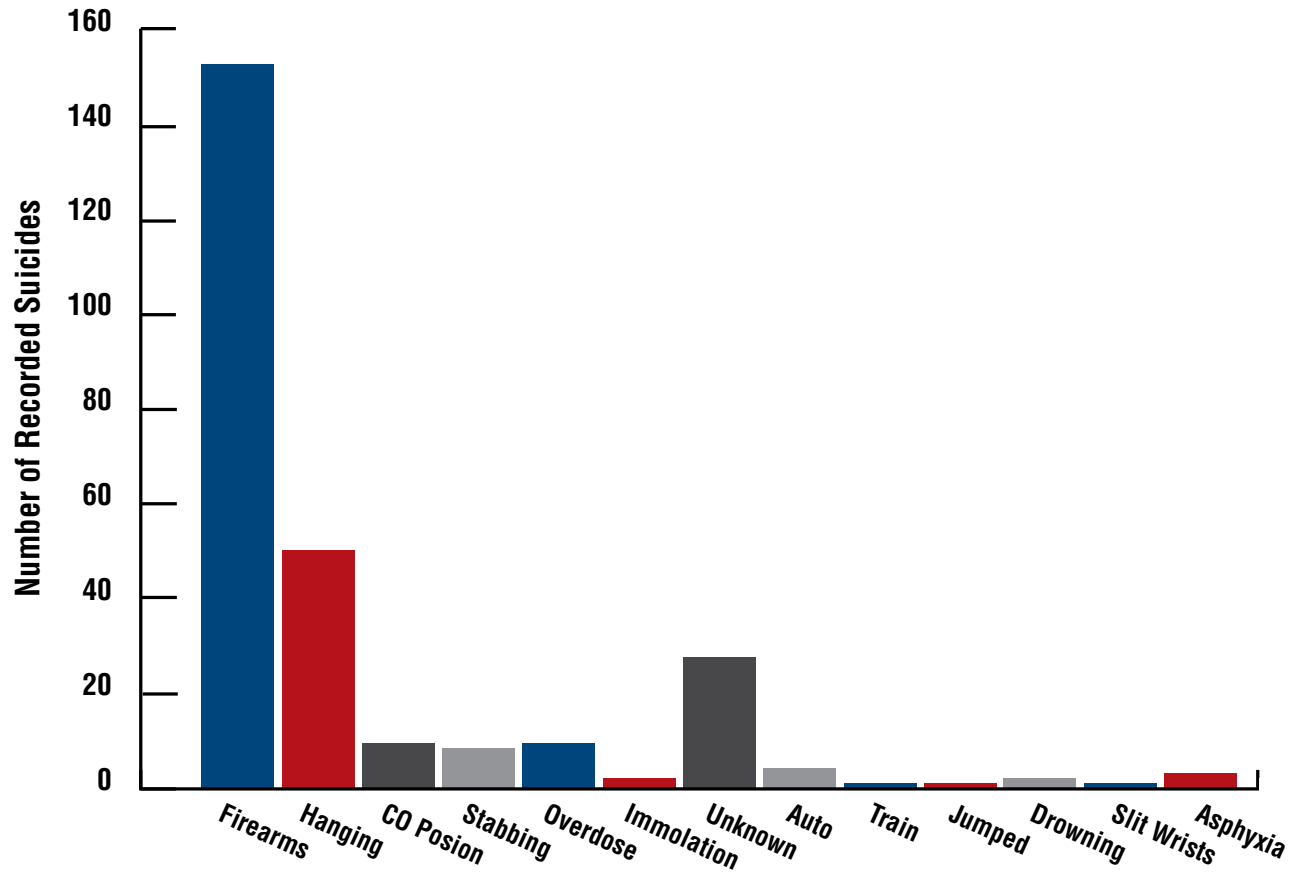
The following charts reflect the data FBHA has collected over the past year. The numbers are strictly what has been reported to FBHA and do not represent a comprehensive study or research project on firefighter suicide. The numbers collected are used for the development of educational workshops for suicide prevention and awareness. The data collected does not involve the use of names of those firefighters unless permission was granted by family members. FBHA attempts to gather the following information: age, rank, state, active vs. retired, method of suicide, and any known issues that caused the firefighter to take their life.

## Suicides by Year



\* Data for 2012 was not complete at the time of publication.

## Suicide Methods





# Chapter 5

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## **Increasing Behavioral Health Awareness and Suicide Prevention**



The fire service can take steps to raise awareness of behavioral health issues. Suicides can be prevented when individuals are able to recognize warning signs and understand how to seek help.

## Training

With the exception of major cities and suburbs, most fire departments spend more “downtime” doing training, equipment repair, fitness, and other non-emergency activities than actual time on fire and emergency medical calls. Firefighters train to be prepared for a variety of situations.

In an article published in the August 2012 issue of *Fire Chief Magazine*, author Jeff Dill addressed behavioral health training. Dill noted that the fire service does an excellent job in training firefighters on fire behavior and fireground operations, but there is a lack of training on behavioral health.<sup>10</sup> Consider this: A firefighter comes up to a peer to talk. He proceeds to say that things have been unbearable at home. On top of that, he describes that a recent tragic call has made him turn to alcohol to cope. In fact, he states that two weeks ago he had a gun on his lap while under the influence of alcohol and had thoughts of suicide. Would his peers be prepared for that situation?

Given the tragedies emergency personnel respond to, dealing with the consequences and outcomes of calls can be overwhelming. In addition to the hardships faced when on call, firefighters are not immune to the pressures of life when they are off duty. For example, they may feel the impact of a down economy, be buried under credit card debt, have spouses who face unemployment, or have family members who are sick. All across the country the fire service is losing good people to depression, addictions, behavioral health problems, and suicide because of a lack of training, understanding, and fear.

Firefighters risk their lives to save their brothers and sisters on the fireground. Yet when collecting firefighter suicide reports or talking to fire chiefs to validate suicide numbers, the comments read the same time after time: “If only we would have seen the signs and symptoms” or “We saw how they were acting but didn’t take any action.” The web site [www.suicide.org](http://www.suicide.org) estimates that 75 percent of suicides were preceded by warning signs. Some studies suggest the percentages might even be higher. Every fire department must

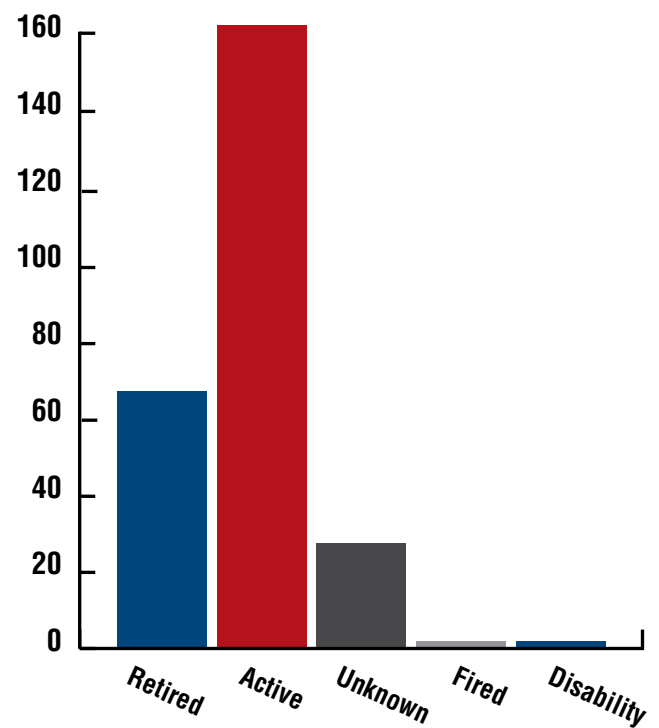
conduct behavioral health training so those warning signs are not ignored or overlooked.

