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Destination:
RESILIENCE

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About the Cover: Raillines are an integrated network of routes to get from Point A to Point B. Similarly, in emergency preparedness and resilience, there is no single way to success. Each jurisdiction starts at its own Point A, determines the best route to reach its goal, and coordinates with other jurisdictions to ensure safety and security for all stakeholders in order to reach Point B. (Source: ©iStock.com/sxn)

Editorial Remarks
By Catherine L. Feinman

A new year has just begun and many changes are or will be occurring around the world over the next 12 months. Government leadership will change, financial support for emergency preparedness and response will fluctuate, and plans and tools will adapt. Regardless the track that local, state, federal, tribal, and territorial jurisdictions take in 2017, the desired end destination for all remains the same: Resilience.

Rachel Clark and Oscar Enriquez lead this edition of the *DomPrep Journal* with an article on how to ensure a sustainable and resilient hospital culture by going beyond the minimum requirements for safety, training, and cost-effectiveness. Similarly, Roland Temah highlights steps for achieving resilience at the local level by leveraging tools provided at the federal level. The National Incident Management System (NIMS) is one such tool but, as Jeffrey Driskill points out, there needs to be flexibility in order for different disciplines and agencies to adapt these tools for successful implementation into various local emergency plans.

Thorough evaluations and reassessments of current plans help to ensure that resilience strategies are modified to meet changing needs. By studying the relationship between the time value of capabilities at the local/state level and disaster relief policies at the federal level, as discussed by Charles Eaneff, agencies and organization can make necessary modifications to mitigate future costs. Vincent Davis reminds preparedness professionals that sometimes change also requires a new way of thinking.

The key is to heed lessons learned in order to keep moving toward resilience. Ignoring the interconnectedness of various factors and the adverse effects they may have could derail this effort. For example, Douglas McDaniel addresses how social inequalities that exist before a disaster will only exacerbate response and recovery efforts after the disaster. However, Yuri Graves ends this issue with encouragement that such challenges can be overcome when communities begin with a strong foundation that includes all stakeholders. Working together, communities can keep moving forward toward the ultimate "Destination: Resilience."

During times of change, it is critical to remember the need for collaboration, communication, and mutual aid across disciplines and jurisdictions. In 2017, DomPrep remains dedicated to bridging these gaps by sharing relevant content from practitioners and subject matter experts and by coordinating interactive roundtables to bring together leaders at all levels. Resilient communities are whole communities.

Catherine L. Feinman joined Team DomPrep in January 2010. As the editor-in-chief, she works with subject matter experts, advisors, and other contributors to build and create relevant content. With more than 25 years of experience in publishing, she heads the DomPrep Advisory Committee to facilitate new and unique content for today's emergency preparedness and resilience professionals. She also holds various volunteer positions, including emergency medical technician, firefighter, and member of the Media Advisory Panel of EMP SIG (InfraGard National Members Alliance).

Sustainable Emergency Preparedness & Response for Hospitals

By Rachel Clark & Oscar Enriquez

A cohesive, well-developed disaster response team is essential to prevent adverse incidents and lives lost. Meeting current safety guidelines must be enculturated for a successful program, thus saving lives and providing optimal quality of life after a major disaster. Completing the minimal requirements for tasks to meet current safety guidelines is not enough to save lives.

High turnover rates, inconsistent training, and reduction in financial support challenge the development and sustainability of optimal emergency response teams. Recently, the Centers for Medicare and Medicaid Services announced its decision to change the Emergency Preparedness Rule within healthcare organizations participating in Medicare and Medicaid. With a focus on endorsing the importance of communication and training, the changes are aimed at improving patient safety.

Developing a Hospital Emergency Response Team (HERT) program as a form of standardization resembles the Federal Emergency Management Agency's process with constant communication that is upheld to meet a uniform process. Hospitals need to create best practices for predictable and repeatable results for emergency preparedness. By having dedicated and knowledgeable elite emergency response teams, hospitals can improve sustainability, cost effectiveness, and turnover rates.

Past Disaster Lessons Learned for Hospitals

In Joplin, Missouri, in 2011, an EF5 tornado stretched across 13 miles and took the lives of 161 people. In the aftermath, significant lessons were learned. The emergency preparedness community needed to provide more consistent education and more frequent training drills. Promotion of the National Incident Management System (NIMS) concepts in all organizational disaster-related trainings and exercises, revise and update disaster plans and protocols to include NIMS and the National Response Framework components, and have a stand-alone emergency preparedness committee became new provisions included in Missouri Hospital Association.

