

# **Supporting First Responder Mental Wellness**

Combating prolonged and traumatic stress for police, fire, and EMS amid Oklahoma's mental health crisis

Police, firefighters, and emergency medical services (EMS) personnel are on the front lines of the most challenging emergencies, incidents, and disasters, often endangering their own well-being and safety for the protection of others. Communities rely on these first responders to manage urgent and emergency situations where lives may be at stake. These professionals have many positive characteristics: a commitment to helping, a family bond among teams, strong socialization and social connections, a commitment to physical health and readiness, and self-sacrifice. These qualities make first responders vital to how Oklahoma faces traumatic events. But traumatic exposures also make them vulnerable to great risks to both their physical and mental health.<sup>1</sup>

Amid a pandemic and higher levels of stress and mental health need across Oklahoma, first responders have continued to serve their communities while often dealing with growing levels of workplace stress. As a result, first responders have experienced rising mental distress, with implications for the future of these professions and safety in Oklahoma.<sup>2</sup> As Oklahoma responds to the mental health effects of the past two years, policymakers at the state, community, and jurisdictional levels can mobilize continued and new support for first responders.

### **Key Takeaways**

- Oklahoma's first responders have borne the brunt of community stressors since the onset of COVID-19. The resulting mental distress threatens first responder lives and may have significant long-term consequences for public safety in Oklahoma.
- As the state deploys innovative efforts to reach first responders, mental health stigma threatens success. According to one study, as many as 60% of first responders say they need care, but fewer than half say they sought it fearing loss of job or reputation.
- Supporting first responder wellness must be a top public safety and health priority in 2022 and beyond. Recommendations for local and state leaders include:
  - Fully deploying new statewide infrastructure supporting first responder wellness
  - Normalizing help-seeking at the top tier of leadership in first responder agencies
  - Training first responders in self-care and coping strategies
  - Growing and raising awareness of existing peer-to-peer support programs
  - o Embracing specific strategies for supporting rural first responder agencies
  - Growing collaborative models of emergency response involving police, fire, EMS, and mental health mobile crisis responders

# **High-Stress Professions**

First responders are often the first people who respond to crisis situations that involve the harm, injury, or death of other community members, and these situations often pose a personal risk to the first responders themselves. As such, first responders may experience a range of distressing events. These include **primary trauma** (facing an event or experience that threatens them directly), **secondary trauma** (witnessing traumatic events that others experience), and **moral distress or injury** (acting in or witnessing events that betray personal moral beliefs and values occurring in high-stakes situations). Although the concept of moral injury is difficult to grasp for people outside of professions that involve life-and-death situations (such as first responder and military service), it is notably a precursor to post-traumatic stress disorder and a factor in increased suicide rates.<sup>3</sup>

First responders receive extensive training in protecting themselves and others when faced with dangerous circumstances. They are screened for readiness and fitness for crisis response duties. However, rigorous physical and readiness training does not necessarily protect first responders from elevated encounters with situations that stress their mental health. As a result, first responders have always been at higher risk for mental distress than the general population. The information below summarizes research conducted prior to the pandemic.

#### Police officers

- Police die at a proportionally higher rate from suicide compared to all other workers in the U.S. working population.<sup>4</sup> Studies find that police officers have higher rates of suicide compared to the general public. Some experts suggest that studies relying on death certificate data underestimate the prevalence of suicides among police officers.<sup>5</sup>
- A study of 193 U.S. active-duty officers found that 8.8% experienced suicidal ideation in the prior two weeks;<sup>6</sup> the 12-month average for U.S. adults reporting past-year suicidal ideation at the time of the publication was 3.8%.<sup>7</sup>
- Among police officers with higher depressive symptoms, increasing work hours was associated with greater prevalence of suicidal ideation.<sup>8</sup>
- A study of police officer health disparities found the following health differences between police officers and workers in the general public:<sup>9</sup>
  - 12% of police officers had depression, compared to 6.8% of the employed general public.
  - 33% of police officers reported that they typically slept fewer than 6 hours per day, compared to 8% of the employed general public. Insufficient sleep is often strongly associated with an increased risk of mental health problems.

#### **Emergency medical services personnel**

- 10% of emergency medical services personnel worldwide experience post-traumatic stress disorder (e.g., intrusive memories, nightmares).<sup>10</sup>
- EMS personnel have a higher prevalence of post-traumatic stress disorder than does the general population.<sup>11</sup>

### **Firefighters**

- Firefighters have a higher prevalence of suicidal ideation and behaviors compared to the general population.<sup>12</sup>
- A 2015 study surveyed nearly 1,000 firefighters from urban settings and found that more than half had one or more heavy or "binge" drinking episodes in the past 30 days.<sup>13</sup>

# **Worsening factors since 2020**

Since March 2020, first responders have worked in the context of an unprecedented global pandemic that has led to rising mental health needs and trauma throughout Oklahoma. Findings highlighted in previous Healthy Minds research show that Oklahoma has experienced:<sup>14</sup>

- **Rising anxiety and depression**. Oklahoma's rates of anxiety and depression during some periods of the pandemic reached nearly four times higher than in 2019.
- **Rising suicide rates.** Between 2019 and 2020, the rate of deaths by suicide increased more than 8% statewide, with rural areas disproportionately accounting for this increase.
- **Rising drug overdose fatalities.** Overdoses climbed back to 2017 levels and are rising, with more than two years of improvements in the death rate erased. Fentanyl and substance use among individuals aged 25 and younger were among the drivers.
- **Higher rates of unmet mental health need**. For people who needed counseling, the rate of unmet need was highest in fall 2020, meaning that among people who needed counseling, only about half received therapy.

