

The Mental Health of Disaster Responders



Giacomo Florio, PA-C^{a,b,*}, Jamla Rizek Bergman, MSN, RN, CEN, CPEN, TCRN, NREMT-P^c

KEYWORDS

- Post-traumatic stress disorder • First responders • Mental health • DMAT
- Debriefing • Suicide • Divorce

KEY POINTS

- First responders are at an increased rate of suicide.
- First responders have a higher rate of divorce.
- First responders are the key individuals during a disaster.
- A collaboration of first responders make up DMAT.

INTRODUCTION

Disasters can strike at any time or place. Some disasters are forewarned, such as hurricanes, and some are completely unexpected, such as tornadoes, earthquakes, and terror attacks.^{1,2} Disaster responders mobilize for such situations sometimes with less than 24 hours' notice. Disaster responders in the case of an expected disaster stage in the areas nearby or in an easily accessible area to rapidly deploy out of. Disaster responders need to be flexible and mobilize at a moment's notice. With rapid mobilization, many natural or man-made disasters can produce an overwhelming disruption to one's social, familial, and economic wellbeing. This can create an undue amount of stress in a providers' life. This article discusses who disaster responders are, the stressors disaster responders may face, and the resources available to them.

THE DISASTER RESPONDER DEFINED

Disaster responders are usually made up of a wide array of professional and volunteer organizations with varying levels of disaster experience. Those who are involved in the disaster response vary greatly in their professions. According to Title 6 – Domestic

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^a St. James Hospital, 411 Canisteo Street, Hornell, NY 14843, USA; ^b Emergency Department, Highland Hospital, 1000 South Avenue, Rochester, NY 14620, USA; ^c Detroit Medical Center Sinai Grace Hospital, 6071 Outer Dr. W Detroit, MI 48235, USA

* Corresponding author.

E-mail addresses: GIACOMO_FLORIO@URMC.ROCHESTER.EDU (G.F.); jamlabergman@gmail.com (J.R.B.)

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Security of the United States Code, Disaster responders include the individuals and groups listed in **Table 1**.

The term emergency response providers includes federal, state, and local government and nongovernment emergency public safety, fire, law enforcement, emergency response, emergency medical and related personnel, agencies, and authorities.³⁻⁵ Also, many NGOs, churches, and other organizations respond to a disaster. These individuals leave their families and their work behind, to be able to focus on the mission at hand. Whether that mission is a planned event such as in staging for a potential disaster, for events such as the State of the Union, or a disaster that just happened such as massive flooding, or an act of nature, disaster responders provide the care that is needed at that time with the resources that are available to them.

Many individuals play a role in disaster response. Teams may be made up of doctors, physician assistants, nurse practitioners, nurses, paramedics, and pharmacists. Pharmacists are invaluable members of a disaster team, as they can aid providers and give alternatives to medication that a provider may be used to using and let them know what is actually available in the supplied cache (medications that are available to a deployment team). The logistics team is another group within the disaster team that can help reduce a provider's stress in that team members have the know how to keep teams functioning and supplies replenished including having a plan on how to get additional supplies when the supplies run out. A profession some may be surprised to learn that is represented on a disaster team is a radiology technician, not the person who helps with the radiographs and computed tomography scans in the hospital, but the person who is familiar with radioactive material and is aware of time, distance, and shielding in the case of radioactive contamination.

Federal teams are comprised of individuals who are readily available to leave their work and lives behind to provide medical care when needed. This can be challenging for several reasons. Not only is it difficult for an individual to just leave their work and life behind and be expected to provide care to individuals who have just been hit with a disaster, but there are many emotions that go along with it. There is the potential responders to not be mentally prepared, because they are focusing on everything they must do at home or perhaps did not get a chance to since they left so rapidly.

Whether they are responding to a hurricane, flood, or other natural disaster; protecting health and saving lives in the wake of a terrorist attack or man-made disaster; providing support in the wake of a disease outbreak; or supporting a major event like the presidential inauguration, DMAT and disaster teams provide care that matters (www.phe.gov).

