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Preparedness – A Constant Juggle

By Catherine L. Feinman

It is impressive to see how emergency preparedness professionals across disciplines constantly juggle numerous tasks and projects while balancing the needs of everyone they serve. In addition to managing their teams, leaders must educate and train personnel for many scenarios and help ensure the team members' physical and mental well-being.

Managing teams – Effectively managing a team should begin with having a comprehensive strategy and a plan (and contingency plans) in place to manage events as problems emerge and incidents evolve. However, a successful response can only occur when these strategies and plans are followed. Emergency operations centers (EOCs) bring together leaders from across disciplines during an incident. The emergence of COVID-19 has provided real-world experience with testing the viability of virtual EOCs, which should prove helpful the next time the physical EOC is inaccessible to the people who staff it.

Preparing teams – Once the plans and strategies are in place, it is time to train team members with valuable hands-on and situational awareness skills to address various potential scenarios. Some trainings may prepare specific agencies, and others may be collaborative efforts across disciplines and jurisdictions – hospital response and tactical medicine are just two examples this month that took a multidiscipline approach. Responding to people with disabilities and identifying signs of human trafficking are two ways teams can build situational awareness to protect and serve the whole community.

Taking care of team members – Managing and preparing a team offers a foundation for emergency response. Still, the response effort will fall apart if the team members are unable or unwilling to participate. As such, leaders have a great responsibility to ensure that their teams receive the support they need when they need it. Support could mean creating programs to reduce burnout and incentivize retention or providing mental health services during a disaster. Whatever form it takes, the aim is to protect those who protect others.

The authors in this August edition of the *Domestic Preparedness Journal* describe the many challenges faced among leaders charged with preparing for the next emergency or disaster. However, the common theme throughout this issue is teamwork. When juggling responsibilities, leaders must not lose sight of the team that makes all the preparedness, response, and recovery efforts possible.

Catherine L. Feinman, M.A., joined Domestic Preparedness in January 2010. She has more than 30 years of publishing experience and currently serves as Editor of the Domestic Preparedness Journal, www.DomesticPreparedness.com, and the DPJ Weekly Brief, and works with writers and other contributors to build and create new content that is relevant to the emergency preparedness, response, and recovery communities. She received a bachelor's degree in international business from University of Maryland, College Park, and a master's degree in emergency and disaster management from American Military University.

There Was a Pandemic Strategy and Plan

By Robert C. Hutchinson

Although it may not have been readily apparent in early 2020, the federal government did have a comprehensive national strategy and plan for a pandemic threat in the November 2005 "National Strategy for Pandemic Influenza" (Strategy) and its May 2006 "National Strategy for Pandemic Influenza – Implementation Plan" (Plan). The documents provide guidance and a detailed framework for planning at all levels of government in conjunction with the private sector and foreign partners. The Plan was released in 2006 to implement the higher-level pandemic strategy from 2005. The two essential documents included influenza in their titles, but they were relevant for any pandemic or vast public health threat – including a novel coronavirus. According to the Plan:

> *The goals of the Federal Government response to a pandemic are to: (1) stop, slow, or otherwise limit the spread of a pandemic to the United States; (2) limit the domestic spread of a pandemic, and mitigate disease, suffering and death; and (3) sustain infrastructure and mitigate impact to the economy and the functioning of society.*

The Strategy contained three pillars:

- Preparedness and communication,
- Surveillance and detection, and
- Response and containment.

The Plan identified over 300 detailed domestic and international actions and expectations to prepare the nation for a pandemic. Many of the actions provided a time period for execution or completion without an established process to ensure compliance and achievement. If fully executed with continued focus and oversight on the actions and expectations, the response to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the novel virus that caused the COVID-19 pandemic, may have been more successful without many of the staggering short and long-term consequences experienced in the United States.

The nine chapters of the Plan from 16 years ago are just as relevant today for SARS-CoV-2 or for the next international public health threat be it naturally occurring or man-made. The retrieval and review of both documents would be beneficial to protect the nation when faced with future biological threats or incidents to include the current concerns over the monkeypox virus.

The updating and consistent execution of the actions and expectations would better prepare the nation for the next inevitable serious pathogenic threat with one major addition – a person with true authority and power to ensure that the federal departments and agencies adopt and maintain their concentration and capabilities. The person would have to be able to convincingly organize and oversee federal efforts and deliver meaningful consequences for intergovernmental resistance.

Pandemic Planning

The Plan clearly identified and directed high-level guidance in 2006 to establish priorities, planning, and preparedness across the government. There were expectations that national plans would utilize a logical whole-of-government approach in planning and preparedness.

> *Develop Federal implementation plans to support the National Strategy for Pandemic Influenza, to include all components of the U.S. Government and to address the full range of consequences of a pandemic. (p. 85)*

These actions and expectations included the critical areas of law enforcement and public safety that are vital for an intergovernmental approach. A review of the actions and expectations demonstrates the broad intention of coordination across the government to include state, local, and tribal partners. Some of these Plan actions are provided below in their entirety to demonstrate their comprehensiveness, relevance, and importance.

> *Develop Federal implementation plans on law enforcement and public safety, to include all components of the Federal Government and to address the full range of consequences of a pandemic, including human and animal health, security, transportation, economic, trade, and infrastructure considerations. Ensure appropriate coordination with State, local, and tribal governments. (8.1.1)*

> *States should ensure that pandemic response plans adequately address law enforcement and public safety preparedness across the range of response actions that may be implemented, and that these plans are integrated with authorities that may be exercised by Federal agencies and other State, local, and tribal governments. (8.1.1.1)*

> *DHS, in coordination with DOJ, HHS, DOL, and DOD, shall develop a pandemic influenza tabletop exercise for State, local, and tribal law enforcement/public safety officials that they can conduct in concert with public health and medical partners, and ensure it is distributed nationwide within 4 months. (8.1.1.2)*

> *State, local, and tribal governments should review their legal authorities that may be needed to respond to an influenza pandemic, identify needed changes in the law, and pursue legislative action as appropriate. (8.1.1.3)*

> *States should ensure pandemic response plans address EMS, fire, public works, emergency management, and other emergency response and public safety preparedness. (8.1.1.5)*

The average observer may not agree that the above actions and expectations were consistently implemented and maintained between 2006 and the arrival of COVID-19. With the continuing and cascading negative societal, financial, political, and public health consequences of the pandemic, the lasting impact of the 300 actions and expectations appeared minimal.

Surveillance and Early Detection

According to the Plan, surveillance and early detection warning of a pandemic was critical to be able to rapidly engage resources to contain the spread of the virus. An effective detection system was required to activate response plans and save lives before the appearance of a pandemic pathogen. To accomplish this task, five pivotal federal departments were identified to work together.

> *DHS will work closely with DOT, HHS, USDA, and DOS to develop and be prepared to implement screening protocols to enhance pre-departure, en route, and arrival screening at the U.S. border (land, air, and sea) for potentially infected travelers, animals, and other cargo. (p. 89)*

The federal government was to provide guidance to the private sector and critical infrastructure partners to assist in their planning and preparedness to maintain essential services with decreased staffing during a pandemic. A public and private partnership would provide a broader and stronger capability for surveillance and early detection. The plan identified actions that became considerably more apparent with the arrival and response to COVID-19.

> *Develop mechanisms to rapidly share information on travelers who may be carrying or may have been exposed to a pandemic strain of influenza, for the purposes of contact tracing and outbreak investigation. (4.2.4)*

> *DHS, in coordination with HHS, DOT, DOS, and DOD, shall work closely with domestic and international air carriers and cruise lines to develop and implement protocols (in accordance with U.S. privacy law) to retrieve and rapidly share information on travelers who may be carrying or may have been exposed to a pandemic strain of influenza, within 6 months. (5.2.3.1)*

Successful screening detection operations would require the timely implementation of the next step in the process of the public health and law enforcement response for possible medical care and quarantine activities.

Despite having an existing pandemic strategy and plan, the United States was still unprepared to effectively respond to COVID-19.

Quarantine and Isolation

The Plan encouraged all levels of government, domestically and internationally, to take appropriate and lawful action to contain a disease outbreak within the borders of their community, state, and country. To further this goal, the Plan directed coordination in the area of quarantine planning and enforcement by several large and diverse federal departments.

> *HHS, in coordination with DOJ, DOS, and DHS, shall determine when and how it will assist States in enforcing their quarantines and how it will enforce a Federal quarantine, within 9 months. (8.3.1.1)*

This action, to be completed in early 2007, may have been one of the more important actions that should have been fully executed and maintained to better understand quarantines and isolation authorities, capabilities, and techniques before the pandemic or other significant public health threat. This clarification and leadership could have reduced the massive confusion regarding the rather undefined or misunderstood definitions of a shutdown, lockdown, shelter-in-place, and stay-at-home for guidance, requests, or orders. The term quarantine was often inaccurately intermixed with the other ambiguous terms that restricted movement on some level for a public health concern. It caused confusion and angst that will likely reappear during the next public health or homeland security emergency. However, it may also have tainted the true concept of quarantine for a public health threat, which could negatively impact its implementation in the future.

In the Plan, the Centers for Disease Control and Prevention (CDC) established recommendations for managing possibly infected air passengers:

> *with pandemic potential include isolation of ill persons, quarantine of all non-ill travelers … and targeted treatment and prophylaxis with … medications. The federal government … [was tasked to] … develop criteria and protocols for isolation and quarantine of travelers early in a pandemic, prior to significant spread of the virus in the United States. (p. 7)*

As discussed in a previous 2021 article regarding limited federal resources, customs officers in the United States are responsible for the enforcement of federal quarantine orders to support the lead agency CDC at the border or within the United States between state borders. U.S. Customs and Border Protection (CBP) and U.S. Coast Guard (USCG) officers are authorized to help enforce federal quarantine orders. In addition to CBP and USCG, thousands of designated customs officers from the U.S. Immigration and Customs Enforcement (ICE) would be required to support the enforcement at the border or other interior locations. Customs officers, supporting Title 42, are the personnel within CBP, USCG, and ICE who have legally designated customs authority.