The findings reported here include first responder and their families, who have lived and worked in the same environments as all Oklahomans since the onset of the pandemic. However, unlike most Oklahomans, first responders have experienced additional stressors related to the pandemic because 1.) they are essential workers who have had to continue serving the public despite the risks presented by COVID-19, and 2.) they face additional physical and emotional dangers associated with being a first responder. The latter has arguably worsened during the pandemic as first responders have been exposed to physical danger and trauma as a result of responding to calls for service involving civilian suicides and overdose from substance use — all of which increased dramatically because of COVID-19.

For first responders during the pandemic, it is important to recognize three subgroups: 1.) those at higher-than-normal risk because of the physical health risks of COVID-19, 2.) responder-victims who contracted the virus in the line of duty, and 3.) those who experience higher-than-normal stress because of the increased physical dangers to themselves (other than COVID exposure) from working in the current environment.<sup>15</sup>

#### Absorbing the impact of a pandemic

As an essential workforce with increased exposure to the virus, first responders were disproportionately affected by COVID-19. In perhaps the most unnerving example, 62% of all duty-related law enforcement officer deaths in 2020 nationally were a result of the virus, and COVID-19 killed more law enforcement officers than any other single cause of death that year. <sup>16</sup> Uncertainty about the virus, including fear of its risks, contributed to significant workplace stress, especially early in the pandemic. According to one early study, 55% of first responders and front-line health care providers reported being concerned about their mental health. <sup>17</sup> Similar findings showed that emergency personnel experienced higher than usual rates of diagnostic thresholds (14% for acute traumatic stress, 20% for depression, and 16% anxiety) compared to earlier service periods.

First responders also tended to experience the effects of social distancing policies more acutely than did the general population. As one study noted, uniformed first responders were easy to recognize. They felt the public kept greater distance and isolation from them than from other people. This isolation also came from co-workers and family members, which has led to additional stress, depression, frustration, and stigma among first responders. These findings led a research team to claim that initial studies of traumatic stress, anxiety, and other stressors placed front-line and first responders at risk for psychiatric morbidity "at severity rates higher than previous viral outbreaks and similar to previous disasters (e.g., 9/11 and Hurricane Katrina)."

### Heightened depression, anxiety, and substance use

Recent literature on the impact of the COVID-19 pandemic on first responders comes primarily from studies completed in spring and summer 2020, a time of rapidly evolving and sometimes confusing recommendations on safety precautions from the Centers for Disease Control and Prevention (CDC) and prior to vaccine availability. One such study included 401 firefighters and 72 law enforcement personnel and used standardized screening instruments for acute traumatic stress, depression, anxiety, and risky alcohol use.<sup>20</sup> In addition, this study examined insufficient sleep (fewer than 6 hours) and pandemic-related stressors (having direct engagement with infected individuals).

These results of this study showed that:

- 14% had elevated acute traumatic stress
- 20% had elevated depression
- 16% had elevated anxiety
- 31% met criteria for risky alcohol use
- 23% met criteria for insufficient sleep
- 79% had direct contact with COVID-19 patients or people who likely had COVID-19

Studies of EMS workers between June and August 2020 also found increased alcohol consumption and severe symptoms of anxiety and depression.<sup>21</sup> Another study of EMS and inhospital providers described first responders having "feelings of isolation, lack of support and understanding by family or friends, decreased or forced removal in immediate social interaction (e.g., within family and friend circles), sentiments of being infected or dirty, increased feelings of sadness and anxiety, and reluctance to ask for help or get treatment (e.g., self-approval of being isolated)."<sup>22</sup>

These findings likely indicate that first responders experienced even higher levels of risk for mental health and substance use problems in the early period of the pandemic. Because the general public also experienced a much higher risk for behavioral health problems during the same period, first responders have experienced compound stressors: their own personal risk for behavioral health problems on top of daily interactions with a general public that is experiencing a higher frequency of life-threatening incidents. First responders getting help to manage their emotional responses is crucial to their overall wellness and to their ability to provide emergency assistance to the general population.