Many fire chiefs and administrators may wonder how their department can afford to implement behavioral health training. It is a legitimate question for many departments with strained budgets. Start by training in segments, using a model similar to five-year projection plans that most fire departments already have in place. Ask for a train-the-trainer program to help educate larger departments. Smaller departments can seek support from local business or apply for grants to fund a training program.

Training sharpens skills, highlights potential mistakes, and provides the ability to try different techniques or methods. It helps firefighters improve and better serve their communities. Yet, there is hesitation when it comes to mandatory behavioral health training. What makes it any less important than fireground training? The subjects may be different, but the results can be just as critical.

Fire service leaders must address behavioral health issues within their departments. It is time to change the culture and adopt a proactive approach. This is where counselors,

## Suicides by Active vs. Retired



chaplains, CISM teams, Training Officers, and national fire service associations can play a vital role. All of these entities can and should band together to promote behavioral health education. Firefighters can be given the help that they need if individuals are trained to recognize the signs and symptoms of distress. The fire service just needs to be willing to take action.

## Retirement Planning

Retirement is often overlooked in the fire service. Retirement can be very difficult on someone who has dedicated their life to the fire service. It doesn't matter if the firefighter was career, volunteer, or paid-on-call. This life change can have a negative effect on some firefighters. Sadly, FBHA statistics indicate that a high number of fire service suicides are committed by retired firefighters.

Career firefighters typically will retire at a younger age than volunteer or paid-on-call firefighters. Career firefighters retire with a pension if they work the minimum years required by their state or pension plan. Comparatively, volunteer and paid-on-call firefighters typically have financial support from outside careers. They have a tendency to continue volunteering with their department after they retire. They can suffer from separation anxiety when it finally becomes time to leave the department. Even though their careers were made outside of the department, it is important to recognize the role that the fire service plays in forming their identity. Leaving the department for volunteer and paid-on-call firefighters is just as impactful as retirement is for career firefighters.

The department, family members, and friends can help firefighters through this transition by being there to support retiring firefighters. Questions to ask include:

- Is retirement approaching soon? What steps are needed to prepare?
- What does one do when they stop being a firefighter?
- How do they keep their identity?
- What are the keys to success and happiness in a "post-firefighter" life?

Remember, most firefighters have "Type A" personalities, which means they look for action, enjoy keeping busy, and become bored sitting around.

Type A individuals are often categorized as ambitious, rigidly organized, highly status conscious, sensitive, caring, truthful, impatient, and helpful. They often take on more than they can handle, want other people to get to the point, are proactive, and are obsessed with time management. People with Type A personalities are often high-achieving "workaholics" who multi-task, push themselves with deadlines, and hate both delays and ambivalence.

It is important to put a plan in place to deal with an impending retirement.

## Preparing for Retirement

First, determine a timeframe. If a firefighter knows two years out that he or she is going to leave the fire service, then they can effectively lay the ground work for retirement.

Once a timeframe is determined, the retiring firefighter should figure out what he or she wants to do after they leave the fire service. Many firefighters leave the service in their early 50's or need to retire young due to injury, health, etc. This allows for ample time to develop new skills, hobbies, or careers. There are many ways to help determine a new path. The retiring firefighter can take a self-assessment test to generate some ideas. There are several tests that are available:

- The Personality Type Test – This test identifies personality types, which can assist in identifying a suitable career match.
- The Holland Code - This three letter code tells a person about their personality type and can help them find a compatible career.
- The Strong Interest Inventory - This self-assessment instrument is used to measure interests as they relate to career choice.<sup>11</sup>

These tests can be taken online or at a local community college. A firefighter can also contact a career counselor for guidance.

In addition to pursuing a new career, firefighters can either start or finish their college education. Completing an Associate or Bachelor's degree or attending a trade school are good options in the event of an early or unforeseen exit from the fire service.

Marriage or relationship counseling is also recommended during this transition period. There will be significant adjustments post-retirement that may be stressful. Communicate with spouses and significant others. Discuss the changes that will occur after retirement and anticipate some growing pains.

Fire departments should be proactive in offering retirement assistance through the use of their Employee Assistance Program (EAP), outside counseling, or chaplains. This is to encourage members to talk about any effects the job might have had on them both physically and psychologically. Counseling should discuss the transition to the “regular world” and the effects of being removed from fire service cultural life.

### Life After Retirement

It is important to understand that life will continue to evolve and grow outside of the fire service. Don't be afraid to explore other avenues. Be proactive and embrace new challenges. Identify personal goals, ambitions, and limitations. Firefighters by nature like to remain active. Retirement is a time to focus on things that may not have been possible when dedicating time to the fire service. This could include hobbies, interests, education, traveling, etc. The sky is the limit.

Remember these keys to retirement success:

- > Prepare.
- > Seek personal or career counseling.
- > Work on communication skills with a spouse, partner, significant other, and family.
- > Set obtainable goals.
- > Retire to something rather than from something.
- > Be proud of your history as a firefighter but don't live in the past.
- > Enjoy life – everyone deserves to!

### Additional Recommendations

The following are recommendations for fire departments to help members deal with potential behavioral health issues.

- > Conduct extensive research when selecting an Employee Assistance Program (EAP). Do not simply select the most cost-effective company. The EAP selection should involve interviews with each company that sends in a bid. Fire chiefs need to know if their counselors have experience specifically dealing with firefighters. It is important that they understand the nature and culture of the fire service and the unique challenges faced by firefighters. Distressed firefighters may be more willing to seek help if they feel they are speaking to individuals that understand their situation. The NVFC survey found that 76.9 percent of respondents would be more willing to use a tailored service than a general help hotline.
- > Invite EAP counselors out for rides with the department. Have members develop a comfort level with the counselors.
- > Create a retirement committee in the department, Mutual Aid Box Alarm System (MABAS) division, the county, or with neighboring fire departments. This committee should be tasked with assisting members as they prepare for retirement.
- > Hold mandatory annual training on behavioral health. Access resources from the organizations listed in the Available Resources section of this report.
- > Encourage all fire academies to include at least two to four hours of behavioral health training for cadets.

# Conclusion

## Conclusion

Suicide is an unfortunate reality in the fire service. The fire service needs to overcome the misconceptions surrounding suicide and mental health conditions and be there to support those who need help. Suicide victims are not weak and did not take the easy way out. They suffered immensely and were unable or unwilling to ask for help. The fire service has a duty to protect its brothers and sisters both on and off the fireground.