Ebola had a profound financial impact on the nation. Many hospitals procured additional needed supplies and many took extra steps to train staff on the appropriate protocols for treating Ebola patients. Dell Children's Medical Center of Central Texas (DCMCCT), a member of the Seton Family of Hospitals, for example, incurred additional costs for just-in-time training, and dismissed the existing program in order to prepare for the unexpected. Around-the-clock news coverage of the escalating Ebola crisis in 2014 reinforced and heightened public concern when patients came to the United States. Although the risk for Ebola transmission in the United States was low, the fear of a U.S. epidemic required a massive communication effort by the Centers for Disease Control and Prevention.

Hospitals reported that prior emergency planning was valuable during storms such as [Hurricanes Sandy in 2012](#), Irene in 2011, and [Katrina in 2005](#), and they subsequently revised their plans as a result. A [2013 report](#) by The Heritage Foundation Emergency Preparedness Working Group found that 172 hospitals out of 174 Medicare hospitals participated in at least one emergency preparedness activity – including nursing, security, and emergency departments – such as a simulated disaster exercise or an actual response to an emergency, in the

HERT Team attending to injured children during a tornado drill (*Source*: Dell Children's Medical Center of Central Texas, 2016).

year before Sandy. Prior emergency planning was valuable during the storms and resulted in the hospitals: revising their plans; pushing for leadership and clearly defined roles within different departments; adding key roles; and sharing response plans among state agencies, health departments, hospitals, and other community departments.

In [West, Texas](#), in 2013, an explosion left 15 people dead and an additional 300 injured. A nursing home in its path trained for an evacuation drill two weeks prior, so when it was time to act they were able to do so successfully. Although it was not requested, nurses, doctors, and ancillary staff arrived at local hospitals to help. Some say plans were not strictly followed, but "controlled chaos" got the job done. This nursing home demonstrates the need to train and train again.

In 2015, there was a national push for planning and preparation for H1N1. DMCCT took steps that were recognized as best practices (ASPR, site visit with author, O. Enriquez, October 28, 2010) by setting up tents to treat the influx of patients to help confine and stop the spread of the disease. The pattern continues with each disaster and enforces the apparent need for more training and clearly defined roles within the team.

Training, Turnover & Funding

When accrediting agencies are due to arrive at any given facility, a scramble occurs to check that the supply closets are up to code, and employees are ready for potential questioning from auditors. Existing training gaps need to be closed because lack of consistency fails to save lives. Therefore, the [Centers for Medicare and Medicaid Services](#) is mandating training to be enforced and a program to be established (implement by November 15, 2017):

> **Training and testing program**: *Develop and maintain training and testing programs, including initial and annual trainings, and conduct drills and exercises or participate in an actual incident that tests the plan.*

In other words, develop a better plan for a plan because past mistakes will be repeated unless designated response teams are created.

In addition, turnover is high within hospitals; collectively, the nation was at 19.2% in 2015. As population trends continue to grow, so does this national average in turnover rates. However, training the hospital as a whole does not solve the real issue. Hospitals need to incorporate cost-saving measures and have volunteers dedicated to a response team, such as the HERT program, which includes trained employees who meet once a quarter throughout the year. Understanding recovery and mitigation is crucial to designing a program that works for each facility. A common thread, though, is that those in whom hospitals invest their training resources may be gone when the next disaster strikes.

Future mandates by Centers for Medicare and Medicaid Services are requiring that hospitals not only have a plan in place, but an established robust program.

The healthcare industry is experiencing a paradigm shift. The expanding healthcare roles, the aging population, the mandate on quality and safety, the squeeze in reimbursements, the competition for patient volume, the shift in the delivery of care, the shortage of physicians, nurses, and allied professionals, and the Patient Protection and Affordable Care Act are all stressing the industry. The cost of turnover can have a profound impact on the already diminishing hospital margin. With hospital turnover high nationally, the emergency preparedness efforts and cost to train increase as well. As hospitals focus on retention efforts to keep employees, they could help cut labor expenses on upcoming mandates to future training by focusing on the team in which they invest their energy and funds, for example:

- Condense the information during mandated training for the entire staff by focusing on patient care;

- Leave the decontamination process, the triage set up, and additional details to the designated response team; and

- Create an incentivized program and mission that ensures team members are committed to, so if they transfer to sister facilities they stay part of the response team.