### Barriers to seeking help

Despite the higher rates of mental health and substance use problems among first responders compared to the general public, barriers such as social or systemic stigma and self-stigma persist, preventing first responders from seeking treatment.<sup>23</sup> According to a 2021 study, of the 60% of first responders reporting a need for care, less than half reported that they sought treatment.<sup>24</sup> Many first responders feared that if they sought help, care will not be confidential or could negatively affect their career.<sup>25</sup> Some were concerned about judgment or job discrimination by their peers and supervisors. In fact, an early pandemic survey found that 38% of first responders were concerned about colleagues finding out they needed help, as compared to 28% of health care providers. First responders were equally concerned about their employer or supervisor discovering a need for help.<sup>26</sup>

Other common barriers to care that first responders identified include challenges related to scheduling an appointment and not knowing where to get help. <sup>27,28,29,30</sup> To reduce these barriers, mental health programming for first responders should address systemic and internalized self-stigma, and peer-led interventions should be available to encourage first responders to seek treatment when needed. <sup>31,32</sup>

#### A community example: Weathering a pandemic

To gain an on-the-ground perspective on the impact of the pandemic on first responders in one Oklahoma community, we interviewed representatives from the Tulsa police and fire departments and from the First Responder Support Services organization, which provides confidential counseling to first responders in the Tulsa area and some jurisdictions outside Tulsa. Everyone interviewed indicated that pandemic stressors have exacerbated existing conditions and increased the need for mental health services. Personnel from the fire and police departments have substantially increased their utilization of counseling since the beginning of the pandemic.<sup>33</sup>

As with the overall health care industry, many first responders had significant challenges with obtaining personal protective equipment. Absences resulting from the virus resulted in a lack of personnel to fully respond to emergency situations. Improvements such as better access to personal protective equipment, COVID-19-specific treatments, and vaccines and boosters helped first responders with managing the pressures of the pandemic and their own health. But the waves of COVID-19 infections continue with no apparent end in sight. The length of the pandemic contributes to ongoing stressors and secondary trauma for first responders and the people they serve.

Interviewees and the literature also described first responders as having a special family-like bond with one another. This bond includes a strong socialization component, social connection, a group identity, self-sacrifice, and, sometimes, a sense of invincibility. <sup>34,35</sup> As the virus has taken its toll on the first responder workforce, requiring infected or potentially infected personnel to take leave to recuperate or quarantine, police and firefighters have had to cover additional shifts, further deregulating sleep and preventing full recovery from prior shifts. More recently, COVID-related deaths among colleagues in the force have resulted in many first responders grieving the loss of their own and questioning their sense of invincibility.

# **Long-Term Implications**

The effects of compounding stressors and worsened mental health outcomes for first responders are not always immediately recognizable, nor are the pandemic's direct and indirect impacts fully known. Nonetheless, the combined traumas of the past two years may leave a lasting mark on

first responder professions and Oklahoma's public safety moving forward. The threat of further loss of life among first responders, including suicide, is a top concern, particularly considering the lower rates of help-seeking for mental health conditions among certain first responders.

Although more studies on the workforce and pandemic are needed, initial findings suggest that pandemic stressors have contributed to both workforce and workplace issues. Some of these issues were immediate, with one study showing that half of the health care workforce reported being less likely to stay in their positions because of the pandemic.<sup>36</sup> A study of clinicians found that 19% reported retiring early or intending to retire early because of the pandemic; although findings for clinicians do not directly apply to first responders, responses are likely similar.<sup>37</sup> As one observer noted, "health care staffing shortages are in and of themselves a COVID-19 stressor."<sup>38</sup> As more first responders retired, resigned, or were removed from the front lines, the decreased workforce had, and continues to have, increased negative effects on first responders' well-being and retention because of workforce shortages and having to cover extra shifts.

Additional concerns surround the way all these stressors, if not adequately addressed, shape both how first responders and the people they serve are negatively affected. Especially during the peak periods of the pandemic, first responders experienced post-traumatic stress disorder (PTSD) at much higher levels than the general public did. The ongoing needs for PTSD support and treatment are essential, given that initial findings show PTSD symptoms are especially prevalent among first responders and are the symptom most related to "adverse occupational outcomes." Together, PTSD, sleep concerns, increased fatigue, workforce turnover, and other mental and physical health needs are likely to have ongoing effects for first responders. These concerns are consistent with a pre-pandemic study finding that fatigue among first responders endangered both personal health and safety, as well as the health and safety of the public and other responders. Together, as well as the health and safety of the public and other responders.

Moreover, instances of moral injury may increase at times of heightened community and workplace stress for first responders. Reporting on the experiences of first responders, a leading publication for fire and rescue professionals states that moral injury occurs when a leader "violates what is believed to be right in a high stakes situation" or when an individual "perpetuates, fails to prevent, bears witness to, or learns about an act that transgresses deeply held moral beliefs."

1 The results of moral injury can affect work performance and overall safety, as individuals experiencing moral injury may experience any of the following:

- "feelings of guilt, shame, anger, sadness, anxiety, and disgust;
- intrapersonal outcomes, including lowered self-esteem; high self-criticism; beliefs about being bad, damaged, unworthy, or weak; and self-handicapping behaviors;

- interpersonal outcomes, including loss of faith in people, avoidance of intimacy, and lack of trust in authority figures; and
- existential and spiritual outcomes, including loss of faith in previous religious beliefs, and no longer believing in a just world."<sup>42,43</sup>

# **Recommendations and Policy Considerations**

Systems of supports for the mental health of first responders have developed over the years in recognition of the stressors they experience on a day-to-day basis and the heightened or extreme trauma experienced in life-threatening critical incidents. These mental health supports include employee assistance programs and trauma-specific services for post-traumatic stress disorder. In recent years, the availability of peer supports has become more common. In these supports, officers are selected to receive training in recognizing mental health symptoms in peers, engaging in supportive discussions with their coworkers, and offering referrals when indicated. However, it is not clear whether these resources are well utilized among first responders. Low utilization may have several causes, such as stigma related to mental health and substance use conditions and a sense of invincibility among first responder teams.