> *Encourage all levels of government, domestically and globally, to take appropriate and lawful action to contain an outbreak within the borders of their community, province, state, or nation. (5.3.1)*
>
> *DOS and DHS, in coordination with DOT, DOC, HHS, Treasury, and USDA, shall work with foreign counterparts to limit or restrict travel from affected regions to the United States, as appropriate, and notify host government(s) and the traveling public. (5.3.1.1)*
>
> *Where appropriate, use governmental authorities to limit non-essential movement of people, goods, and services into and out of areas where an outbreak occurs. (5.3.2)*

The deployable number of officers and agents with delegated customs authority within these border agencies has grown since the Department of Homeland Security

was created in 2003. This growth provides an expanded team of available resources with the now cross-designated immigration officers and agents. However, it remains a very limited resource for the enormous mission with the inadequate public health preparedness resources provided to the federal agencies. With the historical increase in illegal southern border entries in 2021 and 2022, the availability of customs officers shall be even more limited to handle this additional and unique duty for CDC on the behalf of the federal government.

The availability to execute actual quarantine detention orders and operations may be more challenging than expected with the inability of customs officers to depart from their day jobs for a rapidly emerging pathogen for early containment and control. Interdiction is difficult enough, but appropriate public health screening and lawful detention (for public health/quarantine or immigration concerns) are even more of a challenge for many reasons. This is especially problematic for the legitimate detention of the non-compliant and likely use of force issues necessary to enforce CDC quarantine mandates to protect the nation from an exploding pathogenic threat.

Implemented During COVID-19

Fortunately, not all of the Plan recommendations or preparedness appeared to be insufficient during the COVID-19 pandemic response. There were Plan actions and expectations that were utilized at some level during the COVID-19 pandemic.

> *DHS, DOS, and HHS, in coordination with DOT and USDA, shall issue travel advisories/public announcements for areas where outbreaks have occurred and ensure adequate coordination with appropriate transportation and border stakeholders. (5.3.2.1)*

> *DHS and DOT, in coordination with DOS and Treasury, and international and domestic stakeholders, shall consider activating plans, consistent with international law, to selectively limit or deny entry to U.S. airspace, U.S. territorial seas (12 nautical miles offshore), and ports of entry, including airports, seaports, and land borders and/or restrict domestic transportation, based on risk, public health benefits, and economic impacts. (5.3.2.2)*

It is unknown if the early successful responses were due to sufficient planning and preparedness or sheer necessity, but there were early achievements during the pandemic response. The challenge is to ensure that there shall be many more early successes in the next significant public health threat through common-sense planning and strong leadership. There shall be another pandemic in the future and likely sooner than later.

True Oversight and Coordination

The need for an empowered leader to oversee the federal government's pandemic planning and preparedness strategy and activities has been a concern for many years. Its absence has been apparent to public and private sector observers to include influential outside organizations.

As documented in the Trust for America's Health report, *Ready or Not: 2021 Protecting the Public's Health from Diseases, Disasters, and Bioterrorist*, the nation was not prepared for a serious pandemic and lacked effective senior federal leadership and interdepartmental coordination. The report recommended the creation of "a White House Health Security Directorate, including senior advisors to the president with public health expertise on health security issues. This directorate would oversee the national biodefense strategy and all interagency emergency responses." The Trust for America's Health was not alone.

The findings were similar to those in the Bipartisan Commission of Biodefense's (previously known as the Blue Ribbon Study Panel on Biodefense) 2021 report, *Biodefense in Crisis, Immediate Action Needed to Address National Vulnerabilities*. That follow-up report identified the apparent results of national leaders and policymakers failing to consider and implement the 33 recommendations and 87 action items that the Commission outlined in its 2015 report, *A National Blueprint for Biodefense: Leadership and Major Reform Needed to Optimize Efforts*. According to the Commission, many of their recommendations and actions remained partially or completely unaddressed in 2021 after the arrival of the COVID-19 pandemic. With the other critical observations, the Commission stressed the insufficient federal government leadership issue in their 2021 report.

> *Our Commission strongly believes that one federal department cannot tell other departments and agencies what to do, especially in a critical area of responsibility like biodefense. The stalled execution of the National Biodefense Strategy demonstrates what we believed to be true: only the White House can direct all parts of the federal government to work together to defend the Nation against biological threats. Direction must come from someone occupying a position with the imprimatur of the President and the authority to act on the President's behalf. (p. 7)*

The Commission created and maintained an interactive webpage to monitor and update the recommendations and action items to encourage focus and progress. This proactive measure was an initiative designed to place emphasis on the recommendations and action items for prioritization and avoid needing to wait years for another future report to share status conditions or a possible lack of progress.

The two actions for institutionalizing the oversight responsibility with the vice president's office to ensure that biodefense would be addressed by every administration, at the highest levels, and with adequate access to the president remained labeled as crisis actions. As of June 2022, the Commission reported that only three of the action items were completed and six remained as crisis actions. Partial action was reportedly taken for 56 action items with no action for 22 of them.

Use the Foundation

Many pandemic-related strategies, plans, authorities, and regulations existed across the federal government. However, the operational plans and sustained coordination appeared to wane over time with competing priorities, diminishing interest, or willful neglect.

The federal government was expected to release a new *National Biodefense Strategy* in the summer of 2022. The updated national strategy was intended to more clearly describe responsibilities, goals, and deadlines to address confusion and governmental infighting for pandemic response. The new National Biodefence Strategy would reportedly build upon the recent high-level *American Pandemic Preparedness Plan* (2021). An enhanced focus on unified leadership, authority, and action would be greatly beneficial along with a thoughtful and detailed implemented federal plan – possibly utilizing the 2006 Plan as a foundation for a whole-of-government approach.

As the nation continues to recover from the COVID-19 pandemic, the Strategy and Plan can provide a foundation to develop an updated and broader national strategy for the future, incorporating the most important priorities and mandates of the National Biodefence Strategy and *National Strategy for Biosurveillance* into one superseding strategy for the nation. The many common-sounding and overlapping strategies can often provide more confusion than focus on this most critical mission.

With the establishment of one designated and empowered leader with dedicated authority and influence to ensure that departments and agencies adopt and maintain their focus and capabilities for the next serious public health threat, the national security of the country would likely improve. The leader must be truly enabled to compel a coordinated effort for distinctly defined priorities and goals that are implemented, maintained, and evaluated over time.

There was an established pandemic strategy and plan in place to better prepare and protect the nation. The current Strategy and Plan can be utilized as a foundation to develop the next strategy and plan incorporating other public health and biodefense strategies along with the lessons learned from COVID-19. Without the development and implementation of an updated comprehensive strategy and plan, the nation shall likely relive the failures during the next pandemic. National strategies are vital, but their implementing plans are critical.

Important note: A pandemic such as COVID-19 may be considerably less concerning than a possibly much more serious bioterror or biowarfare attack utilizing a novel or enhanced pathogen – one with significantly greater transmission, morbidity, and mortality rates than SARS-CoV-2.

Robert C. Hutchinson, a long-time contributor to the Domestic Preparedness Journal, was the former deputy special agent in charge and acting special agent in charge with the U.S. Department of Homeland Security (DHS), Homeland Security Investigations in Miami, Florida. He retired in 2016 after more than 28 years as a special agent with DHS and the legacy U.S. Customs Service. He was previously the deputy director for the agency's national emergency preparedness division and assistant director for its national firearms and tactical training division. His numerous writings and presentations often address the important need for cooperation, coordination and collaboration between the fields of public health, emergency management and law enforcement, especially in the area of pandemic preparedness. He received his graduate degrees at the University of Delaware in public administration and Naval Postgraduate School in homeland security studies.

Successful Application – Virtual Emergency Operations Center

By Judy Kruger & Kyle Overly

The impacts of COVID-19 led to the need for more virtual emergency operation centers (EOCs). Virtual EOCs became necessary to follow protective strategies (e.g., social distancing, teleworking, and isolation and quarantining of ill or infected individuals) to reduce disease transmission and promote health and safety among first responders. In addition, the ongoing pandemic required emergency management agencies to rapidly reduce in-person meetings and evolve into a more virtual footprint for preparedness and response.

Before the COVID-19 pandemic, agencies leveraged technology to use virtual EOCs for smaller incidents with limited physical impacts. However, in most communities, COVID-19 was the first test for officials leveraging the virtual EOC concept for a major incident. A virtual EOC is a web-based EOC that serves to monitor and host web-based communications for incident command and coordination while responding to a disaster. This report highlights the use of virtual EOCs and the successes and challenges.

Traditional vs. Virtual EOCs

Traditional EOCs are housed in brick-and-mortar buildings, sometimes close to a disaster site, to centralize strategic planning and operations from a physical location. They serve as a central hub to coordinate on-scene operations, resources, and information to support incident management during the disaster cycle from response to recovery. Face-to-face collaboration is essential for solving complex acute problems that often accompany a disaster. When the speed of messages increases during a disaster, one of the first challenges agencies face is communicating effectively. The ability to rapidly problem-solve is one of the core advantages of the traditional EOC construct.

Having a system in place, such as using the Incident Command System (ICS) structure, is critical to ensure coordination and allow information to be relayed for situational awareness. The ICS is easily adaptable to a virtual or hybrid space (e.g., a physical location equipped with technology to allow core staff to participate in-person and virtually). Hybrid EOCs limit the number of on-site personnel and are helpful for medium- to large-size jurisdictions that are required to coordinate with multiple cities and counties regardless of the complexity of the event. Hybrid and virtual EOCs need a virtual coordination plan and platform to support web-based communication for sharing and monitoring incoming information, uploading daily reports, and communicating across partners.