It is important to be committed to investing in individuals and in the success of the emergency preparedness program.

In the case of DCMCCT, Ebola preparedness cost an estimated $90,000 (C. Drubert, materials management, personal communication, November 2016) in supplies alone, in addition to salary costs for hospital staff during the training. To date, two-thirds of the employees who trained for Ebola are no longer employed at DCMCCT. In 2015, Seton Family of Hospitals, a member of one of the country's largest nonprofit health systems Ascension One, adopted the HERT program. With its 21 members, who have an average tenure of five or more years of participation experience, HERT's training cost including salary dollars is $13,000 per year for the entire team. Yet in 2015 during the Ebola scare, DCMCCT increased its spending for additional training and supplies, despite already having a well-prepared program. Those funds were lost.

More Than Checking the Box

The nation is long overdue for key stakeholders seeing the importance of participating in this emergency preparedness movement. There are three key points to remember:

- Past disasters all share a common conclusion: there is a need for more training and dedicated roles.

- Employee turnover may negatively affect the outcomes when disasters do hit.

- Creating a HERT program will minimize impact on additional cost.

The HERT program asks, "Are you better prepared for the threats of tomorrow?" Simply checking the box for compliance is not enough.

Rachel Clark is a student intern from Texas State University in Bachelors of Arts and Science who has dedicated her research to help write this article. She has a background in emergency medicine, and is an emergency medical technician who was a part of the hazmat team at Brackenridge Hospital in Austin, Texas, during Katrina in 2005. She has since been certified as a Surgical Technologist, which led her into the medical sales sector. She volunteers with Samaritans Purse and helped perform mud-outs when flooding hit the central Texas region. With over 10 years medical experience and many volunteer hours, her devotion is to help solve emergency preparedness gaps.

Oscar Enriquez (pictured above) is an emergency medical technician (EMT) and serves as the Hospital Emergency Preparedness and Response Team (HERT) Program Manager at Dell Children's Medical Center of Central Texas (DCMCCT), Austin, Texas. With over 25 years of experience in emergency preparedness, he is responsible for developing and advancing the implementation of training policies and capabilities to improve front line preparedness at DCMCCT and across the Seton Healthcare Network. He was commended by Capital Area Trauma Regional Advisory Council (CATRAC) TSA-O, Officer Assistant Secretary for Preparedness and Response, American College of Surgeons, and Joint Commission for best in practice HERT program. He led the hospital response team to Hurricane Katrina/Ike and H1N1. He has more than 25 specialized certifications and attended countless webinars, workshops, and seminars, including Weapons of Mass Destruction Hazardous Materials, CHEMPAC training, Emergency Medical Task Force-Region 7 (EMTF-7), and Medical Mobile Unit training. He is a past member of the Austin-Travis County Interagency Disaster Council and is an active member of CATRAC, Regional Preparedness and Response Committee. He attended El Paso College and volunteered with the American Red Cross.

Don't Miss DomPrep's 6-Month Review

Local Role in Preparedness & Resilience to Natural Disasters

By Roland Temah

Natural disasters begin locally and may affect one or more communities simultaneously. However, a community approach to preparedness and resilience – with local government officials identifying the different natural disasters that make their communities vulnerable – can greatly influence response and sustainability efforts to counteract potential challenges. To achieve effective resilience, preparedness should be systematic.

The cost of managing natural disasters in the United States has sharply increased over the last decade. Subsequently, the U.S. federal government finds it challenging to provide enough disaster relief funds to support local governments' management of activities related to natural disasters. Through proactive actions, local governments can identify methods and best practices to help their communities effectively prepare for natural disasters based on their specific risks and vulnerabilities.

Federal Support Efforts

The Federal Emergency Management Agency (FEMA) has developed many resources to help communities prepare for disasters. A local community that is resilient to natural disasters forms the basis for a resilient nation. In an era with many means for receiving and sharing knowledge, local emergency managers can easily explore ways to address their natural disaster challenges, which other localities may have already experienced or are currently initiating actions to address similar challenges.

Moreover, templates that have been developed and tested by FEMA and other emergency management organizations may shape a preparedness framework even for a novice emergency manager. If the goal of preparedness is to ensure resilience for the whole community, preparedness actions should take into considerations any potential risks and vulnerabilities (see Fig. 1). In addition, all community stakeholders should be part of the preparedness framework.