During the pandemic, it became increasingly important to strengthen and expand these mental health supports. Below are policy recommendations for addressing the needs of first responders.

### 1. Fully deploy and sustain statewide infrastructure designed to support first responders

Oklahoma is building on its infrastructure to support the wellness of first responders, most notably for police. The Oklahoma Department of Mental Health and Substance Abuse Services (ODMHSAS) implemented a program that provides confidential telehealth access for law enforcement officers to mental health professionals using iPads. Through these devices, officers from participating agencies can reach out to debrief after critical incidents or process their day-to-day experiences with clinicians. However, utilization could be improved with continued enhancements, including 1.) ensuring this service includes options for first responders to connect with support outside of the local area to increase utilization and reduce stigma barriers, 2.) ramping up collaboration with specific police agencies whose officers may have concerns about utilizing the service, and 3.) providing resources to ensure connectivity of the technology every time it is deployed. Experts emphasize that utilization of these services is significantly influenced by agency leadership who demonstrate support for officers seeking help. This iPad service could also be made available to other first responder groups.

Additionally, the Oklahoma Legislature recently passed SB 1613, which authorizes a Mental Wellness Division within the Department of Public Safety. This important policy step allows for a safe and confidential service for public safety personnel to seek help when needed. A small

amount of funding — \$150,000— was appropriated in the 2022 state budget for this purpose. Because of this, Oklahoma has the opportunity to broaden and deepen this state-of-the-art initiative, expanding this type of service to other first responder agencies at the state level and supporting its dissemination to county and municipal governments in support of their front-line personnel. Increasing access to direct behavioral health services, both in-person and through the use of telehealth, is a strategy that could put Oklahoma at the forefront nationally as a state that cares for the mental wellness of its first responders.

# 2. First responder leadership must deal directly with stigma about stress and its relationship to mental health challenges

Leaders must clearly and directly encourage participation in self-care and mental health services and convey that seeking help is a valued strength in their respective organizations. Leadership storytelling and role modeling of experiences and positive mental health practices help dismantle stigma. Explicit protections of job safety and support for seeking mental health support should be communicated. Leaders can specifically endorse the use of emerging support resources, such as the ODMHSAS iPad system, for anonymous help-seeking by law enforcement officers.

# 3. First responder leadership must continually assess the occurrence of incidents by peers, leaders, or the organization that may betray moral and ethical beliefs of their staff and their organizational values

Incidents that staff view as betraying morals and ethics lead to perceptions of leadership failure within and above the organization. They also lead to perceptions that leaders appear to be uncaring or incompetent. Part of the assessment for moral injury should include monitoring sick days for staff members who are physically well but need time off, the overall morale of the organization, and the frequency of episodes when staff display contempt, anger, and disgust. Access to suicide prevention training and suicide assessments should also be available.

# 4. Provide training to first responders in self-care strategies and how to recognize and manage stress before it turns into distress and maladaptive coping strategies

Stress is commonplace in the role of first responders and actually has the positive attribute of pressuring individuals to change, adapt, and grow as they master skills to deal with new challenges in their environment. However, prolonged and traumatic stress can sometimes overwhelm a person's ability to cope and manage effectively. At this point, the person experiences distress, which can lead to anxiety, depression, and abuse of substances to mitigate the discomfort. Recognition of one's experience and adaptiveness to stress, as well as healthy coping skills to prevent distress, can be developed through training and practice.

For self-care, the Substance Abuse and Mental Health Services Administration (SAMHSA) has a Resource Portal that includes training such as Shield of Resilience (for law enforcement) and Service to Self (for firefighters and EMS). The International Association of Fire Fighters also operates the Center of Excellence for Behavioral Health Treatment and Recovery, which offers treatment for post-traumatic stress disorder and connects fire fighters to other mental health resources.

# 5. Provide employee assistance programs and first responder-specific support services to department staff

Fire and police departments can make one or both services available to staff and encourage their use for preventing and treating mental health disorders. To facilitate access and utilization, these services should be readily available, free, and confidential. In contracting for these services, it is important to verify that the provider organization staff are trained and utilize evidence-based practices for treating anxiety, depression, and post-traumatic stress disorder. These practices include cognitive behavioral therapy, cognitive processing therapy, and eye movement desensitization and reprocessing. Because mental illness affects relationships, services should be available, either through marital or family counseling, to spouses and others who live with and support first responders.