The benefits of virtual EOCs are that they promote health/wellbeing for staff, provide some delivery relief and work-life balance, and reduce administration costs. While there are certainly a number of benefits related to virtual EOCs, some challenges have been noted in setting them up. The following list explains some of what could be gained (pros) and

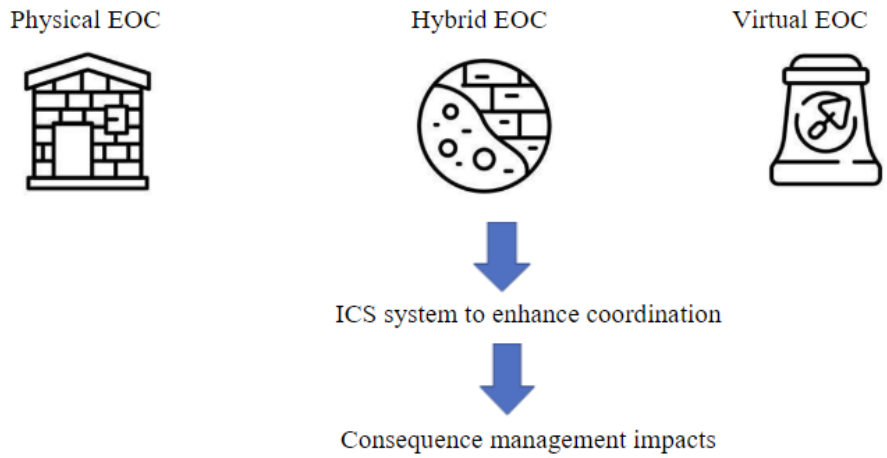

Fig 1. Coordination of emergency operations center options

what could be lost (cons) when considering the implementation of virtual EOCs compared to the physical EOC:

Pros

- Saves money on renting, remodeling, or building a physical EOC;
- Releases real-time information to public safety personnel;
- Lessens the burden of access control and security screening of personnel into a brick-and-mortar facility that has security checkpoints;
- Reduces the need for parking, which may be an issue for some facilities when fully activating and requesting liaison officers to participate in a physical EOC;
- Minimizes public transportation exposure with other riders;
- Saves costs on catering for provided meals;
- Assists with cleaning and sanitizing protocols due to less people trafficking through common areas;
- Increases coordination by all partners and access to satellite and weather forecasts in a consistent manner (forecast projections help to identify where and who to deploy within 120 hours of storm surge or touch down);
- Improves staff role assignments to physical locations to address staff shortage;
- Enhances efficiency by decreasing staff deployment to multiple locations (reduce travel concerns related to security access, traffic jams, debris on the roadway, and severe weather);
- Reduces commute time to a physical EOC and enhances administrative coordination of staff workload shifts to prevent burnout; and
- Improves synchronization with media outlets and accuracy in monitoring input from social media platforms to address misinformation.

Cons

- Requires stable access to electrical power source and internet to support operations (may require a secure web server or e-subscription service);
- Loses information due to remote participant failing to pay attention or multi-tasking instead of focusing on assigned task;
- Impacts employee morale due to lack of face time with staff and partners (less face-to-face interaction with partners limits the ability to pick up on social and subtle body language cues);
- Lacks specific detail (e.g., include names) for feedback provided from all staff and partners who supported virtual operations in an after-action report;
- Pace and scale depend on the complexity of operation (there may be a change from prior activation partners for a variety of reasons); and
- Virtual platforms may not be as effective in large-scale and complex disasters where the plan needs to be frequently updated during the 24-hour operational period (operational plans for smaller-sized events may not be adaptable for more significant events, and some information may fall through the cracks if not requested from state, local, tribal, and territorial [SLTT] partners).

Support for Planning Tools and Process

In 2022, although the virtual infrastructure is in place to allow the virtual deployment of emergency managers to assist through all phases of the disaster cycle, refresher training may be needed through virtual platforms such as Zoom or Microsoft Teams on procedures. In addition, as part of a planning tool, there needs to be a virtual orientation toolkit available for staff to visit and raise their awareness of how virtual EOCs function and their use of ICS. The planning process must address staff workloads, shift changes, and how staff should manage current daily operations for the 24-hour period. Expansion of current documents housed in online incident management tools such as WebEOC can be updated to remain relevant.

Critically important to facilitating virtual EOCs is access to appropriate equipment. While many emergency management agencies provide access to a laptop or a workstation with equipment to support virtual operations through tools like WebEOC, this is not consistent and presents challenges in implementing widespread virtual EOCs. Many states provide online management tools as a resource to their local emergency management agencies. The virtual infrastructure requires more-frequent sharing of updates with staff using an electronic method of communication from phone or computer.

Maryland's Experience Implementing a Virtual EOC

Before the pandemic, the Maryland Department of Emergency Management (MDEM) primarily leveraged a traditional EOC concept for most activations of the State Emergency Operations Center (SEOC). Beginning in the mid-2010s, with the increased availability of technology and user comfort, MDEM began using a hybrid approach to SEOC activations

for more minor incidents with limited impacts. Immediately, the benefits became apparent. Allowing staff to work remotely from home reduced staff burnout, increased safety by keeping staff off the roads when unsafe, and increased the number of operational periods the state could sustain. Although MDEM successfully used the hybrid approach to activations, the state still relied primarily on a traditional EOC concept for medium- or large-scale incidents.

Like agencies across the nation, MDEM had to completely restructure its approach due to COVID-19. At the start of the pandemic, when the activity level was highest and the problems complex, MDEM maintained an in-person EOC activation. From May 2020 through that summer, MDEM gradually reduced its physical footprint, eventually transitioning to virtual operations. In August 2020, MDEM successfully managed the response to Tropical Storm Isaias 95% remotely, with only a small group of staff activating in person. From conducting live Weather Channel interviews in staff's living rooms to virtual damage assessments, MDEM showed that the model worked. MDEM managed nearly the rest of the COVID-19 response virtually. However, operations went back to a hybrid status in February 2021 as vaccination efforts required in-person management. Subsequent disasters demonstrated the viability of the virtual EOC in Maryland for most events.

Source: U.S. Food and Drug Administration (2018).

Enhanced Communications

Since communication is the weakest link to successful virtual EOC operations, selecting a software platform that can be used in emergencies and daily activities is important. Microsoft Teams and the Google Suite provide the versatile integration of video and document management that emergency managers need to succeed. Being prepared in an evolving world requires staying up to date on changing technology and equipping staff with the knowledge and technology to support the successful activation of virtual operations. It also requires enhancing coordination through the creation of a plan on how to activate a virtual or hybrid EOC. Planning includes determining in advance how to restructure the plan to support the mission (e.g., guidance on how to operate from a physical EOC, hotel, or home residence of record, what information to post internally and externally, and the speed and frequency speed for updating websites accessible by staff and by the public).

Developing a high-functioning emergency management workforce in the future will require regularly exercising virtual and blended hybrid EOC operations to address staff technology access issues and work-time accountability. New staff orientations are often delivered through virtual operations and allow for staff mentoring and development. Virtual and hybrid EOC policies may need to be updated over time to address procedural changes in the legal landscape (e.g., electronic signature, authorizing of public information, privacy protection, or purchasing and approval of materials) and to keep staff informed of policy changes.

The COVID-19 pandemic reinforced the need for agencies at all levels to adapt to virtual EOCs for on-scene operations. The emergency management profession will need to continue to adapt and consider virtual and hybrid EOCs as a way of doing business moving forward. As tools and technology change, agencies must update standard operating procedures and communication plans to use these tools efficiently to support interactions with partners and adapt to conditions presented in future responses.

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Hospital Response – A Personal Training Experience

By Erin Valentine

While infectious disease, cyberattacks, and workplace violence may be the most emergent threats to hospitals, the risk of a chemical, biological, radiological, nuclear, or high-yield explosive (CBRNE) event is ever-present. A biological or radiological terrorist attack may seem unlikely, but hazardous materials are abundant around and inside every hospital. CBRNE materials are used in factories and on farms. They are transported by vehicle and rail. The hospital itself contains any number of contaminants, from the radioactive materials used in nuclear medicine imaging, to chemotherapy waste, to cleaning chemicals. Exposure to these substances can lead to everything from irritation to the skin and eyes to cancer.

FEMA's Hospital Emergency Response Training

The Hospital Emergency Response Training (HERT) for Mass Casualty Incidents course is offered by the Federal Emergency Management Agency (FEMA) at the Center for Domestic Preparedness (CDP) in Anniston, Alabama. Twice a month, healthcare personnel learn to recognize the signs and symptoms of a CBRNE event. They use the Hospital Incident Command System (HICS) to assemble a team, select the appropriate personal protective equipment (PPE), perform mass casualty triage, and decontaminate patients exposed to hazardous materials. Full Type B Hazmat protection used in the exercise included: Tyvek suit, icepack vest inside, rubber boots, rubber gloves, shroud, and powered air purifying respirator.

Students participate in three 10-hour days of classroom training on recognizing the indicators, health effects of exposure, and treatment protocols for CBRNE events. On the fourth day, students participate in a full-scale exercise in which they don the appropriate PPE, set up an emergency treatment area, and triage and decontaminate mock victims. The simulation is designed to be as authentic as possible and introduces students to the decontamination process, including the physical and psychological stress on first receivers. After the course, students can stay an extra day to become certified trainers for their teammates at home.