The preparedness framework recommended by FEMA involves planning, organizing, training, exercising, and evaluating. Some of the guides to help in preparedness include: the National Incident Management System (NIMS), NFPA 1600 (Standard on Disaster/Emergency Management and Business Continuity/Continuity of Operations Programs), and Presidential Policy Directive (PPD-8). Looking at preparedness from a comprehensive perspective is essential because sometimes emergency managers may not overtly identify all potential risks and vulnerabilities within their environments or associated risks and vulnerabilities that may result from a disaster.

Preparedness	Resilience
The fundamental steps taken by a community to plan, organize, equip, train, exercise, which will result in sustaining the framework that has been designed by the community to prevent, protect, mitigate, response, and recover from all types of risks and vulnerabilities.	The ability of a local government to withstand and adapt effectively to risks and vulnerabilities, and to recover rapidly from disruption due to emergencies.

Fig. 1. Relationship of preparedness to resilience (*Source*: Author).

Comprehensive preparedness helps community efforts in areas of prevention, protection, response, recovery, and mitigation through the engagement of emergency managers and local community members addressing all risks and vulnerabilities in their environments. Local community concerns have to be tabulated and synchronized to ensure that all community emergency management priorities are addressed immediately. The guidelines for addressing priorities involved look at preparedness at different levels: strategic, operational, and tactical (see Fig. 2).

Strategic Level
Policies that will guide in achieving goals

Operational Level
Defining roles and responsibilities that will help to achieve strategic goals

Tactical Level
Management of personnel and employment of resources to achieve end results

Fig. 2. Levels of preparedness pyramid (*Source*: Author).

Steps to Achieve Resilience
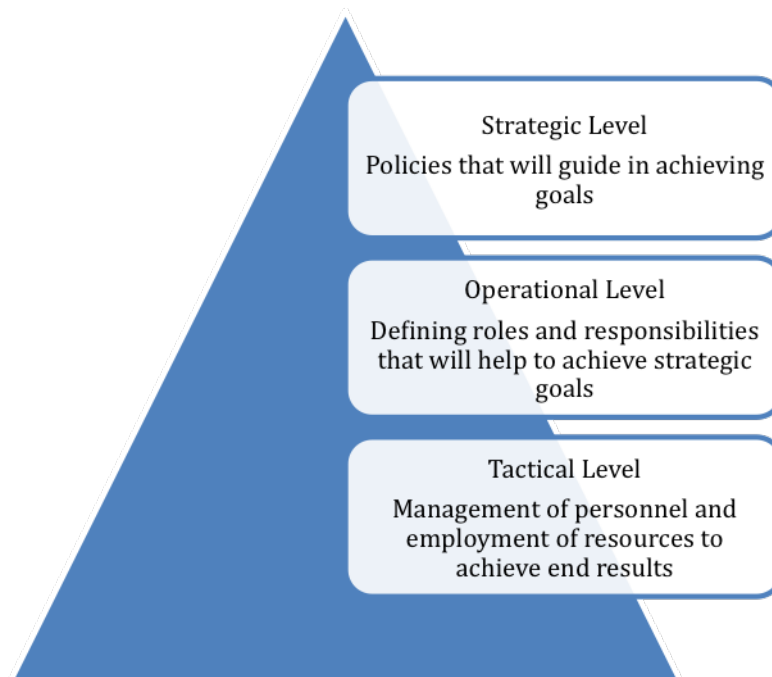
Some practical steps recommended by FEMA that may help a local community achieve its preparedness and resilience goals include:

- *Identifying and addressing risks*: This process involves a combination of different aspects such as: assembling historical data of potential and perceived risks and hazards, and all other relevant information that may affect community safety. An effective evaluation of community risks and vulnerabilities forms the basis for necessary actions.

- *Estimating capabilities requirement*: Locating and listing capabilities that are essential to addressing identified risks are essential. Some capabilities may already exist and some may still need to be developed. Core capabilities in the areas of protection, prevention, mitigation, response, and recovery must also need to be reviewed.

> *A community approach to preparedness and resilience can greatly influence response and sustainability efforts to counteract natural disaster challenges.*

- *Building and sustaining capabilities*: Local community emergency managers should identify the best ways to use their limited resources to build capabilities. Properly assessing risks results in prioritization of resources to address risks and vulnerabilities based on probability.

- *Planning to deliver capabilities*: The planning process for the delivery of capabilities should involve whole community coordination with: individuals, businesses, nonprofits, community and faith-based groups, all levels of government, and other organizations.