THE ROLE OF THE DISASTER RESPONDER

The role of the medical providers is to provide care with the resources at hand to provide the greatest good to the greatest number of people. This is not always an easy

DMAT: Disaster Medical Assistance Team	WHO: World Health Organization
USAR: Urban Search and Rescue	American Red Cross
IMSURT: International Medical Surgical Team	MRC: Medical Reserve Corps
DEA: Drug Enforcement Agency	Logistics
NGO: Nongovernmental Organization	Wildlife and forestry
EMS: Emergency Medical Services	Engineers

task, as some of the tools that the provider may be used to having readily available at his or her daily work are not available during a disaster. There needs to be a switch in the brain of the responders to delineate their role during a disaster to not get discouraged when supplies they need are not readily available. Also, during disaster triage when providers are putting a tag on individuals: black for deceased, red for critical, yellow for moderate and green for walking wounded, providers are faced with stressors. That is, if the responders were not in a disaster zone, there would be a full hospital on hand and the ability to perform a work-up and utilize all resources. This becomes difficult, as providers must rely on physical examination skills and gut instinct, which can provide stress if providers are unsure.

During a deployment, a mix comprised of individuals from different states with different levels of experience comes together and work to care for the population in whatever tragedy is current. Not only is it a challenge working with unfamiliar teammates, but it is also hard to do with limited resources, in an unfamiliar area, with a disaster going on. Infrastructure destruction may make it more difficult for supplies to come in and patients to get transported out. Clashes of personalities, working together, stress of sleeping on floors, poor toilets, collapsed buildings, finding bodies, not enough food, supplies looted, following orders, mobilizing to different locations, and working with unknown teams are added stressors that may make the task at hand more difficult.

A BOO (base of operation), needs to get set-up so that individuals know where to come for medical care. The BOO can also be used for command purposes and as sleeping quarters for the responders. A BOO takes time to set up and build and when there is a mix of individuals, some of whom may be experts and others who may be novices, it only adds to the frustration. When there are hundreds of patients lined up, and there are people yelling, as well as no time or place to take a break or to be alone, this adds to the mental frustration. Not to mention food that one might not like to eat, and one gets so busy that one begins to suffer from dehydration and diarrhea. The pharmacy supplies limited medications, and there is a lack of resources. So walking across the street to get some Imodium for one's diarrhea is not realistic. Depending on the location in which the BOO is located, the logistics for an evacuation may be near impossible; therefore, patients are not moving or getting a higher level of care that they may need and look to the provider with longing eyes. The lack of options for them makes one feel worse.

PREDISASTER PREPAREDNESS AND STRESSORS

There are many risk factors for disaster responders, and these factors are based on time relative to the disaster. As much as one prepares for a disaster, there is always something that happens that one does not expect. It is suggested that collateral behavioral health damage in disaster responders may owe to being unfit mentally or physically prior to the disaster, as well as inadequate training, or unrealistic expectations from leadership.⁶⁻⁸ Once a disaster has struck, it is too late to go back and think, "if I did this then..." Disaster responders must deal with the situation at hand as it presents itself. This goes along with mental wellbeing. As much as one can prepare for a disaster, there are so many unknowns and situations that arise that affect people in unexpected ways. This is why disaster responders prepare many things in their professional and personal life prior to responding to a disaster.

Skills

First responders train for this day in and day out by ensuring their credentials, such as basic life support (BLS), advanced cardiac life support (ACLS), and pediatric

advanced life support (PALS) are up to date. Being competent, skilled providers who are active in providing patient care daily is essential. Not only is being up to date on skills important, but keeping a bag of personal items that the responder will need during a deployment is just as important.

Ready To Go

Disaster responders know from experience that they may not have the time to go home and pack. They may get their orders and be told that they need to be at the airport or central staging area within a short period of time. Responders prepare by having their uniforms and other essentials ready to go in their deployment bag. This includes a supply of any daily medication and toiletry items.

Personal

Leaving behind spouses and children can be difficult. Having the support from one's significant other will make the stress of leaving home to deploy less stressful. Not knowing whether there will be cellular service or how long it will take to get it can be scary for families who cannot reach loved ones, and the stress of them not knowing how we are or that we made it, only increases their anxieties and fears. Children are impacted by what they see on television and what they hear in school. Having the conversation with them prior to leaving puts them at ease and also gives them a sense of pride in the work that one is doing.

Financial

A deployment can be at least 2 weeks long, and not getting a paycheck from work during that time can be a financial burden, not to mention the effect it has on family left behind. Thus, it is recommended that finances be in check prior to deployment. Family members should be made aware of what accounts to use should there be an emergency at home including prioritization of bills and other expenses. Most government deployments are paid; however, it is at times approximately 50% to 75% less than their normal salary. Because the individual is getting paid, the employer does not have to pay the employee for the time that he or she deployed.