The course is designed for emergency managers, clinicians, security teams, housekeeping staff, and others who may be called upon to respond to a mass casualty incident at their hospitals. The only prerequisites are FEMA's no-cost online Independent Study 100, 200, and 700 courses. Like other in-person FEMA training, the course is entirely free, including travel to and from the CDP. Once a student is accepted, all travel arrangements are handled by FEMA. The campus is about 90 minutes outside Atlanta on the campus of the former Fort McClellan Army installation. Students stay in dormitories and take their meals in a cafeteria. The campus "Recovery Zone" lounge provides a way for students to unwind at the end of the day and team-build with their classmates.

It is 85 degrees in Alabama, and the noon sun is beating directly overhead. I am sweating in a head-to-toe Tyvek Suit with a respirator shroud sealed around my head. I can only see what is directly in front of me. One of my ankle socks has slipped down and squished into the toe of my huge rubber boot, but there is no way to retrieve it without completely removing everything, a ten-minute process requiring assistance. I'm wondering how long I can stand to wear this PPE, let alone function in a hands-on role.

I am working in a mock emergency treatment area established for a fictional mass casualty incident in which victims of a terrorist attack were contaminated with nerve gas following an explosion. A large yellow tent is equipped with garden hoses, buckets of dish soap, and a conveyor belt for stretchers. Earsplitting ambulance sirens wail. Volunteer "patient" actors writhe and call out for attention. Stretchers roll past strapped with mannequins, both adults and children. Some have severe burns and amputations; most are covered in blood.

I have been assigned to the ambulatory triage line. My job is to prioritize the walking wounded; they must disrobe, enter a shower inside the tent, and scrub themselves with soap. I soon regret writing my name on the outside of my shroud as the patients now call out for me and demand I personally move them to the front of the line. I send through a pregnant woman in labor. She wears an artificial belly with a doll's head emerging from the bottom and squeezes an IV bag to simulate her water breaking. I triage the next patient. He has a severe arm fracture, so I send him through. Skilled makeup artists have created a jagged prosthetic bone emerging from his skin and covered it in red corn syrup. I usher him into the "outer garment doffing station," as simply removing a patient's clothing can remove 60-80% of contaminants. He points to his t-shirt. It's all black with two words in large white lettering: I'M NAKED. I break character, laugh, and direct him to the next station since he has (technically) already disrobed. As he goes, his prosthetic arm wound falls to the floor. He shrugs, carefully reattaches it, and moves into the shower.

After a quick break where I finally get to take off the shroud and chug a bottle of Gatorade, I move to a different station. My new job is to decontaminate non-ambulatory patients on stretchers. The mannequins have sustained incredibly gruesome injuries from the explosion. We cut off the patients' clothes, carefully wash their bodies and faces, and re-tie their tourniquets. The simulation becomes almost too real when the triage team pushes a baby with a black tag down the conveyor belt in a bathtub. The baby's mother tries to stay with the body, but she is not permitted inside the tent. When we bring the baby out, we try to explain what has happened, but it is not much consolation.

As we finally doff (take off) our Tyvek suits and boots, wring out our soaked clothes, have our vital signs checked, and debrief from the incident, I realize that this exercise has been one of the most intense experiences of my life. In fact, the course is the best training I have ever received in 20 years as an emergency manager.

- Erin Valentine

Stretchers lined up for triage/decon (*Source*: Valentine, 2022).

The five HERT instructors were dedicated subject matter experts with years of experience who could confidently answer any question posed by the class. The class size was limited to 30 people, split into small groups, and it was energizing to be in a room full of healthcare first receivers who could relate to the daily challenges faced in that setting. The classroom training provided an almost overwhelming amount of theoretical knowledge, but the daylong simulation made that knowledge real, understandable, and applicable. The simulation was so realistic, so demanding, and so genuinely stressful that it created a dramatic shift in my perspective as a hospital emergency manager. The course resulted in a notebook full of new ideas and an actionable plan to strengthen the University of Maryland Medical Center hospital's decontamination program.

More information on the HERT course is available at https://cdp.dhs.gov/training/course/PER-902.

Publisher note: In June 2015, Domestic Preparedness was invited to take an exclusive inside look at the CDP training facility, which offers something that could be beneficial to any readers of the Domestic Preparedness Journal. A comprehensive supplement can be found at https://domprep.com/journals/train-for-real-life/

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The Expanding Role of Tactical Medicine

By Ian Pleet

Since the mass shooting at Columbine High School in 1999, the paradigm for responding to an active shooter has shifted from a reactive to a proactive response to stop the killing (by stopping the shooter or shooters) and stop the dying (by stopping external hemorrhage and treating other life-threatening injuries). To prevent the dying, trained first responders with the correct equipment and the courage to use it must be present at the point of wounding, almost immediately, to stop the bleeding. While this may be the principal responsibility of a tactical medic, there is much more involved to be effective in this role.

The Role of a Tactical Medic

The American College of Emergency Physicians describes Tactical Medical Providers (TMPs) as those who "render medical care during training and at high-threat deployments where normal EMS and Fire personnel cannot safely respond." Today, tactical emergency medical care has evolved into a highly specialized discipline within the field of prehospital emergency medical care. The Vietnam War demonstrated the value of rapidly transporting casualties to higher echelons of care via helicopter. Furthermore, the global war on terrorism – with combat operations in Iraq and Afghanistan – has confirmed the lifesaving effects of tourniquets and hemostatic agents. Although there has been and continues to be ongoing development in new and better ways to kill in combat, there are also improved ways to treat combat injuries with higher survivability rates. As a result, casualty fatality rates have decreased by almost 10%, from 19.1% in WWII to 9.4% in the Iraq and Afghanistan conflicts.

Unfortunately, the wounding patterns previously seen primarily on the battlefield now occur in neighborhood streets, subways, busses, and schools. Mass shootings and active assailant attacks have become frequent headlines in the daily news. Further, there is the ever-present threat of a chemical, biological, radiological, nuclear, or high-yield explosive (CBRNE) attack. As a result, tactical medicine has become a discipline and specialty within EMS and law enforcement circles using the principles of tactical combat casualty care (TCCC) and tactical emergency casualty care (TECC), now widely taught to first responders.

When the U.S. Department of Defense realized that the leading cause of preventable death on the battlefield was exsanguination due to bleeding from an extremity, they and the Uniformed Services University of the Health Sciences reevaluated battlefield trauma care. From 1993 to 1996, a three-year study produced the TCCC guidelines. TCCC is a set of evidence-based, best-practice prehospital trauma care guidelines and the standard taught to the members of the U.S. military. TCCC is the standard taught to the members of the U.S. military. Medical personnel (MP), such as U.S. Navy Hospital Corpsman, U.S. Army Medics, and U.S. Air Force Pararescuemen, receive 16 hours of TCCC-MP training. Nonmedical personnel deploying in support of combat operations receive 40 hours of combat lifesaver (CLS) training (TCCC-CLS). All service members

(ASM) receive 7 hours of TCCC-ASM. The civilian version is 16 hours of classroom training (TECC). Both TCCC and TECC emphasize:

- Bleeding control, using tourniquets high and tight on the extremity, over the clothing, and wound packing with hemostatic gauze;
- Airway and breathing control with needle decompression and surgical airways;
- Techniques for removing a patient from a vehicle; and
- Assessment and treatment of the patient in a nontraditional environment (e.g., under or behind cover, in low light, no light, or under night vision).

Lack of Standardization

There is no national standard on what training or certification must be considered to become a tactical medic. They may or may not have tactical training, be sworn law enforcement officers, or even be armed. However, several organizations offer training or certification in tactical medicine:

- The Counter Narcotics and Terrorism Operational Medical Support (CONTOMS) course, which has existed since 1990;
- The Tactical Paramedic-Certified (TP-C), offered by the International Board of Specialty Certifications;
- Emergency Medical Technician-Tactical (EMT-T) certification, offered by Rescue Training Incorporated;
- The TCCC and TECC courses, offered by the National Association of EMTs.

In addition to these classes, prehospital trauma life support (PHTLS), advanced trauma life support (ATLS), and the trauma nurse core course (TNCC) offer valuable education for the tactical medic. Tactical medics practice the full scope of prehospital paramedical care. So, while these instructional programs focus on trauma, an officer can just as quickly die from an exacerbation of his underlying asthma. Therefore, it is critically important for the tactical medic to stay current on their knowledge, skills, and abilities to recognize and treat medical conditions.

Tactical medicine plays a significant role in reducing deaths associated with active assailant incidents.

Tactical medical skills are perishable. They require many hours of direct patient care experience and regular exercises to maintain competency and proficiency, like any other medical skill. A full-time tactical medic assigned to the tactical team would train officers or agents in the basics of self-care and buddy care, focusing on bleeding control. A 12-month training calendar would include periods of classroom instruction, clinical rotations at the local trauma center, cadaver and live tissue labs, and operating room time to maintain their airway skills and techniques. In addition, the agency must allocate funds in the annual budget to support attendance at local and national professional development and training conferences.

There is currently no nationwide standard practice for how law enforcement and EMS agencies integrate tactical medics. For example, some law enforcement agencies have tactical medics assigned to their tactical teams full-time, while others utilize them part-time for callouts. In some cases, the tactical medic is a sworn police officer, but they are not required to have full police powers. Additionally, there are times that transport capabilities exist, such as an ambulance staged inside the hot zone. But there are other circumstances in which that capacity does not exist.

Many law enforcement agencies depend on the local civilian EMS agency to provide EMTs or paramedics and the transport vehicle. However, relying on civilian EMS agencies poses several challenges. For example, the EMT or paramedics may or may not have tactical medical training and may not be familiar with the tactical team's techniques, procedures, or equipment. Additionally, it is standard practice for civilian EMS to stage in the cold zone with the ambulance. While this keeps the civilian EMTs and paramedics safe, it requires precious time for them to be brought up to the injured officer or bring the wounded officer to the ambulance.