### 6. Develop peer support programs within each department

Peer support programs train and support selected front-line personnel to recognize behaviors that indicate a fellow first responder may be struggling to cope. Peer support personnel are trained to engage with and discuss what the fellow first responder is experiencing. Peer support staff can share their own experiences and can encourage their peers to examine their situation and seek professional help when needed. Peer-focused interventions may be preferred over other types of interventions because peers understand the nature of the work and are trusted more than professionals.<sup>44</sup> Developing peer support programs serves to embed peer support staff within the force where they can be readily available when needed. Peers in support must be allowed to provide this service as part of their routine workday and not as an extra duty without pay. Department leadership must also support and encourage its use.

Local peer support programs and resources:

- Warriors Rest Foundation has resources across Oklahoma to mentor and train peer support teams to help first responders and their families.<sup>45</sup>
- ODMHSAS provides **Mental Health First Aid for First Responders** and online suicide prevention training through **LivingWorks Start**.

National exemplars of peer-led interventions:

- REACT (Recognize, Evaluate, Advocate, Coordinate, and Track) is a paraprofessional program that trains first responders to provide peer support. Research suggests that colleagues trained in this program were better equipped to talk to peers about mental health and to encourage seeking treatment.<sup>46</sup>
- Firefighter Behavioral Health Alliance, run by former and current first responders, provides behavioral health workshops to firefighters and EMS personnel to increase behavioral health awareness and promote available resources. The alliance educates personnel on the signs and symptoms of behavioral health problems, communication, and confidentiality to promote good mental health and to prevent first responder deaths by suicide.
- Lifelines staffed by peers can provide confidential crisis or support services for first responders. These services can remove some of the barriers to reaching out for help. **CopLine** is an international law enforcement officers' hotline staffed by retired officers.

# 7. Adapt first responder support services and training approaches for rural departments with small numbers of personnel by collaborating across jurisdictions

Fire and police departments in rural communities have small numbers of personnel on their respective forces. Pulling a member out of service for training or any other reason is difficult, as that reassignment leaves the community under-staffed for public safety response. These communities also have limited access to nearby mental health services. These factors complicate the cost and logistics of providing training for rural departments, which therefore must employ strategies and approaches different from their urban and suburban departments counterparts.

To overcome these barriers, allocations of federal COVID relief funding should be considered to establish a supportive infrastructure for rural departments. Additionally, some type of regional planning should be considered to achieve the economy of scale necessary to sustain such efforts. Technology could be used to bring remote training and mental health care to first responders. These technologies would reduce the barriers of transportation and travel time. Also, regional planning could involve a contribution of resources from municipal, county, state, and federal resources.

# 8. Reduce the burden on first responders – and increase safety – with collaborative response models involving first responders and mental health professionals

Starting July 16, 2022, anyone in Oklahoma will be able to call 988, the new national mental health crisis line, or 911 to request assistance for themselves or others during a mental health crisis. The mental health crisis lines are staffed with people trained to address mental health crises, particularly suicide risk, and can deploy a range of services, such as phone, text, or chat de-escalation and support, as well as mental health mobile crisis teams when the caller needs

this level of care. The coordination of calls between 911 and 988 would help ensure that the caller gets connected to a person with the right training and skills to address their specific needs. Some jurisdictions in Oklahoma and other communities across the country have already begun to coordinate the handling of calls from people with mental health crises between mental health and 911 call takers. However, as 988 becomes the preferred number for mental health crises, each community will need to mobilize and plan to access available funding that supports better, more coordinated interventions involving clearly defined roles for police, fire, EMS, and mental health mobile responders. These staff can assist each other with managing community crises related to the past two years of the COVID-19 pandemic and ongoing mental health incidents. They can also work together to prevent or minimize overreliance on already stressed first responders to manage mental health crises in their communities.

New federal legislation and funding are currently available to increase community-based responses to mental health crises. These responses include strengthening call centers in preparation for the rollout of 988 as the mental health crisis number, increasing capacity for mobile crisis teams to assist people needing face-to-face contact, and establishing crisis facilities run by mental health staff. The federal funds for these services are being allocated to states, counties, and communities across Oklahoma from the CARES Act and the American Rescue Plan Act. In Oklahoma, many of these efforts are overseen and funded by ODMHSAS as part of its comprehensive crisis response plan. Organizations such as ODMHSAS and Healthy Minds Policy Initiative are available to help communities in Oklahoma coordinate local responses, funding and staffing plans, and strategies to ensure maximum benefit from the new 988 system.