Uniformed Services Employment and Reemployment Rights Act

"The Uniformed Services Employment and Reemployment Rights Act of 1994 (USERRA) is a federal law that establishes rights and responsibilities for uniformed service members and their civilian employers".⁹ Deployment orders for responders comply with USERRA, which protects them from losing their job while working a disaster. There may be some discord with the employer; however, it is crucial that the employer know upfront so that there are no "surprises" when the individual must leave. One can never predict the disaster that can occur; however, being upfront and honest is important. This also shows how dedicated one is to the profession and gives the organization a sense of pride in the work that the emergency responder is doing.

MENTAL HEALTH AND FIELD STRESSORS

Mental Health

In austere medical conditions, mental health professionals and psychiatric facilities will usually be inadequate or nonexistent. For this it is important to be able to recognize when a disaster responder is having a hard time dealing with stress. In Kenneth V. Iserson's book "Improvised Medicine," he categorizes 3 categories of crisis induced psychiatric illnesses ([Table 2](#)).

Table 2
Three categories of crisis-induced psychiatric illnesses

Adequate functioning	Most people during a crisis or disaster function at this level. They are able to cope with their feelings until they return, or things return to a normal setting.
Anxious and agitated	Distress individuals that demonstrate their crisis by loud or unmistakable crying, screaming, fainting or signs of panic, or histrionic behavior. Some may convert distress into physical signs or symptoms.
Shocked and subdued	These individuals may wander aimlessly or sit and stare. Physical signs may include confusion or disorientation.

Data from Iserson K. *Improvised medicine, providing care in extreme environments*. New York: McGraw Hill Education; 2020. p. 522.

Stressors

Stressors with which disaster responders can subconsciously affect the work that they are trying to do. Some stressors with which responders deal are listed in **Box 1**.

These responders are faced with the task of making life or death decisions in a split instant that can change the lives of so many, and while this holds true, providers must remember to take care of their emotional wellbeing when faced with this. Responders are prepared to face the critical incidences of their job. However, what they do not prepare for is how these incidences will affect them emotionally, after they leave the job. These responders put others first and because of their selflessness, their personal lives may pay the price. Responding to disasters can be both rewarding and challenging work. Because of this, protecting the population's health is a vital part of preserving national security and the continuity of critical national functions.

Traumatic Events

Working in a disaster can be a traumatic event for some responders. The situations are so unlike what they experience in their daily jobs. Chronic exposure to traumatic events, or even just daily stressors at work increase the likelihood that disaster

Box 1 Disaster responders stressors

Anxiety: The individual is on edge and may exhibit signs of uneasiness, restlessness or the inability to relax.

Depression: Weeks and months after the disaster, the responder may feel empty, lost, confused, and may suffer from the inability to communicate how they are feeling as a result of the incident.

Flashbacks: A smell, taste or sound can trigger a specific call or event that the first responder replays in their mind over and over.

Guilt: The responder may feel as though he or she did not do enough or could have done more.

Regret: The responder may feel this way if he or she was sleeping when the disaster happened and was not able to respond initially, or perhaps the individual needed to leave for his or her own mental well-being, and an adverse event happened, and they regret not being there.

Post-traumatic stress disorder (PTSD): Social pressures and lack of support can lead to lasting effects.

Substance abuse: The inability to cope with the event or compounded events may lead the individual to turn to alcohol as a way to mask his or her feelings.

responders will suffer from mental health outcomes such as depression, PTSD, chronic fatigue, increased alcohol use, potential spousal abuse, and a general poorer quality of life.¹⁰

Post-Traumatic Stress Disorder

Any traumatic event can cause PTSD or other stress related conditions. During a disaster, this can be caused by exposure to the dead, dying, or mutilation of bodies; chronic exposure to injured individuals; hearing the cries of the trapped or those that are in pain; or when the disaster was unexpected.

One of the core risk factors for any disaster responder is the pace of work. Disaster Responders are always on the front line facing highly stress and risky jobs. This tempo can lead to the inability to recover in between events.

Providers have their own ways of mentally preparing for a disaster; however, what works for one individual may not work for another. Having a support system is crucial to mental health wellbeing. Providers believe that there is a strong relationship between disaster responders, and it is important that they have the ability to reach out to someone who has been in the disaster with them. Some responders find it difficult to talk about what happened with their families while others feel, no one would understand.