Some jurisdictions opt to use a hospital car or "h-car," which is a police car that takes an injured police officer to the hospital. As reported in a January 25, 2021 article from the Penn Medicine News, Philadelphia Police transport as many as two-thirds of penetrating trauma victims to the hospital using their police cars. While this may be a practical way to get an injured person to definitive care, there is little to no lifesaving en-route care.

Additional Benefits of TMPs

A vital part of any tactical medic program is medical control. If a civilian EMS agency supplies the tactical medic, they already have medical control. However, if the tactical medic is organic to the law enforcement agency, they would most likely fall under the operational medical control of the same doctor directing the local civilian EMTs and paramedics – but would most likely need some kind of agreement between the law enforcement agency the medical director. Getting medical control could be as simple as a memorandum of understanding or a memorandum of agreement with the local hospital or authority having jurisdiction.

Law enforcement agencies with tactical medics should use them to maximize their value to the team. When taking part in a pre-planned event or callout, the tactical medic could be consulted or personally author the medical plan. They could assist in identifying the vehicle(s) used for transport and the primary and secondary evacuation routes to the nearest trauma center. Part of the contingency planning for any event should also be identifying where the landing zone would be. The tactical medic should go with an officer to the hospital to provide en-route care, be the medical advocate for the officer, and liaise between the hospital and law enforcement agency. When attending training or at high-threat deployments, the tactical medic can provide value when not directly participating in the training or deployment – for example, distributing bottles of water to keep the officers hydrated or monitoring for weather extremes in heat or cold to help the officers avoid hyperthermia or hypothermia. The tactical medic is also trained in canine medicine and provides medical support in remote or austere environments such as a fugitive hunt.

The tactical medic can provide emergency medical contingency planning and administrative support when not deployed on a tactical operation. Medical contingency planning, more commonly known as the behind-the-scenes work, is an often-overlooked and underappreciated aspect of tactical medicine until an officer is wounded. They can help buy medical supplies, create a budget for medical equipment, training, and resources, and provide medical and logistical support. They should advocate for policy standardizing the contents and location of the individual first aid kit (IFAK). While commercial off-the-shelf (COTS) IFAKs can be well-stocked, the tactical medic can add value by customizing them for their officers, including pre-sized nasal pharyngeal airways. Officers should be required to carry their IFAK on their support side, opposite their handgun, so that other officers know where to locate the device in an emergency.

Tactical training is traditionally a high-risk training event, which carries a higher risk of injury to the participating officers. A tactical medic on-site during training allows them to provide immediate lifesaving care if needed. It also enables the tactical medic to gain a basic understanding of movement and tactics. Another administrative procedure is creating a medical file for each officer, tactical or not. This file could be a laminated index card listing the past medical history, known allergies, next of kin contact information, and medications. The tactical medic can reference this card if the officer cannot speak or

is unconscious. Officers should keep this on their persons in a pre-determined location, for instance, in the breast pocket on their support side.

With the increased awareness and threat of CBRNE attacks, the tactical medic can train officers to identify the signs and symptoms of a nerve agent attack and use a nerve agent antidote kit. With the rise of Fentanyl-related calls and reported exposures, the organic tactical medic can provide officers with procedures to screen for exposure and immediate care if necessary. They can also give the officers current and accurate procedures and practices to screen for actual exposure and coordinate with the local fire department or hazmat team to provide appropriate decontamination. The agency's public relations can be bolstered by having the tactical medic teach CPR and Stop the Bleed® classes to the public. With the rise in violence, it is prudent for law enforcement leaders to work with EMS leaders to codify how they will integrate tactical medics within their ranks before the next active shooter opens fire or the terrorist pushes the plunger.

Ian Pleet is a veteran U.S. Navy Hospital Corpsman and has worked as a contractor in U.S. Northern Command (USNORTHCOM), U.S. Indo-Pacific Command (USINDOPACOM), and U.S. Central Command (CENTCOM). He is a Change Management Advanced Practitioner, FEMA Professional Continuity Practitioner, and Nationally Registered EMT.

Responding Respectfully to People With Disabilities

By James Martin

Police officers, firefighters, paramedics, emergency medical technicians, doctors, nurses, and others in emergency response roles are regularly tasked with responding to emergencies and disaster sites and communicating with various people who have been involved in or witnessed an incident. However, some research has shown that there is "a gap in first responders' ability to meet the functional and access needs of some people with disabilities." To address this gap and be able to respond effectively and with respect, it is critical to understand the different types of needs and how various impairments can affect individuals with disabilities and access and functional needs (DAFN).

Differing Needs Within a Community

Emergency responders will encounter many individuals with DAFN, which are not restricted to any specific demographic groups. However, when responding to an emergency, functional needs are likely to be found in at-risk populations and situations, which include but are not limited to senior citizens, young children, impoverished or homeless persons, substance abuse cases, people with physical or mental disabilities, and those with cultural, geographic, or linguistical differences. At-risk populations are defined by the Centers for Disease Control and Prevention (CDC) as:

> *[I]ndividuals or groups whose needs are not fully addressed by traditional service providers or who feel they cannot comfortably or safely use the standard resources offered during preparedness, response, and recovery efforts.*

In 2002, the Americans with Disabilities Act (ADA) defined an *individual with a disability* as "a person who has a physical or mental impairment that substantially limits one or more major life activities, has a record of such an impairment, or is regarded as having such an impairment." However, in 2008, the ADA broadened the definition to include many other types of physical and mental impairments, which are currently defined as:

> *Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more body systems, such as: neurological, musculoskeletal, special sense organs, respiratory (including speech organs), cardiovascular, reproductive, digestive, genitourinary, immune, circulatory, hemic, lymphatic, skin, and endocrine; or*
>
> *Any mental or psychological disorder such as intellectual disability, organic brain syndrome, emotional or mental illness, and specific learning disability.*

Emergency responders must recognize the signs and ask the right questions in each scenario to identify and respond with sensitivity to people with potential hearing, mental, mobility, or environmental and chemical impairments. By understanding the potential needs associated with physical and mental impairments, responders will be better equipped to determine the appropriate actions and provide the highest level of care possible.

How Impairments Can Affect Daily Activities

Physical and mental disabilities are associated with a broad range of impairments. Following are general descriptions of the types of impairments that responders may encounter and how these impairments may affect daily activities. However, no assumptions should be made before discussing with and assessing each person's individual abilities.

Vision impairments include various levels of visual ability: partially sighted, low vision, legally blind, and totally blind. As such, people with vision impairments may have difficulty reading, be unable to discern objects and colors, or have diminished depth perception. Some may also use assistive technologies or guide dogs to perform daily tasks.

Hearing impairments include partial or full loss of hearing in one or both ears and can affect the outer or middle ear (conductive) or the inner ear or hearing nerve (sensorineural). In addition to hearing loss, these impairments can affect a person's balance and mobility. Some people with hearing impairments wear assistive devices (e.g., hearing aids), know sign language (American Sign Language is just one variation), and speak with some or no speech impediment.

Emergency preparedness and response professionals need to know how to respond to an emergency and how to meet the needs of everyone who may be affected.

Mobility impairments include different types of physical disabilities that "limit or prevent independent movement or full use of one or more body parts." Regardless the cause (genetic, traumatic, neurological, disease- or age-related), ability to ambulate and perform routine tasks can vary significantly. Cognitive and neurological abilities could also be affected. Some people may use assistive equipment (e.g., wheelchair, crutches, cane, walker) or service dogs.

Mental impairments include neurological disorders, learning disabilities, and psychological or intellectual disabilities. These impairments may inhibit a person's ability to learn, communicate, build relationships, or express or control behaviors, feelings, and emotions. Physical symptoms may also manifest. Some people may be able to use medications and other forms of therapy to manage certain symptoms.

Chemical and environmental impairments include hypersensitivity and severe reactions to various substances such as chemicals, smoke, latex, mold, foods, and other allergens. People with underlying health conditions like asthma could experience life-threatening effects.

Responding Effectively

When assisting anyone, with or without a known impairment, there are some general recommendations that responders should consider. The following action items will facilitate effective emergency response interaction under any circumstances. However, when one or more persons involved has an impairment or disability, not taking these actions could inhibit a responder's ability to provide the immediate care and support needed. Following are just a few key recommendations, but many more tips for engaging persons with disabilities (including those specifically for first responders) are provided in the hyperlinked resources.

General Recommendations

- Identify yourself and why you are there.
- Do not make any assumptions about a person's abilities.
- Remember that nobody has to divulge their disabilities but ask if there are any health issues that need to be addressed to better assist them.
- Remain calm and provide reassurance throughout the interaction.
- Always ask permission before attempting to touch or assist the person.
- Provide frequent updates on the current situation and upcoming actions.
- Ask if any assistance or any assistive devices are needed.
- Be aware of any service animals, which are often dogs but could include other animals:
- Know that service animals are working animals and not pets.
- Do not pet or feed animals without the owner's permission.
- Do not distract working animals from their assistive tasks.
- Do not separate the animal from the owner if evacuation is necessary

Engaging People With Vision Impairments

- Verbalize any actions and use visual descriptors.
- Do not assume that people with vision impairments also have hearing impairments.
- Let the person hold your arm or follow you if guidance is needed.
- Describe obstacles such as doorways and steps and their orientation (e.g., stairs to your right).
- Read any written information out loud.
- Ensure adequate lighting conditions based on visual acuity.

Engaging People With Hearing Impairments

- Establish eye contact and talk with the person rather than their family member or interpreter.

- Do not speak with your back turned away from the person.
- Use hand gestures and facial expressions to facilitate communication.
- Offer to use written communication when oral communication is not understood.