<sup>&</sup>lt;sup>1</sup> Substance Abuse and Mental Health Services Administration. (2018). *First responders: Behavioral health concerns, emergency response, and trauma*. https://www.samhsa.gov/sites/default/files/dtac/supplementalresearchbulletin-firstrespondersmay2018.pdf

<sup>&</sup>lt;sup>2</sup> Substance Abuse and Mental Health Services Administration. (2018). *First responders: Behavioral health concerns, emergency response, and trauma*. https://www.samhsa.gov/sites/default/files/dtac/supplementalresearchbulletin-firstrespondersmay2018.pdf

<sup>&</sup>lt;sup>3</sup> Ames, D., Erickson, Z., Youssef, N. A., Arnold, I., Adamson, C. S., Sones, A. C., Yin, J., Haynes, K., Volk, F., Teng, E. J., Oliver, J. P., & Koenig, H. G. (2019). Moral injury, religiosity, and suicide risk in U.S. veterans and active duty military with PTSD symptoms. *Military Medicine*, *184*(3-4), e271–e278. https://doi.org/10.1093/milmed/usy148

<sup>&</sup>lt;sup>4</sup> Substance Abuse and Mental Health Services Administration. (2018). *First responders: Behavioral health concerns, emergency response, and trauma*. https://www.samhsa.gov/sites/default/files/dtac/supplementalresearchbulletin-firstrespondersmay2018.pdf

<sup>&</sup>lt;sup>5</sup> Stanley, I., Hom, M., & Joiner, T. E. (2016). A systematic review of suicidal thoughts and behaviors among police officers, firefighters, EMTs, and paramedics. *Clinical Psychology Review 44*, 25–44. https://doi.org/10.1016/j.cpr.2015.12.002

<sup>&</sup>lt;sup>6</sup> Chopko, B. A., Palmieri, P. A., & Facemire, V. C. (2014). Prevalence and predictors of suicidal ideation among U.S. law enforcement officers. *Journal of Police and Criminal Psychology*, *29*(1), 1–9. https://doi.org/10.1007/s11896-013-9116-z

<sup>&</sup>lt;sup>7</sup> Han, B., Compton, W. M., Gfroerer, J., & McKeon, R. (2015). Prevalence and correlates of past 12-month suicide attempt among adults with past-year suicidal ideation in the United States. *The Journal of Clinical Psychiatry*, *76*(03), 295–302. https://doi.org/10.4088/JCP.14m09287

- <sup>8</sup> Violanti, J. M., Charles, L. E., Hartley, T. A., Mnatsakanova, A., Andrew, M. E., Fekedulegn, D., Vila, B., & Burchfiel, C. M. (2008). Shift-work and suicide ideation among police officers. *American Journal of Industrial Medicine*, *51*(10), 758–768. https://doi.org/10.1002/ajim.20629
- <sup>9</sup> Hartley, T. A., Burchfiel, C. M., Fekedulegn, D., Andrew, M. E., & Violanti, J. M. (2011). Health disparities in police officers: Comparisons to the U.S. general population. *International Journal of Emergency Mental Health*, *13*(4), 211–220. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4734372/
- <sup>10</sup> Berger, W., Coutinho, E. S., Figueira, I., Marques-Portella, C., Luz, M. P., Neylan, T. C., Marmar, C. R., & Mendlowicz, M.V. (2012). Rescuers at risk: A systematic review and meta-regression analysis of the worldwide current prevalence and correlates of PTSD in rescue workers. *Social Psychiatry and Psychiatric Epidemiology, 47*(6), 1001–11. https://doi.org/10.1007/s00127-011-0408-2
- <sup>11</sup> Berger, W., Coutinho, E. S., Figueira, I., Marques-Portella, C., Luz, M. P., Neylan, T. C., Marmar, C. R., & Mendlowicz, M.V. (2012). Rescuers at risk: A systematic review and meta-regression analysis of the worldwide current prevalence and correlates of PTSD in rescue workers. *Social Psychiatry and Psychiatric Epidemiology, 47*(6), 1001–11. https://doi.org/10.1007/s00127-011-0408-2
- <sup>12</sup> Stanley, I., Hom, M., & Joiner, T. E. (2016). A systematic review of suicidal thoughts and behaviors among police officers, firefighters, EMTs, and paramedics. *Clinical Psychology Review 44*, 25–44. https://doi.org/10.1016/j.cpr.2015.12.002
- <sup>13</sup> Haddock, C. K., Day, R. S., Poston, W. S. C., Jahnke, S. A., & Jitnarin, N. (2015). Alcohol use and caloric intake from alcohol in a national cohort of U.S. career firefighters. *Journal of Studies on Alcohol and Drugs*, *76*(3), 360–366. https://doi.org/10.15288/jsad.2015.76.360
- <sup>14</sup> Healthy Minds Policy Initiative. (September 2, 2021). *The impact of COVID-19 on Oklahoma mental health: Behavioral health trends since the onset of the pandemic*. https://www.healthymindspolicy.org/wp-content/uploads/2021/09/COVID-General-Update-September-2021.pdf
- <sup>15</sup> Drew, J. M., & Martin, S. (2020). Mental health and well-being of police in a health pandemic: Critical issues for police leaders in a post-COVID-19 environment. *Journal of Community Safety and Well-Being*, 5(2), 31–36. https://doi.org/10.35502/jcswb.133
- <sup>16</sup> Violanti, John M; Desta Fekedulegn, Erin McCanlies, and Michael E. Andrew. *Proportionate mortality and national rate of death from COVID-19 among US law enforcement officers: 2020.* Policing: An International Journal. (May 24, 2022). https://www.emerald.com/insight/content/doi/10.1108/PIJPSM-02-2022-0022/full/html
- <sup>17</sup> Cohen Veterans Network. (2020, June 11). New survey shows COVID-19 is having a significant impact on the mental health of America's frontline healthcare providers and first responders. https://www.prnewswire.com/news-releases/new-survey-shows-covid-19-is-having-a-significant-impact-on-the-mental-health-of-americas-frontline-healthcare-providers-and-first-responders-301074693.html
- <sup>18</sup> Zolnikov, T. R., & Furio, F. (2021). First responders and social distancing during the COVID-19 pandemic. *Journal of Human Behavior in the Social Environment*, *31*(1–4), 244–253. https://doi.org/10.1080/10911359.2020.1811826
- <sup>19</sup> Wright, H. M., Griffin, B. J., Shoji, K., Love, T. M., Langenecker, S. A., Benight, C. C., & Smith, A. J. (2021). Pandemic-related mental health risk among front line personnel. *Journal of Psychiatric Research*, 137, 673–680. https://doi.org/10.1016/j.jpsychires.2020.10.045
- <sup>20</sup> Wright, H. M., Griffin, B. J., Shoji, K., Love, T. M., Langenecker, S. A., Benight, C. C., & Smith, A. J. (2021). Pandemic-related mental health risk among front line personnel. *Journal of Psychiatric Research*, *137*, 673–680. https://doi.org/10.1016/j.jpsychires.2020.10.045
- <sup>21</sup> Vujanovic, A. A., Lebeaut, A., & Leonard, S. (2021). Exploring the impact of the COVID-19 pandemic on the mental health of first responders. *Cognitive Behaviour Therapy*, *50*(4), 320–35. https://doi.org/10.1080/16506073.2021.1874506
- <sup>22</sup> Zolnikov, T. R., & Furio, F. (2020). Stigma on first responders during COVID-19. *Stigma and Health, 5*(4), 375–379. https://doi.org/10.1037/sah0000270
- <sup>23</sup> Haugen, P.T., Evces, M., & Weiss, D.S. (2012). Treating posttraumatic stress disorder in first responders: A systematic review. *Clinical Psychology Review, 32*, 370–380.
- <sup>24</sup> Rikkers, W., & Lawrence, D. (2021). Mental health help-seeking experiences and service use among Australian first responders. *Australian Journal of Psychology*, *73*, 125–133.