During a disaster, social support appears to be important, particularly with having good relations with leadership and coworkers. Having supportive, approachable leaders and camaraderie among responders helps with psychological wellbeing.¹¹ During a disaster there is so much going on, that the effects the disaster had on the disaster responder may not be apparent until he or she is back in their normal environment. It may not hit a disaster responder until after he or she is home and back at work, all that happened on deployment. Rather than speaking to his or her family about it, the disaster responder may not want to burden loved ones, show vulnerability, or even expect that loved ones will understand.

Being able to reach out to other team members who were there may be helpful; however, this is essentially requiring the disaster responders to convince themselves that they need to talk. This may be felt as a sign of weakness and might make them feel exposed or embarrassed, so the reaching out and talking might not happen. The disaster responders then lets the feelings subconsciously get in the way, and those feelings start to affect their daily lives, unbeknownst to them. It is not uncommon for disaster responders to relate to the things they have seen and personify them.

As much as one prepares for daily jobs everyday by getting up, having a routine, and focusing on the task at hand, there are things that happen that are out of one's control. How one responds to this is important, because one needs to be able to focus on the end results and how one can get there despite the obstacles that got thrown in the way. These are just road blocks, and every disaster responder understands, that despite training, there will be a time when something comes up for which they did not train.

Burnout

The emotional stress of being deployed and addressing all the other needs mentioned previously can cause the provider to get burnout. Disaster responders always give their best, but when they begin to think that their best is not good enough or that the demands of the mission exceed their abilities, there is increased risk for burnout.

According to a study, 69% of EMS professionals have never had enough time to recover between traumatic events.¹² As a result of this, depression, stress, PTSD, and suicidal ideation have been reported. When a spouse is not in the same line of

work, he or she may not understand what his or her loved one is going through at work, and this can become a challenge.

Communication issues are not uncommon, especially among disaster responders and their families. A man who sees countless domestic abuse situations may feel more strongly about the situation; however, he is also more likely to become an abuser himself. This is because he has no outlet to express his feelings. He feels as though no one understands and thus takes out his aggression on those who are closest to him.

The Ruderman Foundation studied suicide among disaster responders and found that firefighters and police officers are 20% more likely to commit suicide than anyone else.^{13–16}

SOLUTIONS

One cannot fix anything unless one first acknowledges that this is an issue with which disaster responders are faced. Support is important, not only at home, but in the workplace as well. Nonverbal and verbal queues are what people pick up, on and they need to not be afraid to speak up and reach out and express their concern over one's well-being. This cannot be one-sided. The responder must feel comfortable talking about how he or she is feeling and understanding that expressing his or her emotions does not make them weak or less of a person. First responders may hide behind a strong exterior, when behind it, they are crumbling. Recognizing a change in one's loved one and getting him or her help even when he or she says he or she is fine and does not need help can prevent a tragedy later on.

Debriefing

Disaster and emergency personnel are not exempt from the devastating impact of tragic events on their emotions, health, careers, family, or lives. In fact, they may be more seriously affected because of the ability to suppress their reactions to maintain their ability to function in times of stress and may fear their emotions and fear debilitation. Therefore, debriefing is a way most agencies have helped reduce the mental baggage brought back from a disaster or crisis. This is a way for one to let out his or her feelings and fears.

Although there are some individuals who take debriefing lightly, others engage in the conversation and open up about how the situation made them feel and how they are coping with what they saw during the disaster. Talking about feelings is not an easy thing to do, especially when one considers how the media identify the majority of disaster responders as men. There is a fear that their peers will treat first responders differently and the stigma of not being able to handle the job or being weak. However, by opening up and discussing the event and how it makes them feel and how it is affecting them, it may give someone else the opportunity to open up also, perhaps someone who was internally struggling and was afraid to reach out for help. It is important that agencies develop a clear line of communication and develop mental health and resilience training and promote counseling following stressful situations.

It is important to note that a debriefing is not an opportunity for someone to place blame on another person, nor is it the time to talk about how things could have or should have gone, but rather to reflect on the event or situation after it has happened and to discuss how what happened affects first responders. There is an opportunity to provide feedback as to opportunities for improvement. This is important, because from this one can learn ways to better adapt to situations in future deployments.