Engaging People With Mobility Impairment

- To respect their independence, ask the person if they need assistance and, if so, how to help them.
- When talking with someone in a wheelchair for more than a few minutes, move down to their eye level.
- Ask the person about their wheelchair or other equipment and ask permission before attempting to push or operate it.
- When assisting someone with a walker or other assistive device, do not rush them – take breaks as needed.
- Avoid the "fireman's carry" on those who have severe limited mobility or preexisting spinal cord injury.

Engaging People With Mental Impairments

- Use clear, concise, and respectful communication (one discussion topic at a time) – do not talk down to the person.
- Explain processes and timeframes for what is happening or will occur.
- Be reassuring, do not argue, and do not rush the person to respond.
- Move to a quieter space if the person shows signs of agitation or stress.

Engaging People With Environmental Impairments

- If smoke, odors, or spores that may be in the air, provide a means for the person to cover their nose and mouth to keep from inhaling anything harmful.
- Check to make sure if they have any meds or epinephrin pen in case of any reactions.
- Keep people with possible reactions clear from areas and "upwind" from smoke or odors.

More Education and Training to Close Response Gaps

Agencies and organizations that are tasked with incident management must create inclusive programs to address the needs of everyone within their communities. Agencies in Maryland created a toolkit using "a function-based approach to identify ways to meet the needs of a wide range of people that may be adversely affected by incidents." Considerations are needed at each phase of an emergency: preparedness (external outreach, training and exercising, planning), response (shelter-in-place, evacuation support, emergency shelters), and recovery (post-incident external outreach, depart shelter and demobilize, and disaster recovery services). This toolkit contains the following resources to assist emergency preparedness professionals in developing their own DAFN programs:

- Planning and legal considerations;
- Description of the function-based framework – including communication, health and medical, maintaining independence, personal care assistance, and transportation;
- Functional needs considerations worksheets;
- Self-assessment checklist for creating inclusive emergency programs; and
- Additional resources.

Being able to identify and understand the needs of others and developing the skills to address these needs with sensitivity are crucial tools for any emergency preparedness and response professional. Emergency responders will encounter many scenarios that involve a person(s) with some form of disability or impairment. However, communicating effectively with everyone on scene involves interpersonal skills that may not be innate.

Learning how to communicate and interact with individuals with DAFN requires being able to identify functional needs, understanding how these needs may affect the person's ability to perform routine tasks, and developing the skills to address these needs with sensitivity. Additional education and training on this topic would help agencies and individuals better serve their communities and close the emergency response gap for individuals with DAFN.

Additional resources for emergency preparedness and response professionals:

An ADA Guide for Local Governments – Making Community Emergency Preparedness and Response Programs Accessible to People with Disabilities (Americans With Disabilities Act [ADA])

Individuals With Disabilities (Ready.gov)

Disability & Health Emergency Preparedness Tools & Resources (Centers for Disease Control and Prevention [CDC])

Access and Functional Needs Toolkit: Integrating a Community Partner Network to Inform Risk Communication Strategies (CDC)

Emergency Procedures for Employees With Disabilities in Office Occupancies (Federal Emergency Management Agency and U.S. Fire Administration)

Planning for People with Disabilities And Others With Access and Functional Needs Toolkit (Maryland Emergency Management Agency and other Maryland partners)

Tips for First Responders (Georgia Emergency Preparedness Coalition for Individuals with Disabilities and Older Adults)

Tips for First Responders, 2nd Edition (Center for Development and Disability University of New Mexico and collaborative partners)

James Martin was the founder and executive director of the Maryland-based Accessible Resources for Independence (ARI), a 501(c)(3) organization that supports the disability community and, through a federal grant, also served as the Center for Independent Living for both Anne Arundel County and Howard County. In 1985, he was involved in an automobile collision that left him a functional quadriplegic and a member of the disability community. He served on the Commission for Disability Issues of Anne Arundel County as chair for the Legislative and Housing Committees. He also served as chairman of the Citizen Corps Council for Anne Arundel County and the City of Annapolis. As a member of and trainer for the Anne Arundel Community Emergency Response Team (CERT), he developed and taught a "Functional Needs" module for the local CERT training program and volunteered at the county emergency operations center, where he was a call-taker during snowstorms and hurricanes, including Irene and Sandy. He graduated from Anne Arundel Community College (AACC). He graduated in 1999 from the Architecture School of Mississippi State University with a Bachelor of Architecture degree. He later became an adjunct professor in the Architecture and Design Department at AACC.

How Natural Disasters Exacerbate Human Trafficking

By Hailey York & Lindsey Lane

In August 2005, Hurricane Katrina made landfall in Louisiana, impacting the Pelican State with winds up to 174 miles per hour. While breached levees and the loss of homes, businesses, and lives made global news, they were not the only damages to follow the Category 5 storm. Many individuals displaced from the storm became victims of human trafficking. In the five years following Katrina, over 3,750 survivors of human trafficking were identified in the Gulf Coast region alone. For comparison, 2020 saw 386 new survivors identified in Louisiana through the National Human Trafficking Hotline.

Human trafficking, the "crime of using force, fraud, or coercion to compel an individual to work or to engage in a commercial sex act," is the world's second-largest criminal industry, generating an estimated $150 billion annually. In the wake of natural disasters like hurricanes, droughts, earthquakes, and floods, an individual's risk of being trafficked increases as traffickers often recruit and exploit victims from vulnerable populations. Certain pre-existing vulnerabilities are more likely to lead an individual into trafficking and are more likely to be exacerbated by disaster. Among the federal criminal human trafficking cases filed in 2021, adult victim vulnerabilities identified included financial debt (70%), financial insecurity (60%), undocumented status (49%), and limited English proficiency (47%). For minors, identified key vulnerabilities include being a runaway (76%), homelessness (8%), foster care (30%), previous trafficking victim (22%) or having undocumented status (5%).

After natural disasters like Katrina, these already present vulnerabilities in communities are compounded as livelihoods and lives are lost, and communities are displaced from their support networks, leaving individuals more susceptible to traffickers. Additionally, limited resources force law enforcement's attention toward immediate rescue needs, leaving those vulnerable to the uptick in human trafficking with limited protection. Children orphaned or separated from their parents, women who have lost their homes and livelihoods, and immigrants flooding into the disaster-stricken area to work are particularly at risk for trafficking post-disaster.

Children orphaned or separated from their parents post-disaster can be highly traumatized and especially trusting of adults, increasing their risk of sex or labor trafficking. While they may not be runaways, many of these children are subject to the same vulnerabilities a runaway would experience due to separation from supportive adults. Beyond the immediate trauma and harm of natural disaster exposure, children are also more likely to suffer long-term physical, psychological, and educational deficits, which may lead to a vulnerability to trafficking in the future. Illegal adoptions can also occur post-disaster as traffickers take advantage of displaced children, selling them to

remote families who believe they are helping a child in need. Though it is unclear how frequently this practice occurs in the U.S., it was prevalent after the 2010 earthquake in Haiti, when an unknown number of children were taken illegally from the country for international adoption.

Women also face an elevated trafficking risk post-disaster, especially for sex trafficking. Post-disaster, women may lose their jobs and homes, leading to poverty and financial debt – two key vulnerabilities that make them ready targets for traffickers. Traffickers often recruit victims by offering shelter, a way to make quick cash, or a way for individuals to get back on their feet. For example, after Hurricane Harvey, the prevalence of adult advertisements online doubled, with many offering rent-free accommodations to any "pretty girls wanting to make some quick money and recover losses after Harvey." Further, thousands of aid workers, such as construction and remediation crews, arriving in the post-disaster area can increase the demand for commercial sex, incentivizing traffickers to increase their supply by targeting vulnerable disaster victims.

Immigrants recruited to the post-disaster area for work are specifically at risk for labor trafficking. Post-disaster, there is an increased need for workers to repair damaged infrastructure and work in the local hospitality industry, which often hosts displaced individuals. Many of these jobs are considered undesirable by domestic laborers, driving up the demand for laborers from abroad. Immigrant workers – documented (through the H-2 visa program) and undocumented – are at an increased risk for labor trafficking. They often have limited English proficiency, financial debt, and financial insecurity. The H-2 visa, which is contingent on a worker remaining with a specific employer, creates an exploitative environment where employers may threaten and exploit workers unless they agree to work on particular terms.

In the wake of natural disasters, human trafficking cases rise. This article describes the threat and ways to mitigate the impact on vulnerable populations.

Undocumented workers have even fewer rights and protections, making them exceptionally vulnerable to exploitation. Simultaneously, labor and immigration regulations are often relaxed after a natural disaster, compounding vulnerabilities, and creating situations ripe for human trafficking. For example, after Hurricane Katrina, Signal International (a Gulf Coast marine services company) used false promises of permanent U.S. residency to traffic hundreds of workers to the U.S. to repair damaged oil rigs and related facilities. The traffickers kept the men in guarded camps and threatened deportation if human rights abuses were reported. Since many of the trafficking victims had paid thousands of dollars to reach the U.S. and had their families' livelihoods on the line, many were deterred from reporting. Unfortunately, cases like these are not uncommon.