Although there is plenty of discussion about what the fire service can do to prevent firefighter suicide, the individual

is ultimately responsible for taking action. Firefighters need to ask for help if they need it or be there to support those who do. As a community, the fire service needs to fill in gaps in suicide prevention measures by focusing on training, reporting, counseling, developing department policies and procedures, and retirement planning.

Luckily, firefighters are adaptable and can meet these challenges head-on. Firefighters dedicate their lives to helping others no matter the personal cost. That same dedication needs to be focused inward. Now is the time to learn about behavioral health, get educated on the signs and symptoms of suicide, learn how to communicate with those who are suffering, and challenge departments to be proactive. Firefighters do not need to face this alone. Inaction could literally mean the difference between life and death.

# Available Resources

## Available Resources

- > Chaplain Programs: <http://firechaplains.org>
- > National Programs on Suicide: [www.suicide.org](http://www.suicide.org) or 1-800-SUICIDE
- > Firefighter Behavioral Health Alliance: [www.ffbha.org](http://www.ffbha.org)
- > National Suicide Prevention Lifeline: 1-800-273-TALK(8255)
- > Counseling Service for Fire Fighters: [www.csff.info](http://www.csff.info)
- > American Counseling Association: [www.counseling.org](http://www.counseling.org)
- > Safe Call Now: [www.safecallnow.org](http://www.safecallnow.org) or 1-206-459-3020. Safe Call Now offers a crisis referral program for police officers and firefighters experiencing mental health issues or other personal problems.
- > National Fallen Firefighters Foundation: [www.firehero.org](http://www.firehero.org). Refer to their Everybody Goes Home Program and its sixteen Firefighter Life Safety Initiatives. Life Safety Initiative #13 is the Psychological Support Initiative which states "Firefighters and their families must have access to counseling and psychological support."
- > National Volunteer Fire Council: [www.nvfc.org](http://www.nvfc.org). Access free online trainings and resources focusing on behavioral health issues.
- > American Addiction Centers: [www.americanaddictioncenters.org](http://www.americanaddictioncenters.org) or 888-300-3332. The NVFC offers members a free Members Assistance Program through American Addiction Centers, which provides first responders and their families with a toll-free, confidential phone line for immediate assistance with issues like substance abuse, stress, relationship problems, work-related concerns, and virtually anything disrupting a member's work life and overall wellness.



# About the Authors

## About the Authors

Jeff Dill

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Firefighter Behavioral Health Alliance founder Jeff Dill holds a Master's Degree in Counseling, is a Licensed Professional Counselor in the state of Illinois and is currently an Assistant Chief at Palatine Rural Fire Protection District in Inverness, Illinois. He is a member of the American Counseling Association, Illinois Counseling Association, Illinois Mental Health Counselors Association, Illinois Fire Chiefs Association, International Association of Fire Chiefs, Illinois Professional Firefighter's Association, and is also an alumni member of the International Association of Fire Fighters. He is dedicated to educating firefighters and emergency personnel on the importance of behavioral health and suicide awareness.

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Cheryl Loew's professional background offers a unique blend of marketing communications, event planning with experience in effectively increasing revenue by managing brand recognition campaigns, media planning, and tradeshow events. Her marketing role contribution within Firefighter Behavioral Health Alliance focuses strategically on resources to help bring awareness to behavioral health within the fire service and further the mission of FBHA. Cheryl holds a Bachelor of Arts Degree with a concentration in Applied Behavioral Science and actively volunteers as the Group Leader for the Palatine Rural Fire Protection District Fire Corps in Inverness, Illinois and as the Community Vulnerability Assessment Coordinator for Palatine Emergency Management Agency in Palatine, Illinois.

The authors care deeply about the men and women of the fire service, and are honored to share vital information on firefighter behavioral health awareness and suicide prevention with this report. Any questions or contributions should be sent to the authors using the email addresses provided.

The information in this guide, the opinions expressed, and any errors belong to the authors.

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# Appendix

## NVFC Behavioral Health Survey Results and Analysis

The National Volunteer Fire Council (NVFC) worked with the HOPE Health Research Institute to develop a survey focusing on behavioral health. The survey used previously developed proven measures to compare the collected data to previous studies through outreach to members, and other populations. The NVFC distributed the online survey national fire service organizations, and fire service publications.

The following section provides a detailed analysis of the survey results. Questions with regard to the data, methods, or analysis should be directed to HOPE Health Research Institute: [http://hopehri.com/contact\\_us](http://hopehri.com/contact_us). Contact the NVFC at [nvfcoffice@nvfc.org](mailto:nvfcoffice@nvfc.org) to obtain a copy of the survey.

### Analytic Notes

- Due to the sampling strategy, results cannot be construed as representative of the fire service as a whole. Prevalence rates within some measured mental health domains (e.g. depression) were considerably higher than found in the published literature for the U.S. general population or firefighters, likely indicating a selection bias for people who elected to complete the survey (i.e., given that it was a survey about depression and suicide issues, people with those concerns may have been more likely to complete the survey).
- Personnel were stratified based on gender and role in the fire service (e.g. career, volunteer, both) where appropriate.
- A total of 849 people completed the survey. Due to an inability to classify their role in the fire service, 47 individuals in the “other” category were excluded from analysis.
- Given the extremely small sample (n=5) of women in the “both” category (described themselves as serving in both the career and volunteer fire service at the same time), rates are likely not representative.
- When national age/gender stratified rates were available, age or gender standardizations are reported in the notes sections of the tables.
- For traumatic exposure measures (TSQ and IES), average prevalence rates (Table 2) are reported for those who

responded they had been exposed to a traumatic event. Rates of those indicating scores in the range of concern (Table 5) are for the entire sample.

### Measures

**Demographics:** Standard individual demographics (e.g., age, marital status, educational level, etc.) and occupational history (e.g., current rank and position, years in the fire service, etc.) were collected similar to previous studies of firefighters and in a manner consistent with established scientific practices (Poston et al., 2011; Haddock et al., 2011).

**Depression:** The Center for Epidemiological Studies Short Depression Scale (CES-D 10) and the PRIME-MD 2 questions (Irwin et al., 1999; Mulrow et al., 1995; Whooley et al., 1997) were used to assess depressive symptoms. The survey includes questions about the frequency of both feelings and behaviors during the past week. The CES-D has been found to be highly reliable among the general population (Spearman-Brown, split halves  $r=0.85$ ) and in patient samples ( $r=0.90$ ; Radloff, 1977; Mulrow et al., 1995). The CES-D 10 was found to have comparable reliability estimates to those reported for the original CES-D (Radloff, 1977). For example, it had strong internal consistency (Chronbach's  $\alpha=0.92$ ) and test-retest reliability ( $r=0.83$ ; Irwin et al., 1999). The PRIME-MD 2 questions (1. “During the past month, have you often been bothered by feeling down, depressed, or hopeless?” and 2. “During the past month, have you often been bothered by little interest or pleasure in doing things?”) were compared to a number of other case-finding measures and to the Quick Diagnostic Interview Schedule (Whooley et al., 1997). The PRIME-MD exhibited similar sensitivity and specificity and ROC characteristics when compared to longer depression case-finding measures, suggesting that the two items were as useful for detecting distress and depressive symptoms as longer measures (Whooley et al., 1997).