- <sup>25</sup> Haugen, P. T., McCrillis, A. M., Smid, G. E., & Nijdam, M. J. (2017). Mental health stigma and barriers to mental health care for first responders: A systematic review and meta-analysis. *Journal of Psychiatric Research, 94*, 218–229.
- <sup>26</sup> Cohen Veterans Network. (2020, June 11). New survey shows COVID-19 is having a significant impact on the mental health of America's frontline healthcare providers and first responders. https://www.prnewswire.com/news-releases/new-survey-shows-covid-19-is-having-a-significant-impact-on-the-mental-health-of-americas-frontline-healthcare-providers-and-first-responders-301074693.html
- <sup>27</sup> Chapman, P. L., Cabrera, L. D., Varela-Mayer, C., Baker, M. M., Elnitsky, C., Figley, C., et al. (2012). Training, deployment preparation, and combat experiences of deployed health care personnel: Key findings from deployed U.S. Army combat medics assigned to line units. *Military Medicine*, *177* (3), 270e277.
- <sup>28</sup> Chapman, P. L., Elnitsky, C., Thurman, R. M., Pitts, B., Figley, C., & Unwin, B. (2014). Posttraumatic stress, depression, stigma, and barriers to care among U.S. Army healthcare providers. *Traumatology: An International Journal, 20* (1), 19e23. http://dx.doi.org/10.1037/h0099376.
- <sup>29</sup> Davenport, P. B. (2012). Assessing deployment risk and resiliency factors and the adjustment outcomes of police officers serving in Operation Iraqi Freedom and Operation Enduring Freedom. Virginia Commonwealth University. https://doi.org/10.25772/SNTZ-Z648
- <sup>30</sup> Fox, J., Desai, M. M., Britten, K., Lucas, G., Luneau, R., & Rosenthal, M. S. (2012). Mental health conditions, barriers to care, and productivity loss among officers in an urban police department. *Connecticut Medicine*, *76* (9), 525e531.
- <sup>31</sup> Haugen, P. T., McCrillis, A. M., Smid, G.E., & Nijdam, M.J. (2017). Mental health stigma and barriers to mental health care for first responders: A systematic review and meta-analysis. *Journal of Psychiatric Research*, *94*, 218–229.
- <sup>32</sup> Marks, M. R., Bowers, C., DePesa, N. S., Trachik, B., Deavers, F. E., & James, N.T. (2017). REACT: A paraprofessional training program for first responders: A pilot study. *Bulletin of the Menninger Clinic*, *81*, 150–166.
- <sup>33</sup> The average monthly First Responder Support Services (FRSS) intakes have increased 21% since the beginning of COVID (March 2020). On average, there were 16.6 new intakes per month during the 18 months before the pandemic (March 2019 to February 2020), compared to an average of 20.1 intakes per month since the start of the pandemic (March 2020 to August 2021). This increase is predominately driven by intake trends during the summer of 2020, which had the highest number of intakes, peaking at 37 in July 2020. Recently, intakes have been trending down to about 15 per month (May 2021 to August 2021). The total number of direct FRSS services has increased in the last 3 consecutive years (2019 3,345; 2020 4,536; and 2021 6,389), representing a 91% increase between 2019 and 2021.
- <sup>34</sup> Vujanovic, A. A., Lebeaut, A., & Leonard, S. (2021). Exploring the impact of the COVID-19 pandemic on the mental health of first responders. *Cognitive Behaviour Therapy*, *50*(4), 320–35. https://doi.org/10.1080/16506073.2021.1874506
- <sup>35</sup> The Link. (2017, November 7). *Five characteristics of first responders*. Columbia Southern University. https://www.columbiasouthern.edu/blog/blog-articles/2017/november/characteristics-of-first-responders/
- <sup>36</sup> Hendrickson, R. C., Slevin, R. A., Hoerster, K. D., Chang, B. P., Sano, E., McCall, C. A., Monty, G. R., Thomas, R. G., & Raskind, M. A. (2022). The impact of the COVID-19 pandemic on mental health, occupational functioning, and professional retention among health care workers and first responders. *Journal of General Internal Medicine*, *37*(2), 397–408. https://doi.org/10.1007/s11606-021-07252-z
- <sup>37</sup> Hendrickson, R. C., Slevín, R. A., Chang, B. P., Sano, E., McCall, C., & Raskind, M. A. (2020). The impact of working during the Covid-19 pandemic on health care workers and first responders: Mental health, function, and professional retention (p. 2020.12.16.20248325). medRxiv. https://doi.org/10.1101/2020.12.16.20248325
- <sup>38</sup> Hendrickson, R. C., Slevin, R. A., Hoerster, K. D., Chang, B. P., Sano, E., McCall, C. A., Monty, G. R., Thomas, R. G., & Raskind, M. A. (2022). The impact of the COVID-19 pandemic on mental health, occupational functioning, and professional retention among health care workers and first responders. *Journal of General Internal Medicine*, *37*(2), 397–408. https://doi.org/10.1007/s11606-021-07252-z
- <sup>39</sup> Hendrickson, R. C., Slevin, R. A., Hoerster, K. D., Chang, B. P., Sano, E., McCall, C. A., Monty, G. R., Thomas, R. G., & Raskind, M. A. (2022). The impact of the COVID-19 pandemic on mental health, occupational functioning, and professional retention among health care workers and first responders. *Journal of General Internal Medicine*, *37*(2), 397–408. https://doi.org/10.1007/s11606-021-07252-z
- <sup>40</sup> Yung, M., Du, B., Gruber, J., & Yazdani, A. (2021). Developing a Canadian fatigue risk management standard for first responders: Defining the scope. *Safety Science*, *134*, 105044. https://doi.org/10.1016/j.ssci.2020.105044