Human trafficking is an incredibly complex problem that cannot be solved by implementing a single remedy or solution. However, the uptick in trafficking of at-risk groups post-disaster can be mitigated through proper emergency preparedness

and training. While some agencies and organizations offer anti-trafficking training programs, less than half of surveyed emergency medical services (EMS) workers have received training on human trafficking. With the frequency of natural disasters increasing by a factor of five over the past 50 years and continuing to rise, human trafficking will only become a more pressing issue. There are steps federal, state, and local governments, corporations, and civil society organizations can take now in preparation to fight human trafficking:

- Establish more in-depth anti-trafficking training for front-line workers and ensure all front-line workers receive training. For example, in June 2022, the Texas Division of Emergency Management included presentations during its annual conference on how to recognize human trafficking post-disaster and how emergency management can help prevent trafficking. Effective training should consist of materials that highlight:
    - The signs of human trafficking post-disaster,
    - Legal definitions of human trafficking,
    - Local trafficking statistics,
    - Who is at risk for trafficking,
    - How people fall victim to traffickers,
    - How traffickers control people,
    - Common trafficking settings, and
    - How to ask questions of and listen to suspected victims.
- Develop toolkits with direct outreach materials, policies, and phone numbers to contact for assistance in multiple languages.
- Promote public awareness campaigns on trafficking surrounding natural disasters, including common phrases used by traffickers that civilians should watch out for and the risks of trafficking before and during disasters. This information should be posted in emergency shelters to ensure it reaches at-risk people.
- Ensure greater resources for law enforcement and front-line workers post-disaster to fortify anti-trafficking work amidst ongoing rescue efforts.
- Provide women with a way to make cash locally and quickly post-disaster to minimize their risk of trafficking. For example, after Hurricane Matthew landed in Haiti, UNICEF effectively partnered with cash-for-work companies to hire women to assemble needed hygiene kits.
- Prioritize safe environments for children post-disaster to decrease the risk of recruitment and exploitation by traffickers.
- Avoid relaxing labor and immigration standards post-disaster, as this can exacerbate trafficking.

Any combination of these approaches can help to limit trafficking post-disaster. Most importantly, though, steps to implement these programs should be included in emergency management so the U.S. is prepared to fight human trafficking when disaster strikes.

Source: Photo by Adam Szarmack.

If you, or you suspect someone might be a victim of human trafficking, contact the National Human Trafficking Hotline at (888) 373-7888.

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Reduce Burnout & Increase Retention in Emergency Management

By Kesley Richardson

In emergency management (EM), the landscape of incoming professionals is evolving from second-career professionals to first-career college graduated practitioners. This change spotlights the difference between management and leadership and its effects on the retention and burnout of professionals. EM professionals see growth in organizations, with "projected growth between 2016 and 2026 to be around 8%" states Columbia Southern University. Issues and gaps inside the EM field or ecosystem become even more apparent when the severity of and damages related to an incident or event increase.

Burnout in EM

Burnout and retention of EM professionals are growing issues within the EM field and a valuable lesson for leadership. These lasting effects within the field also have secondary effects damaging the output of professionals. Leaving them with traumatic stress, compassion fatigue, and lower levels of quality of life. Other professions have a wealth of best practices for staff management and retention, but the application of these practices often differs between industries. In addition, research, studies, articles, and news cycles frequently focus their discussions on the disaster, incident, or event while providing limited focus on the personnel, organization, or structure within EM departments.

"Understanding the Burn Out Experience" describes burnout as:

> *[A] psychological syndrome emerging as a prolonged response to chronic interpersonal stressors on the job. The three key dimensions of this response are an overwhelming exhaustion, feelings of cynicism and detachment from the job, and a sense of ineffectiveness and lack of accomplishment.*

This and other research highlight the correlation between higher burnout and lower empathy levels. Furthermore, such research on burnout demonstrates how just one factor like empathy can directly correlate with maintaining and increasing retention of EM professionals.

To reduce burnout and increase retention, agencies and organizations should focus on the individuals serving in the EM profession, which encompasses many responsibilities, including high-stress roles, political pressure, life safety, vulnerable infrastructure, and community vulnerabilities. In addition to incident management, they must simultaneously sustain their daily operational duties within the organization and the broader profession. The people directly involved in the emergency response efforts of their communities may require additional support beyond the existing departmental human resource practices. Yet, more research is needed on the organizational structure and employee retention or development in EM outside of preparing for the next disaster.

Existing research shows how Maslow's Hierarchy of Needs plays a role. When the basic personal needs and responsibilities are met, operational levels are higher because practitioners are not as worried about their family's needs, personal safety, or mental, emotional, and physical wellbeing while on the job. Another theory by Maslow on Human Motivation states, "practically everything looks less important than safety… A man, in this, state, if it is extreme enough and chronic enough, may be characterized as living almost for safety alone."

Three Ways to Reduce Burnout

The EM profession requires proactive, not just reactive, efforts to support personnel that extend to the recruiting, development, and sustainment of departments, teams, and leadership. Gayle Capozzalo from the American College of Healthcare Executives recommended three preemptive strategies in *The Preventative Measures of Burnout* – lead with care, invest in psychological support, and look at the schedule.

Leading With Care

A mastery of soft skills and leadership abilities are needed to understand one's team and have genuine interactions and meaningful conversations. With active listening, subordinates, managers, and colleagues can become leaders and friends in the workplace that assist with cultivating a culture of care and value. Leading with care is a limited skillset within EM, likely due to a limited awareness by the general population regarding EM. More awareness in the field would create a more diverse pool of applicants and practitioners. The professional infrastructure of EM has been continually improving and developing since the Cold War. However, there is still an opportunity for expanded advancement in this profession, where certifications are respected, and advanced education is valued for advancing beyond entry-level opportunities. Leading with care extends to the person, the team, the culture, and the change that will come forth as the field evolves beyond just the grey skies (i.e., activation) times.

Source: ©iStock/Antonio_Diaz

Investing in Psychological Support

The second strategy is to invest in the office's psychological support and mental health. The strain and elevated stress of responding to or being exposed to high-stress environments at regular intervals can have lasting effects on the personnel. Developing preventative measures, offering ample recharge time, and taking opportunities to provide value to the staff at all levels help mitigate the impact of working during stressful events. Not taking care of the mental space can have a negative effect on emotions and result in diminished performance and teamwork issues. Some online sources support stress reduction even though they may not quell the source of the stress. For example, this self-paced online program for healthcare workers is also applicable as a resource to other organizations' wellness and mental health efforts. As the hit film Remember the Titans mentioned, "Attitude reflects leadership." Attitude – regardless of the role of the person within the organizational structure – can have positive outcomes and effects on a staff's cooperation and mental well-being or have the exact opposite effect.

Looking at the Schedule

Working longer hours is a significant cause of burnout, leading to another reason for employee retention issues. As recommended, "Many of the HR [human resources] best practices performed by our members, including consistent scheduling and capped over time, can help mitigate stress, prevent burnout, and improve employee retention." In some scenarios, overtime may not be an option for staff. However, when the time served is equally reflected for employees in a compensation or time off (e.g., flex time, comp time, or alternate incentives), personnel will have additional opportunities to recharge. Response to the COVID-19 pandemic expanded the concepts of hybrid workspaces and flexible schedules, which still present challenges for balancing activations during grey skies (frequently assigned in 12-hour shifts) or operations during regular blue skies (i.e., non-activation), which can often exceed an average 8-hour workday. Checking calendars, showing positive intent, and offering flexible schedules can promote employees' health and well-being, which may increase retention in EM and among first responders. The traditional old-school way of tracking time and schedules – when mental health was not as accessible, openly discussed, or prioritized – may be a thing of the past. The profession must evolve to accommodate scheduling and time served versus time recovered. From a manager's and a leadership perspective, taking care of one's team, department, and people comes with constant growth as a leader, regardless of the official job title.

A Shift Toward Retention

The work landscape is changing internally and externally to EM and response. With these changes, management and leadership also must change. The existing practices need to shift to support personnel retention within the organization and the development of departments. Focusing on preventative methods that concentrate on burnout can increase personnel retention. EM teams and first responders' mental well-being correlates with an organization's ability to provide proficient teams to fully support the communities they serve. A whole community approach facilitates accountability and responsibility, decreases burnout when possible, increases personnel retention, and promotes the value of the people within an organization or department.

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Wanted: Mental Health Support for Disaster Trauma

By Ruth Baugher Palmer, Mary McNaughton-Cassill & Mary Schoenfeldt

Disaster response organizations have become increasingly adept at meeting the basic needs of survivors, including shelter, food, water, and medical treatment. However, traumatic disaster-related experiences – including threats to life, exposure to death and injury, and the destruction of homes and communities – also take a psychological toll on survivors. Common responses to disasters include grief, anxiety, and anger, as well as post-traumatic stress disorder (PTSD), depression, and anxiety. Although the presence of social support is known to moderate the impact of trauma on psychological well-being, disasters often disrupt individual and structural social networks causing further distress. Consequently, disaster responses increasingly include mental health components. The Green Cross Academy of Traumatology (GCAT) focuses on providing specialized mental health support in disaster situations at no required cost to the requesting local authorities during gray sky days.

About the Green Cross

Originally organized to serve a need in Oklahoma City following the 1995 bombing of the Alfred P. Murrah federal building, the Green Cross is an international, non-profit, humanitarian assistance organization comprised of volunteer professionals trained to help people in crisis following traumatic events. GCAT provides training to prepare mental health practitioners and other professionals, such as medical and healthcare workers, emergency managers, first responders (law enforcement, fire, emergency medical services), educators, animal service workers, or Community Emergency Response Team (CERT) members for disaster response deployment. Levels of involvement are available, ranging from basic membership to five tiers of specialty certification: Compassion Fatigue Educator, Compassion Fatigue Therapist, Field Traumatologist, Certified Traumatologist, and Master Traumatologist.

To deploy with GCAT, members must have completed the Federal Emergency Management Agency's (FEMA) independent study courses IS-100 (Introduction to the Incident Command System) and IS-700 (An Introduction to the National Incident Management System). They also must have prior professional experience in crises and have training specifically in disaster field traumatology but do not have to be licensed mental health professionals. An essential element of trauma work is maintaining a non-anxious presence in crises, which means more than simply having the capacity to appear calm. Although staying calm is necessary, the concept of non-anxious presence also includes utilizing positive self-talk and other personal skills to maintain a low level of anxiety in stressful situations. This practice enables the responder to remain non-reactive and to use skills and training, thereby increasing the benefit potential for both the responder and the client.