**Perceived Stress:** The Perceived Stress Scale is a validated, 10-item measure that queries how unpredictable, overloaded, and uncontrollable individuals perceive their lives with a 5-item Likert scale with responses ranging from “Never” to “Very Often.” Items are summed to create a total score indicating the level of perceived stress.

**Alcohol Questions:** Alcohol questions were based on a previous large scale survey on alcohol use among firefighters (Haddock, et al., Alcohol use among firefighters in the Central United States, in press, Occupational Medicine). Participants were instructed that “one drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor.”

- > Alcohol use was assessed with the item: “During the PAST 30 DAYS, have you had at least one drink of any alcoholic beverage such as beer, wine, a malt beverage, or liquor?”
- > Days drank was assessed with the item “During the PAST 30 DAYS, how many days did you have at least one drink of any alcoholic beverage?”
- > Level of alcohol consumption was assessed with the item “During the PAST 30 DAYS, on the days when you drank, about how many drinks did you drink on the average?”
- > Binge drinking was assessed with the item: “Considering all types of alcoholic beverages, how many times during the PAST 30 DAYS did you have 5 drinks or more on an occasion?”
- > Peak alcohol use was assessed with the question “During the PAST 30 DAYS, what is the largest number of drinks you had on any occasion?”

**Traumatic Screening Questionnaire (TSQ):** The TSQ is a brief (10 question) screening instrument for post-traumatic stress symptomatology. Participants are asked whether they had experienced a number of reactions common after a tra-

matic experience. Five of the items are related to re-experiencing the traumatic event and five are questions about hyper-arousal. Using a cut-off of 6 endorsed symptoms, the sensitivity of the TSQ was found to be 0.76 and specificity was 0.97. It is recommended that those endorsing 6 or more items be further evaluated for post-traumatic stress disorder.

**Impact of Events Scale – Revised (IES-R):** The IES-R is a 22 item measure that asks participants about the frequency with which they have experienced a number of difficulties in the past 7 days commonly experienced following exposure to a traumatic event. Response options include: not at all, a little bit, moderately, quite a bit, and extremely. The items listed correspond to the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders) symptoms of PTSD. Subscales include: Intrusion, Avoidance, and Hyperarousal. The IES exhibits strong internal consistency (Cronbach’s alpha ranged from 0.79 – 0.92). The test/re-test reliability of the measure range from 0.56 to 0.94 depending on the sample and time frame of testing.

**Suicide Questions:** Suicide questions from within the Major Depression section of the National Institute of Mental Health Diagnostic Interview Schedule (DIS) were used to assess suicidal ideation and/or attempts. The DIS was developed in the 1970s by the Centers for Disease Control to be used in large scale epidemiologic studies of mental health and is a widely used measure of pathology.

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## Data Analysis

**TABLE 1:****Characteristics of firefighters responding to the NVFC survey - Percentages (%) or Means and Standard Deviations**

<b>Variable</b>	<b>Career (n=295)</b>	<b>Volunteer (n=403)</b>	<b>Both (n=104)</b>
<b>Gender (% Male)</b>	91.2	85.6	95.2
<b>Gender (% Female)</b>	8.8	14.4	4.8
<b>Age (years)</b>	43.6 (10.4)	43.1 (14.5)	39.7 (12.5)
<b>Race (% White)</b>	94.9	95.0	98.1
<b>Hispanic (% Yes)</b>	2.7	2.5	1.0
<b>Marital Status (%)</b>			
- Married or member of an unmarried couple	83.3	73.5	74.0
- Divorced	8.1	4.5	10.6
- Widowed	0.7	0.7	1.0
- Separated	2.0	0.5	0.0
- Never married	5.8	20.8	14.4
<b>Served Active Duty or Active Reserve in the US Military (% Yes)</b>	13.2	16.4	14.4
<b>Education (%)</b>			
- Up to High School or GED	5.1	15.1	11.5
- Some College or Technical School	47.8	42.9	50.0
- Undergraduate Degree	34.9	26.1	27.9
- Advanced Degree	12.2	15.9	10.6
<b>Rank in the Fire Service (%)</b>			
- Firefighter	15.6	32.5	23.1
- Firefighter/Paramedic	18.3	3.2	10.6
- Paramedic or EMT only	1.0	1.2	1.0
- Driver/Operator	5.8	4.5	4.8
- Company Officer	25.7	17.6	24.1
- Chief (BC, Asst. Chief, Chief, etc.)	28.1	26.5	21.1
- Other	5.4	14.4	15.4
<b>Number of Years in the Career Fire Service (years)</b>	16.0 (9.8)	1.7 (6.9)	11.2 (9.8)
<b>Number of Years in the Volunteer Fire Service (years)</b>	8.2 (9.2)	16.7 (12.5)	16.8 (11.5)
<b>Shift Length (%)</b>			
- 24 hour	54.6	2.5	35.6
- 48 hour	6.4	0.5	5.8
- Rotating	4.4	3.5	9.6
- Fixed	18.3	2.7	18.3
- On call	2.0	77.7	16.3
- Other	14.2	13.2	14.4
<b>Hours per week worked in the fire department (hours)</b>	78.4 (323.1)	43.4 (239.1)	46.0 (24.1)

Note: Unless noted as percentages, cell entries represent mean and standard deviation.

**TABLE 2:****Depression, perceived stress, and PTSD measures (Means and Standard Deviations)**

Measures	Career		Volunteer		Both	
	Men (n=269)	Women (n=26)	Men (n=345)	Women (n=58)	Men (n=99)	Women (n=5)
<b>Depression</b>						
- CES-D	3.2 (2.3)	3.1 (2.6)	2.8 (2.6)	3.3 (2.7)	2.9 (2.6)	4.6 (2.8)
- PRIMEMD	0.9 (0.9)	0.8 (0.8)	0.7 (0.8)	0.8 (0.9)	0.6 (0.8)	1.2 (0.8)
<b>Perceived Stress</b>						
<b>(PSS)** †</b>	15.4 (6.5)	15.8 (6.0)	15.1 (6.9)	16.7 (7.8)	14.8 (7.3)	16.6 (6.7)
<b>PTSD</b>						
- IES	17.0 (16.9)	16.1 (11.8)	15.4 (16.0)	16.4 (17.4)	14.5 (14.5)	19.2 (26.0)
- TSQ	2.1 (2.7)	2.5 (2.3)	1.8 (2.5)	1.7 (2.3)	2.3 (2.7)	2.6 (4.2)

\*\*Normative data from Cohen and Janicki-Deverts (2012)<sup>a</sup>

†PSS US Normative Sample: Men 15.5 (7.4); Women 16.1 (7.6); Full-Time Employed 16.2 (7.3).

\* Cohen S, Janicki-Deverts D. Who's stressed? Distributions of psychological stress in the United States in probability samples from 1983, 2006 and 2009. *Journal of Applied Social Psychology* 2012;42:1320-1334.