- *Validating capabilities*: Testing capabilities through exercises and other activities addresses the gaps in plans and capabilities. It is very important to regularly assess progress that has been made toward preparedness.

- *Reviewing and updating*: The conditions of an environment regularly change, so it is essential to regularly review guidance, programs, and processes to ensure capabilities, resources, and plans are up to date.

Preparedness efforts can yield maximum results when local stakeholders understand their roles and take advantage of the resources available to build the necessary framework for effective resilience to all types of natural disasters.

Roland Temah, Ph.D., serves as a law enforcement officer for the District of Columbia Police Department. His research area of focus is emergency management planning and is trained in management and response to complex emergency situations, methods and practices in developing and communicating information critical to multijurisdictional emergency management stakeholders. Before becoming a law enforcement officer, he spent eight years in the United States Army, including deployment during Operation Iraqi Freedom and New Dawn. He is currently a member of the International Association of Emergency Managers and has completed several independent courses provided by the Federal Emergency Management Agency. He holds a bachelor degree in psychology with a minor in criminal justice, master degree in information technology with a specialization in homeland security, and a Ph.D. in public safety with a specialization in emergency management.

Time Value of Capability: Expenditures vs. Savings

By Charles Eaneff

The business of domestic preparedness seems to be a likely priority in 2017, and the relationship between the time value of state and local capabilities and federal disaster relief policies are sure to evolve. For public safety professionals – including police, fire, emergency medical, and emergency management services – the time value of capability is fundamentally the same as the time value of money.

Given a choice of investing $1 million today or the same amount in five years, individuals, investors, and public safety decision makers would likely choose investing now so that return on investment can begin immediately and be worth more than $1 million in five years. Key in this calculation is identifying investments that appreciate, rather than depreciate over time, and that the item purchased, or capability, costs more later. This is a basic premise of hazard mitigation.

Mitigating Future Costs

The Federal Emergency Management Agency (FEMA) is evaluating benefits of the time value of hazard mitigation capability through "disaster deductibles," insisting states make investments in time-valued capability before a disaster as one method of reducing national disaster cost. Depending on its administration, and state return on capability (investment), this could either directly transfer cost to a state, or result in local, state, federal, and national disaster cost reduction. In a December 2016 interview, FEMA Administrator Craig Fugate explained that, as states take actions to buy down future risk, incentives to mitigate that future risk could be part of a disaster deductible system. Further, the administrator observed that, "There is a direct cause and effect between land use and building codes and disaster declarations." This is the business of public safety, including emergency management.

Fire, law enforcement, emergency medical, building, and health departments – along with insurance companies at the local, state, and national levels – encourage, incentivize, and mandate public and private capability routinely and successfully to reduce future public and private expenditures for response/recovery. FEMA proposes a variation of this model, in part based on the economic experience hazard mitigation projects. The FEMA Hazard Mitigation Grant Program requires that a grant project's potential savings must be more than the cost of implementing the project. A 2005 report by the Multihazard Mitigation Council estimated that the actual return on investment for every $1 spent on hazard mitigation is $4 in future costs.

Although the current conversation regarding disaster deductibles involves FEMA recognition of the time value of state and local investments in capabilities that provide a national benefit in the form of reduced future disaster expenditures, public safety leaders across disciplines make decisions about the time value of capability routinely and consistently,

building it into both strategic and tactical decision making. Joseph Pfeifer, assistant chief for the New York City Fire Department, and Ophelia Roman, former manager in Deloitte's Crisis Management Practice, provide an overview of one version of time and capability integration in the December 2016 issue of *Homeland Security Affairs*.

Example: Active Shooters

As described by Administrator Fugate, there are robust examples of the time value of capability in fire prevention and emergency management mitigation, but a very public and currently evolving example is in law enforcement. Using this same understanding of the time value of capability described in the October 2016 *DomPrep Journal* topic of "Active Shooter," it is possible to calculate the time value of the tourniquet and individual first aid kit capability recommended by authors. In 1999, the capability to successfully engage active shooters largely resided in Special Weapons And Tactics (SWAT) teams, but the active shooter threat showed that the time value of SWAT capability was very low for active shooters. In response, law enforcement moved active shooter capability to patrol through policy, training, and equipment investments, adding capability in the timeframe of maximum response value. The FBI 2013-2015 analysis of 40 active shooter incidents found officer-involved shooting(s) in 14 of the active shooter incidents and 14 wounded officers, 4 fatally. Not every shooting resulted in officer wounding, but some had multiple officers wounded or killed.