Similarly, trauma work requires more than desire and training. An essential part of caring for others is the ability to care for self. Even the most accomplished traumatologist is susceptible to compassion fatigue. Therefore, Green Cross members wishing to volunteer for disaster response must complete compassion fatigue self-tests, and their scores must be approved to deploy. Additionally, ongoing monitoring of members' self-care is a crucial part of every Green Cross deployment.

Each Green Cross response team deploys using an incident command structure to ensure the deployment effort coordinates with and fits into the structure of the overall emergency and disaster response efforts of other agencies. This structure is designed to expand and contract as positions are needed. On a small team, one person might hold more than one position. Green Cross always designates a team leader and a compassion fatigue specialist at a minimum. Within the structure are four functions: operations, logistics, planning/intelligence, and finance/administration. GCAT informally calls these doers, getters, thinkers, and payers and works to match team members to roles that fit their skill sets (see Fig. 1).

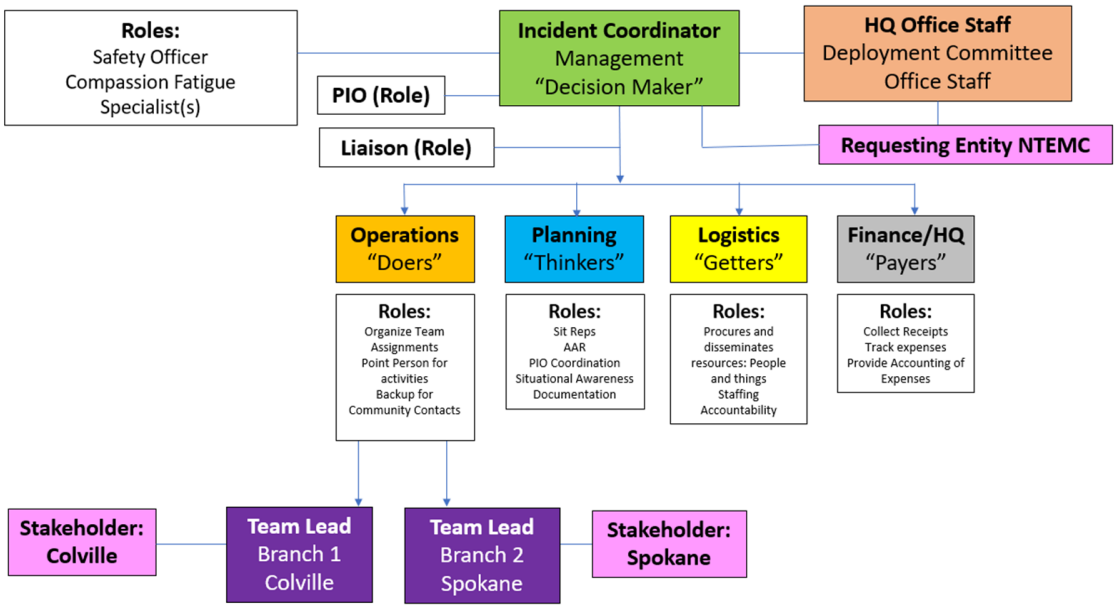

Fig. 1. Green Cross field deployment organizational structure (*Source:* Green Cross, 2022)

What Green Cross Does

Green Cross never self-deploys but responds to invitations following a traumatic event. Sometimes GCAT is known ahead of time by local officials or agencies who extend an invitation directly. Other times previous partners inform a new group of GCAT's mission, who then reaches out to initiate a memo of understanding (MOU) for services. Green Cross's on-ground services are free, as it is financially supported by donations, grants, and fees received for membership and trainings. The requests for on-ground services can include any or all the following:

- Crisis intervention and stabilization;
- Psychological first aid;
- Critical incident stress management (CISM) activities;
- Assessment and referral services to survivors;
- Assessment and consultation with management; and
- Training, education, and certification.

For example, Green Cross was invited by a local government agency to Paradise, California, following the "Camp Fire," one of the deadliest wildfires in California's history. The fire began on November 8, 2018, and took three weeks to contain. It burned over 150,000 acres, destroying more than 18,000 structures. Many residents fled amid raging fire that burned the equivalent of one football field every second at its peak of destruction. More than 85 people were killed and several injured, including civilians and firefighters.

The initial request was to provide support services to first responders as they grappled with their professional roles and personal losses in confronting the reality of this disaster. Green Cross team members met with local first responders, bearing witness in individual and group conversations to their heroism and (at times) their own vicarious trauma experienced in the rescue efforts and attempts to contain the fire's destruction. Green Cross teams also worked with Butte County Behavioral Health staff at the disaster recovery centers, where displaced residents sought services from FEMA, the Red Cross, and local municipal departments. GCAT members dispersed across the town of Paradise and surrounding communities to local businesses where fire survivors gathered and churches distributing meals and supplies. There they met individually and in groups to help residents process the traumatic events they experienced and deal with the aftermath of their overwhelming losses. Green Cross returned to Paradise on the fire's first anniversary to support and guide the community as they continued to work toward recovery.

How Green Cross Helps

GCAT's disaster mental health efforts are based on best practice field traumatology principles, including psychological first aid (PFA). PFA's core actions include:

- Establishing contact with community members in non-intrusive ways,
- Addressing immediate safety and practical concerns,
- Helping people to manage emotional distress,
- Creating recovery and action plans, and
- Linking survivors to sources of long-term support.

Disaster response interventions focus on helping people deal with the acute stress they are experiencing. GCAT-trained teams can also assess for further services and encourage the use of local resources.

Disaster research suggests that people typically show signs of acute stress in the weeks following a disaster and are at increased risk for developing PTSD. They may also

experience a range of difficulties, including clinically significant depression or anxiety, disturbances in sleep, appetite, or libido, and somatic complaints such as headaches and gastrointestinal problems. Those who experience disaster trauma also have difficulty problem-solving, remembering, or using critical thinking skills. In addition, people who have lost a loved one, a pet, or property may exhibit responses characteristic of bereavement. Typically, disaster responders, including trained and certified GCAT members, focus on helping the bereaved to understand their feelings, meet their basic needs, take care of their families, and manage the logistics of coping in a disrupted world.

The mission of any Green Cross deployment is to transform disaster victims into survivors. Immediately following a traumatic event, survivors attempt to address five fundamental questions:

- What happened to me/others? (shock, disbelief, disorientation, confusion)
- Why did it happen to me/us? (fear)
- Why did I/we do what I/we did during and right after this disaster? (guilt and feelings of inadequacy)
- Why have I/we acted as I/we have since the disaster? (confusion and worry about their sanity and ability to recover)
- Will I/we be able to cope if this disaster happens again?

Green Cross member, Dr. Sherry Todd, offers support to residents waiting for services, following Hurricane Harvey, Rockport, TX (Source: Green Cross, 2017).

Green Cross teams invite these conversations in formal meetings offered to communities, as well as informal activities and chats that emerge as they hand out water to people waiting in line for meals and services. Teams provide support and do not press people to talk about their experiences. Often, casual conversation builds a relationship and helps people know they are not alone. The goal is to help normalize what survivors are experiencing in a disorienting, abnormal situation and to enhance their coping resources and resilience. With this support, survivors become more stable and better able to problem solve and cope with the overwhelming experience. GCAT teams are trained in mental health interventions, which include suicide assessment, CISM, and emotional calming and grounding techniques. Green Cross teams also offer compassion fatigue support for first responders and volunteers participating in the disaster response. This includes support groups for emergency responders and healthcare workers.

Join Green Cross

Mental health professionals, paraprofessionals, health care workers, emergency management professionals, educators, and other interested professionals are encouraged to join the Green Cross Academy of Traumatology. GCAT members are an energetic and dedicated group of colleagues committed to applying the knowledge and skills of their respective fields to individuals, families, and communities in the aftermath of disasters. Alert to the risk of personal compassion fatigue and vicarious trauma, team members tend to each other carefully on deployments. They also support one another with kindness, respect, and lots of humor as they seek to serve those experiencing loss and pain. In doing so, they find hope and camaraderie amid the devastation.

Ruth Baugher Palmer, Ph.D., is a professor of Counseling Psychology at Eastern University, near Philadelphia, PA. She is the director of the master's program in Clinical Counseling, which has a concentration in Trauma Studies. She is a licensed psychologist and holds certifications from the Green Cross Academy of Traumatology and the International Association of Trauma Professionals in compassion fatigue education, grief counseling, and clinical and field traumatology. She served as a field traumatologist with Green Cross during wildfire disasters in Paradise, California (2019) and Lane County, Oregon (2020).

Mary McNaughton-Cassill, Ph.D., is a professor of clinical psychology at the University of Texas at San Antonio. Her research focuses on coping with the stress of modern life, and she has written two books on the topic ("Mind the Gap" and "Give Way"). She also has a blog on the Psychology Today website entitled "Mental Health Matters." She is a fellow of the University of Texas Academy of Distinguished Teachers and a licensed therapist with experience working with trauma survivors in various settings, including a college counseling center, a U.S. Department of Veterans Affairs hospital, and private practice. In addition, she has deployed with Green Cross as a team member, compassion fatigue coordinator, team leader, and stress management educator in Puerto Rico, Texas, California, and Oregon.

Mary Schoenfeldt, Ph.D., is the board president of Green Cross Academy of Traumatology and has responded to countless disasters. She is an emergency management professional specializing in community and school crises and has a passion for disaster psychology. She is a faculty member of FEMA Emergency Management Institute, an adjunct faculty at Pierce College, and a subject matter expert for the U.S. Department of Education. She also serves clients through her consulting business. She can be reached at yoursafeplace@msn.com