**TABLE 3:****Proportion (%) of firefighters meeting relevant cutoffs on the risk of depression and trauma measures**

Measures	Career		Volunteer		Both	
	Men (n=269)	Women (n=26)	Men (n=345)	Women (n=58)	Men (n=99)	Women (n=5)
<b>Depression</b>						
- CES-D (%>4)** †	42.8	38.5	33.9	43.1	34.3	60.0
- PRIMEMD (%>1)	55.0	57.7	47.0	50.0	46.5	80.0
<b>PTSD</b>						
- TSQ > 6	11.2	7.7	9.6	5.2	13.1	20.0
- IES > 35	11.5	3.8	10.7	12.1	8.1	20.0

\*\*Age standardized rates using age strata from a US National Sample<sup>b</sup>

†Overall prevalence of depression in the total survey sample using the CES-D 10 was 37.9%. Age-standardized prevalence of depression was 29.9% using the age strata from the U.S. National Sample<sup>b</sup>.

#### Comparisons of Depression Prevalence in the Survey Sample with U.S. Estimate and Data Reported for Career Firefighters:

- Prevalence of major depression and any current depression in the U.S.<sup>b</sup> was reported to be 3.4% and 9.0% among adults 18 and older.
- Prevalence of risk for clinical depression on a screening measure also has been reported in one population-based study of male career and volunteer firefighters<sup>c</sup> and four studies using smaller samples of firefighters.<sup>d-g</sup>
  - Approximately 13.0% and 16.6% overall were at risk for depression using the CES-D 10 in population-based samples of male career (n=450) and volunteer (n=191) firefighters, respectively, with valid CES-D data.<sup>c</sup>
  - 15.6% among 132 career firefighters in two Midwestern departments<sup>d</sup>
  - 10.8% among 112 career firefighters in one North eastern department<sup>e</sup>
  - 33.0% among 145 male firefighters in a single Midwestern department<sup>f</sup>
  - 36.0% among 1,915 retired male firefighters exposed to the World Trade Center disaster; only 7% actually were diagnosed with major depressive disorder.<sup>g</sup>

**Note:** The above data suggests that the survey sample has definite potential for selection bias, meaning firefighters who

had mental health concerns were more likely to respond to the survey than those who did not. This conclusion is evident because the overall prevalence of risk for depression in the survey sample is substantially higher than recent rates published for the U.S. adult population or firefighters in smaller studies. Even the age-standardized rate was substantially higher than that for the corresponding U.S. adult sample. The only rates that were comparable were the comparisons to male firefighters from a Midwestern department in 1993 and to retired firefighters exposed to the World Trade Center disaster, but a direct comparison to this sample is not possible because the samples are very different with respect to age and gender distributions. Thus, we do not consider this sample to be representative of firefighters nationally with respect to risk for depression or depressive symptoms.

#### Correlation of Risk for Depression in the Overall Sample:

##### ➤ Demographics

- Age was significantly related to depression risk (OR=0.96, 95% CI=0.95-0.98 p<0.001), suggesting that younger firefighters were more likely to meet the criterion for depression risk on the CES-D 10 in the overall sample. In fact, firefighters who were at risk for depression were more than five years younger than those who were not at risk.
- Those who were married were substantially less likely to report risk for depression (OR=0.67, 95% CI=0.45-

0.99;  $p=0.047$ ) when compared to firefighters who were never married or widowed. While firefighters who were divorced or separated demonstrated greater risk for depression (OR=1.10, 95% CI=0.60-2.04;  $p=0.753$ ) when compared to those who were never married or widowed, this association was not statistically significant.

- Chiefs were significantly less likely (OR=0.54, 95% CI=0.36-0.80;  $p=0.002$ ) to be at risk for depression when compared to firefighters. Firefighter/Paramedics were 47% more likely to meet the criterion for depression risk (OR=1.47, 95% CI=0.90-2.40;  $p=0.127$ ), but this association was not statistically significant.

#### > PTSD Symptoms

- Those who scored in the range of concern on the Impact of Events Scale were almost 5% more likely to be at risk for depression (OR=1.05, 95% CI=1.04-1.06,  $p<.001$ ).

#### > Stress

- For each unit increase in the Perceived Stress Scale, there was a 29% greater chance of being at risk for depression (OR=1.29, 95% CI=1.24-1.34,  $p<.001$ ).

#### Post-traumatic Stress Symptomatology (PTSS), Comparisons to Published Literature

> The survey asked personnel about symptoms of post-traumatic stress symptoms related to events experienced during the course of their fire service career rather than a specific event. Evidence suggests firefighters and other emergency personnel may manifest responses to exposures in a variety of ways not specific to one event but rather the repeated exposure to negative traumatic stressors.<sup>h</sup>

> Almost all (90.6%) personnel reported that they had experienced a distressing or traumatic event during their fire service career.

> Prevalence of PTSS in the published literature for firefighters range between 22% and 26% for 188 career firefighters from two urban departments.<sup>i</sup>

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**TABLE 4:**  
Alcohol use patterns in the firefighter sample

Measure	Career		Volunteer		Both	
	Male	Female	Male	Female	Male	Female
<b>Alcohol Use Past 30 Days</b>						
<b>Percent Abstinent**</b>	20.4	30.8	30.4	39.7	26.3	20.0
<i>AMONG THOSE WHO CONSUMED IN THE PAST 30 DAYS</i>						
<b>Days Drank</b>	7.9 (7.5)	7.7 (8.5)	6.4 (7.3)	6.3 (8.0)	8.1 (7.9)	6.4 (8.0)
<b>Percent Binged**</b>	44.4	37.5	33.9	24.4	42.5	60.0
<b>Number of Binge Episodes</b>	2.1 (4.1)	2.9 (6.2)	1.2 (3.0)	1.4 (3.6)	2.2 (4.7)	2.8 (2.8)
<b>Largest Number of Drinks on Any Occasion</b>	5.2 (5.2)	3.5 (3.3)	4.1 (4.3)	2.8 (2.8)	5.0 (4.5)	4.4 (3.2)

Note: Unless noted as percentages, cell entries represent mean and (standard deviation); Overall, 27.4% of who answered the survey did not drink alcohol at all in the previous month.

\*\*Overall rates of abstinence from alcohol and binge drinking in the survey sample were 27.2% (or 72.8% drank alcohol in the last 30 days) and 45.8% among those with valid alcohol consumption data.

#### Comparisons of Alcohol Use and Binge Drinking in the Survey Sample with U.S. Estimate and Data Reported for Career Firefighters:

- Prevalence of alcohol consumption in the 2010 Behavioral Risk Factor Surveillance System<sup>j</sup> was 54.1% (or 45.9% were abstinent); prevalence of binge drinking was 17.1% among 457,677 adults surveyed.<sup>k</sup>
- Prevalence of alcohol use and binge drinking also have been reported in one population-based study and two studies using convenience samples in moderate-sized fire departments.<sup>l,m,n</sup>

- 85% and 71% drank alcohol and 56% and 45% binge drank in population-based samples of male career (n=459) and volunteer (n=197) firefighters, respectively.<sup>l</sup>

- 80% used alcohol and 56% binge drank among 112 career firefighters in one Northeastern department.<sup>m</sup>

- 88.3% drank and 29% scored in the range of concern for alcohol problems on the Michigan Alcohol Screening Test among 145 male firefighters in on Midwestern fire department.<sup>n</sup>

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- n Boxer PA, Wild D. Psychological distress and alcohol use among fire fighters. *Scand J Work Environ Health* 1993;19:121-125.