> *Investing a relatively small amount of money today can lead to significant savings in public safety costs later.*

"Stop the Bleed," and similar state, local, and federal initiatives are now focused on moving hemorrhage control capability up the capability timeline to every law enforcement officer. Law enforcement officers need the capability to keep themselves alive until the emergency medical services (EMS) system can get to them, but it is not practical without personal and partner hemorrhage control capability. The national EMS hemorrhage control capability was too low in the three-minute period following a shooting where properly applied hemorrhage control can have maximum value. By adding law enforcement to the national hemorrhage control capability through policy, training, and equipment, capability is effectively increasing at the time of maximum value.

Tourniquets and law enforcement trauma packs have just begun adoption by the 765,000 state and local law enforcement officers, but some minimum time value calculations can be made based on early reporting, even though new reports of officers saving their own lives, their partners' lives, or community members are becoming routine. A 9 September 2016 article published in *U.S. News & World Report* revealed that, in the past five years, Denver law enforcement saved 11 people with tourniquets. Although establishing the value of life is controversial, each year the Department of Transportation, FEMA, and Office of Management and Budget establish a "value of a statistical life" (VSL) to assess the economics of fatality prevention. For 2016, the VSL was $9.6 million. Additionally, direct federal expenditures

from the current Bureau of Justice Assistance Public Safety Officers' Benefits Program (line of duty deaths) is $343,589 for the families of fallen officers.

Tourniquets are the exact type of time-valued capability the business of emergency management can, and does, support. For example, the time value of a tourniquet in a police utility pocket is less than $30 (Amazon will deliver one for less than that), but once successfully deployed to save a life, the used tourniquet has appreciated to $9.6 million (VSL). For the five-

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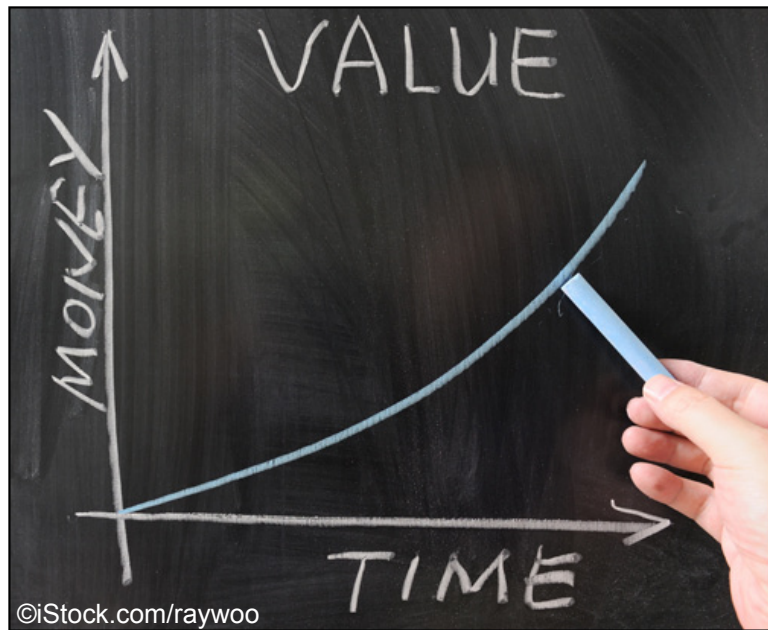
year useful life of the Denver law enforcement tourniquets, the return on investment (lives saved) was $105.6 million (five officer and six civilian saves at $9.6 million each). If this were a hazard mitigation grant project, that return would have justified a tourniquet delivered to the home of every state and local law enforcement officer in the United States, with over $80 million left over to invest in helmets and improved outer tactical vests to prevent officer gunshot wounds in the first place. Even counting just the direct federal Public Safety Officers' Benefits Program expenditure, the five law enforcement lives saved by Denver reduced federal cost by over $1.7 million or over 57,000 tourniquets. Law enforcement emergency medical capability is not just a smart practice, given the time value of this capability, it is a smart business decision for federal, state, and local leadership.

The business of domestic preparedness will be a priority in 2017, and state and local investments that provide a national return on investment are critical components of the disaster deductible proposal, which may be recast and expanded as capability credits, since almost no one wants to pay deductibles, but most want credits.