<sup>&</sup>lt;sup>41</sup> Fayed, M. (2021, November 15). Health and wellness: Beyond PTSD: moral injury in first responders. Firehouse. https://www.firehouse.com/safety-health/article/21241509/health-wellness-beyond-ptsd-moral-injury-in-first-responders

<sup>&</sup>lt;sup>42</sup> Centre for Posttraumatic Mental Health and the Canadian Centre of Excellence – PTSD. (2020). *Moral stress amongst healthcare workers during COVID-19: A guide to moral injury. Phoenix Australia*. https://www.phoenixaustralia.org/wp-content/uploads/2020/07/Moral-Stress-Healthcare-Workers-COVID-19-Guide-to-Moral-Injury.pdf.

<sup>&</sup>lt;sup>43</sup> Chen, Q., Liang, M, Li, Y., Guo, J. Fei, D. Wang, L, & et al. (2020, February 18). Mental health care for medical staff in China during the COVID-19 outbreak. *The Lancet Psychiatry*, 7(4): p. e15-e16. https://doi.org/10.1016/S2215-0366(20)30078-X

Lai, J., Ma, S., Wang, Y., & et al. (2020). Factors associated with mental health outcomes among health care workers exposed to Coronavirus disease 2019. *JAMA Network Open, 3*(3): p. e203976. https://doi.org/10.1001/jamanetworkopen.2020.3976

<sup>&</sup>lt;sup>44</sup> Repper, J. & Carter, T. (2011). A review of the literature on peer support in mental health services. *Journal of Mental Health,* 20, 392–411.

<sup>&</sup>lt;sup>45</sup> Warriors Rest Foundation.(n.d.). What we do. https://www.warriorsrestfoundation.org/what-we-do

<sup>&</sup>lt;sup>46</sup> Horan, K. A., Marks, M., Ruiz, J., Bowers, C., & Cunningham, A. (2021). Here for my peer: The future of first responder mental health. *International Journal of Environmental Research and Public Health*, *18*(21); 11097. https://doi.org/10.3390/ijerph182111097