**TABLE 5:**

Prevalence of firefighters who reported considering, planning, or having the means for suicide

Domain	Career			Volunteer			Both		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Percent who have considered suicide during their fire service career</b>	23.8	38.5	25.1	16.5	29.3	18.4	23.2	40.0	24.0
<b>Percent of sample who have had a plan for suicide</b>	10.5	26.9	12.1	10.1	17.5	11.2	8.2	20.0	8.8
<b>Percent of sample who have considered means of committing suicide</b>	16.9	30.8	18.1	11.4	26.8	13.6	9.2	40.0	10.7
<b>Of those who have considered suicide, percent who have had a plan</b>	42.2	70.0	45.9	58.9	58.8	58.9	34.8	50.0	36.0
<b>Of those who have considered suicide, percent who have considered the means</b>	66.7	80.0	68.5	61.4	88.2	67.6	39.1	100.0	44.0
<b>Percent who have attempted suicide during their fire service career</b>	1.9	3.8	2.0	3.5	6.9	4.0	0.0	0.0	0.0
<b>Percent who believe a fire/EMS specific suicide hotline would be a valuable resource</b>	83.3	92.3	84.1	85.8	87.9	86.1	82.8	80.0	82.7
<b>Percent who believe they would be more willing to use a tailored service than a general suicide hotline</b>	74.3	96.2	76.3	75.1	81.0	75.9	76.8	80.0	76.9

Correlation of Suicide Risk (e.g. reported suicidal ideation, a suicide plan, considering a means of suicide or attempting suicide) in the overall sample:

> Demographics

- Women were 80% more likely than men to report being at risk for suicide (OR=1.81, 95% CI=1.12-2.93, p=0.015).
- Age was not significantly related to suicide risk (OR=0.99, 95% CI=0.98-1.00, p=0.138).

- Those who were not married were twice as likely as those married to report risk of suicide (OR=2.01, 95% CI=1.42-2.85, p<0.001).

> PTSD Symptoms

- Those who scored in the range of concern on the Impact of Events Scale were almost 400% more likely to be at risk for suicide (OR=3.71, 95% CI=2.31-5.94, p<.001).

- Those who scored in the range of concern on the TSQ were nearly three times as likely to be at risk for suicide (OR=2.82, 95% CI=1.75-4.56, p<.001).

> Stress

- For each unit increase in the Perceived Stress Scale, there was a 14% greater chance of being at risk for suicide (OR=1.14, 95% CI=1.11-1.18, p<.001).

> Depression

- Those in the range of concern on the CES-D10 were nearly 4 times as likely to be at risk for suicide (OR=3.75, 95% CI=2.65-5.31, p<.001).

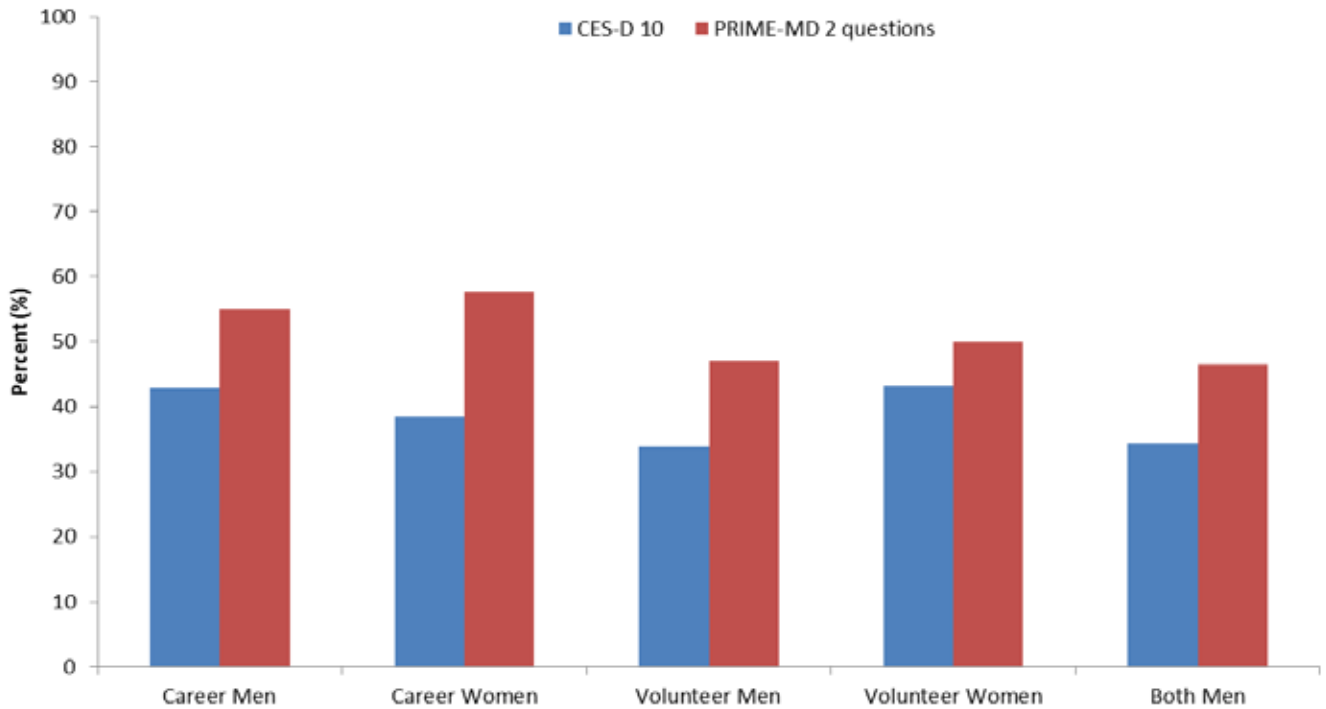
- Those in the range of concern on the PRIME-MD were nearly 5 times as likely to be at risk for suicide (OR=4.88, 95% CI=3.31-7.20, p<.001).

> Substance Use

- Each reported binge drinking episode in the past 30 days was related to almost a 10% increase in suicide risk (OR=1.09 95% CI=1.05-1.13, p<.001).