Those who came to help others in their time of need were thought to be trained not to react to human carnage and destruction or to the pain of the survivors. They were

considered exempt from the psychological complications that result from disasters. In reality, this is not true. These events impact their health, careers, family, and their lives. Health responders are more seriously affected, because disaster responders are in the habit of suppressing their reactions and emotions in order to maintain the ability to function during any crisis and later because they might fear debilitation from their own emotions within their own personal lives.

In terms of DMAT, teammates have a routine of debriefing daily before leaving the area where working and before heading back to the sleeping barracks. The goal of this is to be able to discuss things that happened during the shift, plan for the next day, and also highlight some of the things that went well or could have gone better. It is also important to show appreciation for the members of the team for the things that they have done.

RESOURCES

If you or someone you know is having a hard time coping with a disaster, do not be afraid to reach out. Talk to someone. You are not alone. One should not make the mistake of taking care of everyone else but forgetting to take care of oneself. Providers need to be vigilant in their awareness of changes in behavior, suicidal comments, or peers being withdrawn. Mental health providers are available. Providers need to not be afraid to reach out. There are many campaigns that support disaster responders, and social media platforms have become a great outlet for responders to connect with one another.

The CODE Green Campaign provides awareness and education on PTSD in disaster responders. The Code Green Campaign is raising awareness on mental health issues that affect disaster responders, and also providing education to those who think that they should just deal with it or it is part of the job. However, public health workers can experience a broad range of health and mental health consequences because of work-related exposures to natural or human-caused disasters.¹⁷

The National Suicide Prevention Lifeline is a 24/7/365 free phone call that provides confidential support for anyone, not just disaster responders. This is a confidential call.

The Disaster Responders Support Network (DRSN) not only has a retreat for disaster responders, but also for their spouses, which is crucial to healing after a traumatic incident. The great thing about this organization is that it is run by volunteers. The DRSN discusses secondary traumatization, which is when the individual listening to the story, such as the spouse of the responder, is affected by his or her firsthand experiences. Secondary traumatization is not discussed so openly; however, it can also lead to communication barriers.

Backing the Badge is an organization that shows support for law enforcement agencies and highlights the work that they do along with the dangers that go along with it. This organization has not branched in all the states, but the ones in which they have a presence have incredibly active social media pages that include pictures, community events, and words of support. By highlighting all of this, law enforcement officers have the ability to see the good that they do and cope with the traumatic events with which they have to deal on a daily basis.

Share the Load program highlights the mental health issues in disaster responders, specifically firefighters. One of the concerns is how physically capable these men and women are, but they may not be able to mentally cope with what goes on at work every day. The alarm goes off, and they are on that fire truck, sometimes not even taking a moment's rest between calls and still maintaining their professionalism and dedication to the community they serve.

Only a few of the available organizations that are out there in support of and for disaster responders are mentioned here, but the key factor is recognizing the abnormal or withdrawn behavior and being able to feel comfortable asking for or reaching out for help. There is no shame in that.

When one factors in all the issues that go on in the lives of the disaster responders every day and then one takes them away from that environment to deploy to a disaster with individuals from different states and skill levels with limited resources, it is not only mentally challenging, but exhausting also. First responders must be able to do the work for which they trained, and they cannot do that without support at home from their families, coworkers, and employers.

SUMMARY

Being a first responder emits a sense of pride in the work that is done to provide care to individuals that are unable to care for themselves. Being able to provide this service is gratifying and fulfilling. However, there is more to it than just being there when needed. Responding to disasters plays a toll on one's emotions and in one's daily lives. Daily career work may be affected, because providers are gone for weeks at a time. Personal lives also may be affected when loved ones do not understand why one would want to leave them and work during a disaster that is stressful and hard work. Difficult emotions can get the best of providers when working with individuals who have different personalities and with whom one is not accustomed to working alongside. Disaster responders can tire easily and feel burned out because of the situation, and sad because they wish we could do more for those that were affected. The money made does not pay the bills and can create financial stress. Sleep may be affected, as one may be sleeping in crowded spaces, during odd hours, and in sleeping bags.

With that being said, there is something so gratifying about being able to respond to a disaster that disaster responders take all those facts and prepare for the effects it will have and mentally put emotions in check and move on. Disaster responders understand that it is not easy, but still do it out of passion. The relationships made on deployments with other responders are lasting ones. Although disaster responders may not speak to each other on a daily basis, they will forever have a shared experience that others at home may not understand.

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