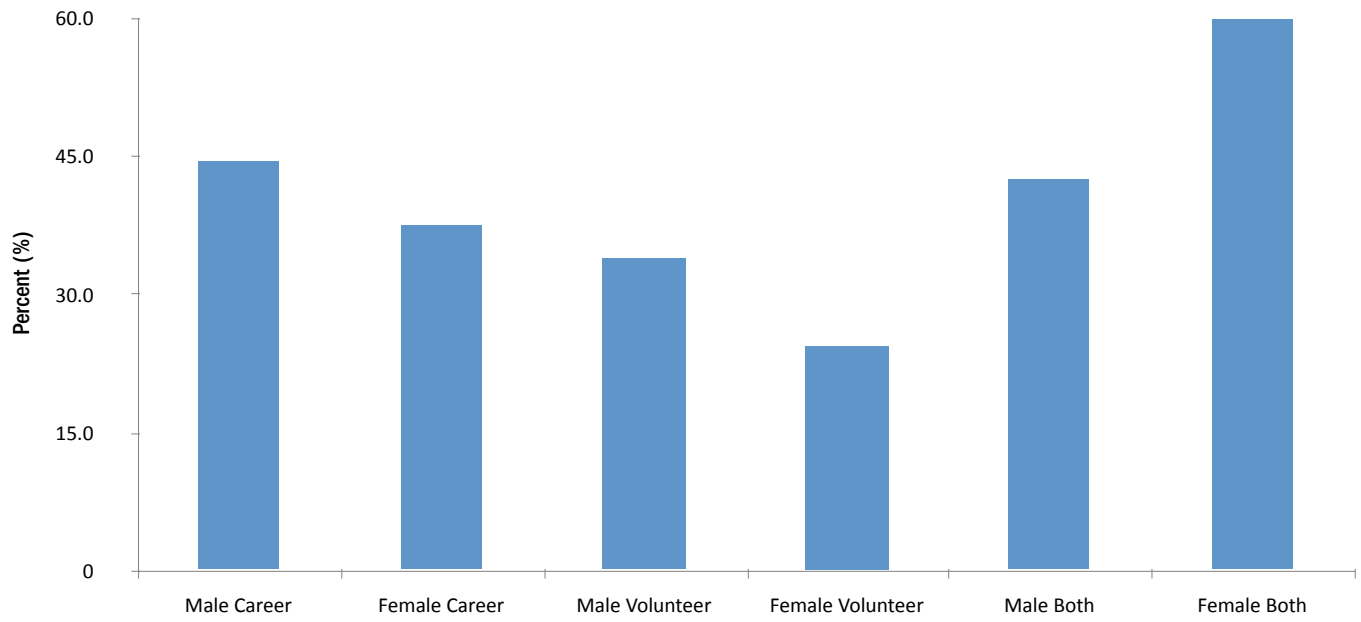
## FIGURE 1:

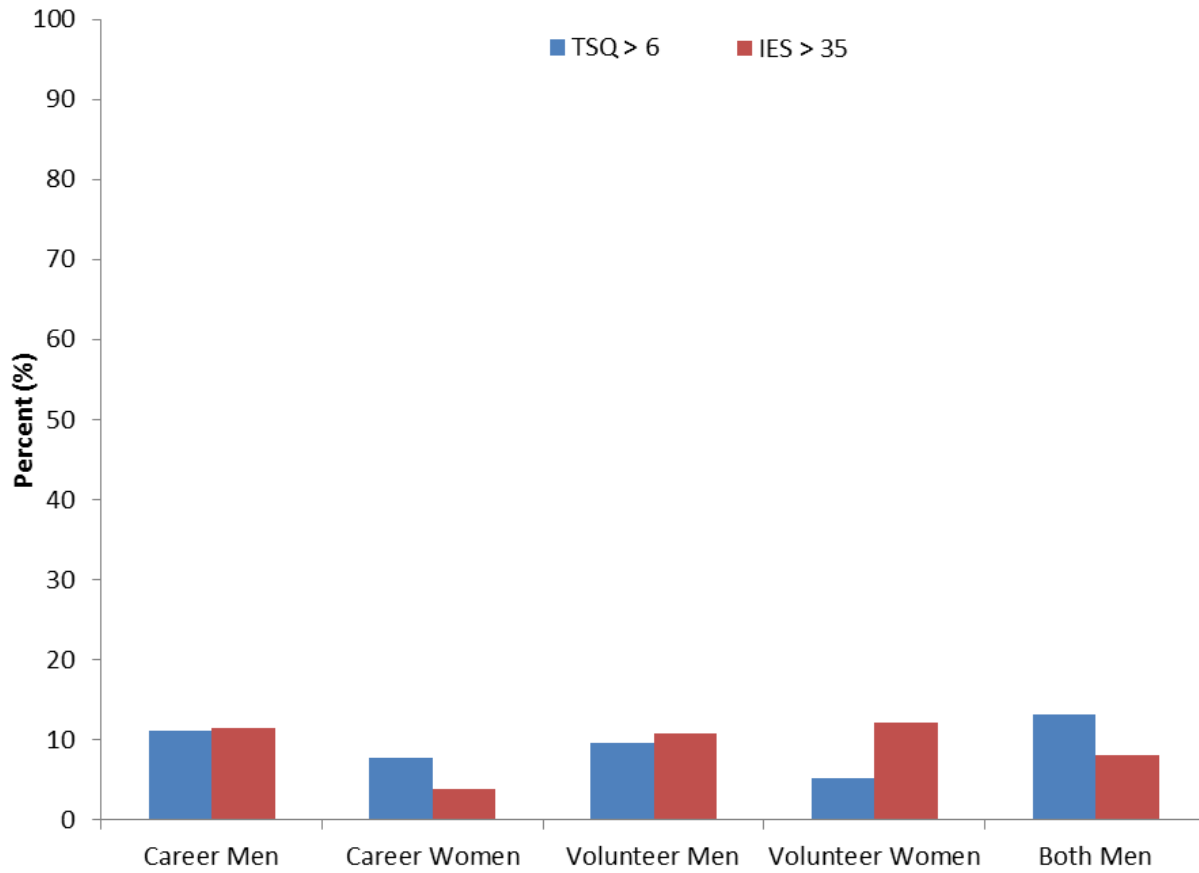
Prevalence of depression using the CES-D 10 and the Prime-MD 2 questions\*



\*Due to the low rate of women in the “both career and volunteer” category and the lack of generalizability, they were excluded from the graph.

**FIGURE 2:**  
Percent of firefighters who binge drank during the past 30 days

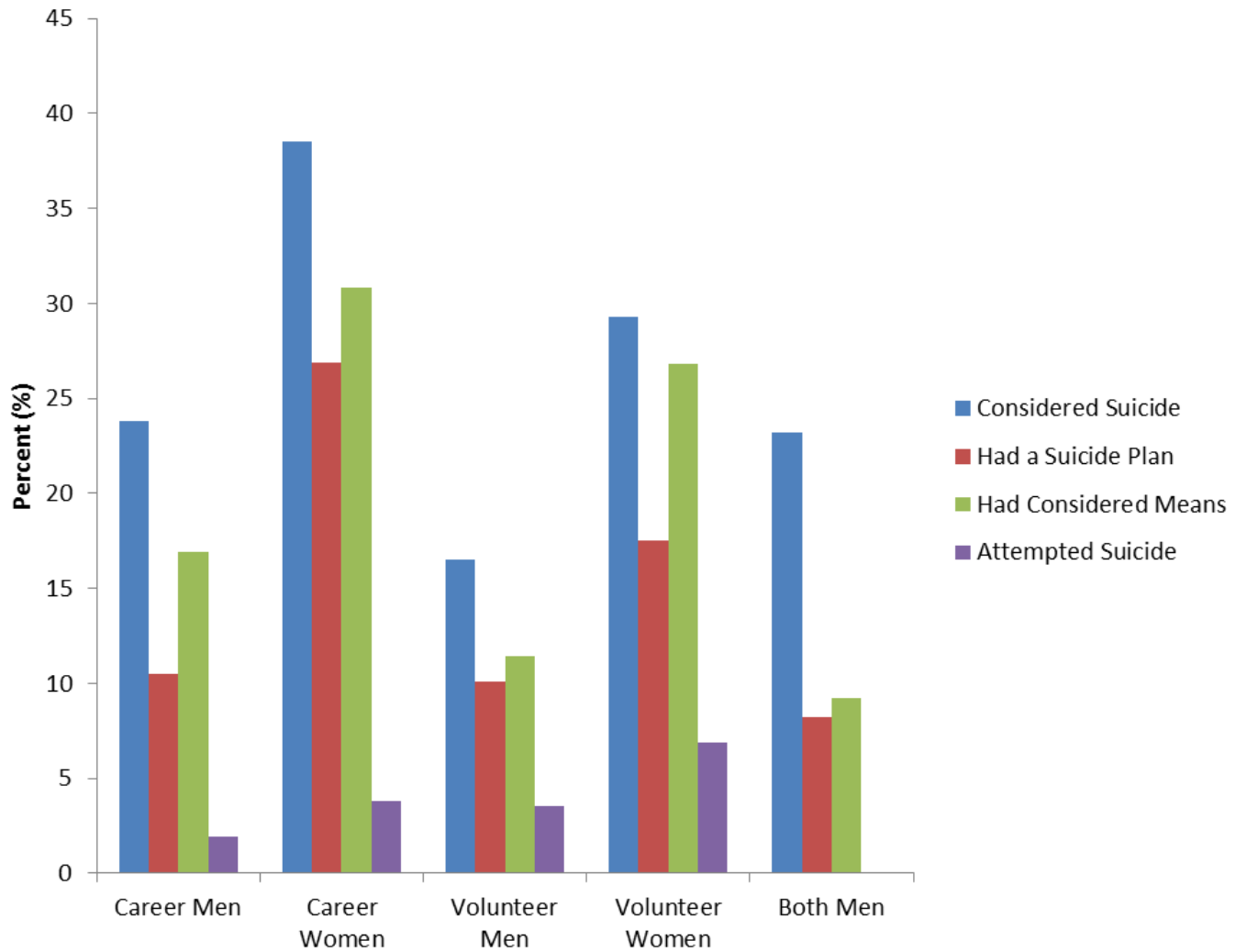


**FIGURE 3:****Percent of firefighters with elevated scores on the PTSS measures\***

\*Due to the low rate of women in the “both career and volunteer” category and the lack of generalizability, they were excluded from graphs.

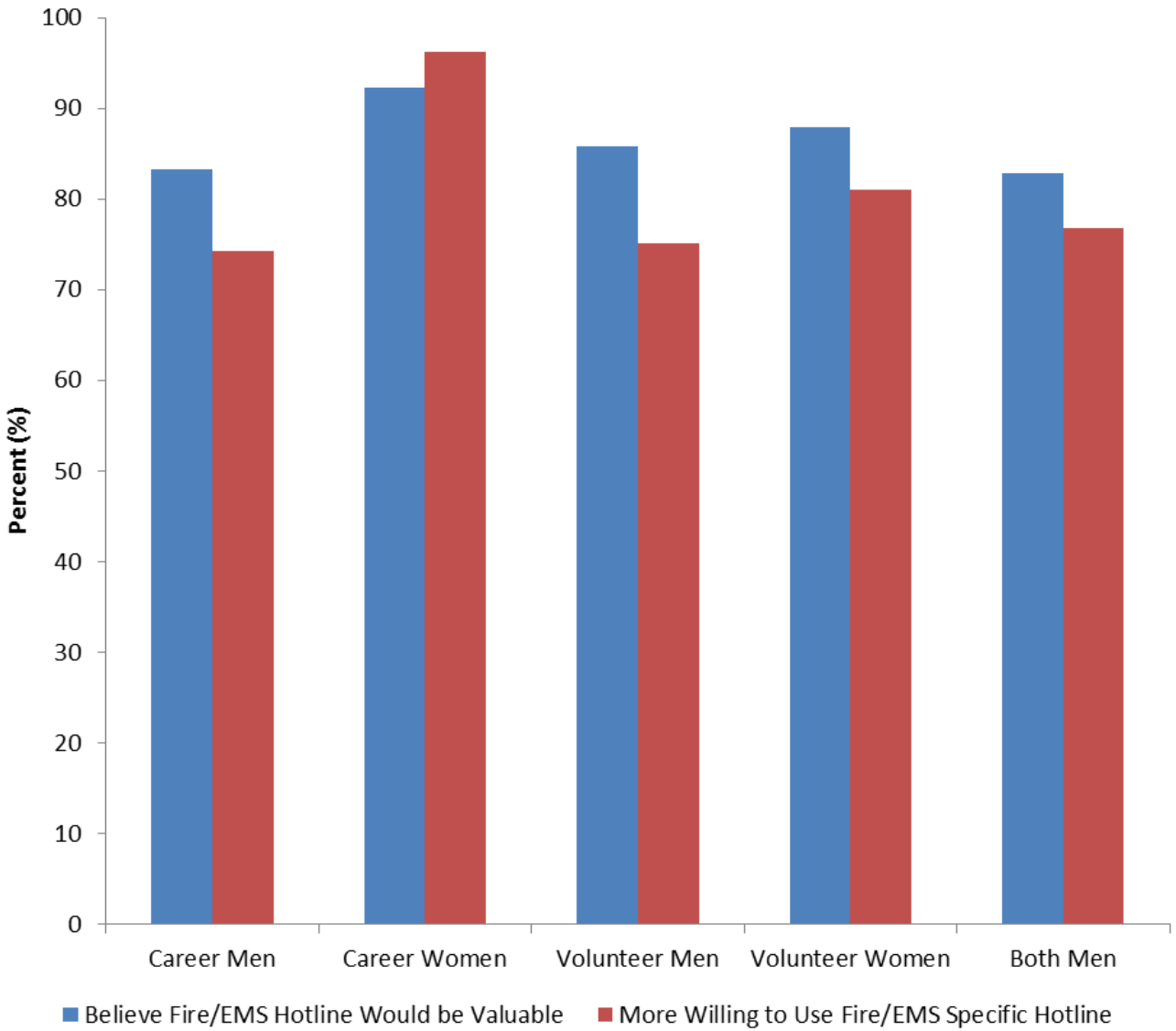
**FIGURE 4:**

Percent of firefighters endorsing questions related to suicide\*



\*Due to the low rate of women in the “both career and volunteer” category and lack of generalizability, they were excluded from graphs.



**FIGURE 5:****Percent of firefighters endorsing questions related to a suicide prevention hotline\***

\*Due to the low rate of women in the “both career and volunteer” category and lack of generalizability, they were excluded from graphs.