Chuck Eaneff is a consultant focused on the integration of the public's safety and the homeland's security and a subject matter expert for the Naval Postgraduate School Center for Homeland Defense and Security Mobile Education Team. He was formerly the deputy director of law enforcement for FEMA and the acting executive director of the DHS Office of State and Local Law Enforcement, the office responsible for the formulation and coordination of national-level policy relating to law enforcement's role in preventing acts of terrorism and the department's primary liaison with state, local, and tribal law enforcement. Prior to accepting the position at FEMA, he was a Naval Postgraduate School, Center for Homeland Defense and Security Distinguished Fellow. Retired as deputy director of the Sunnyvale Department of Public Safety in California (a fully integrated public safety agency providing police, fire, emergency management, and EMS services for a community of approximately 133,000 in the heart of the Silicon Valley), he had the unique opportunity to lead both fire services and police services, reporting to directors of public safety. He can be reached at Chuck@RiskAdapted.com
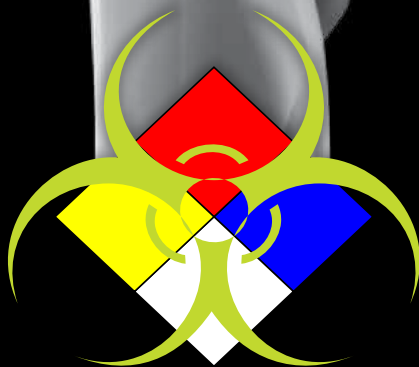
The Changing Face of Disasters Demands New Thinking

By Vincent B. Davis

New problems call for new solutions. The definitions and parameters, in which emergency management, law enforcement, nongovernment organizations, and others now work under, are inadequate to meet the new challenges of today. Furthermore, the old rules as to how and why to prepare simply do not apply anymore.

The current way of thinking depends heavily on top-down communications. Agencies and organizations are accustomed to gathering data, determining what the message should be, then disseminating it to the public. But with today's reliance on social media, news and information are more likely to be communicated through the lens of bystanders, at a much more rapid rate than traditional approaches. Stakeholders must embrace and learn to master management of social media.

Social Media & Preparedness Education

Social media provides efficient and effective solutions for pre-disaster engagement. Adam Crowe, director of emergency preparedness for Virginia Commonwealth University in Richmond, describes "6 Ways to Utilize Social Media Before a Disaster Strikes." Crowe says before an emergency or disaster strikes is the optimum time for emergency managers to engage their communities in public education, community preparedness activities, training, exercises, and advocacy. Traditionally, these components are handled in very resource-heavy ways, including educational booths, printed materials, public talks, and similar processes. Although these types of programs are somewhat effective, they often take a tremendous amount of staff time; they cost money to generate; and they are not necessarily environmentally friendly.

On a day when the situation is changing rapidly, as it does with flooding, people will be looking for information anywhere they can get it. It is important to keep in mind that there is a high likelihood that those searches will be occurring on a mobile device. According to the Pew Research Center, the growing ubiquity of cellphones,

FEMA/J.T. Blatty

especially the rise of smartphones, has made social networking just a "finger tap away." Fully 40% of cellphone owners use a social networking site on their phones, and 28% do so on a typical day. There are many ways communities can reach their citizens with emergency information: websites, reserve calls, social media, and door-to-door (if necessary). It is important to keep in mind that no single source will reach all citizens. Younger people may search social media for news and information (as shown by the Pew Research Center results) and older individuals might not ever look at your website.

According to the American Red Cross, a 2010 survey asked 1,058 adults about their use of social media sites in emergency situations. It found that, when unable to reach 9-1-1 when needed, one in five would reach out to responders through e-mail, websites, or social media. When web users knew that others needed help, 44 percent would ask their social network to contact authorities, 35 percent would request help directly by posting on a response agency's Facebook page, and 28 percent would tweet direct messages to responders.

> *Effort would be better focused on preparedness to cope with the onset of a disaster than on the management of recovery after a disaster.*

The failure of traditional preparedness efforts to effectively resonate with individuals and households is well documented. Estimates by the Federal Emergency Management Agency and others range from 50% to 70% of people having done nothing to prepare. Disaster apathy is even more prevalent, despite a significant increase in disasters worldwide.

In his 2015 article, "Public Apathy in the Path of Preparedness," Geary Sikich asks whether business continuity and emergency planners are missing something when it comes to communicating preparedness with the public. The public has a problem that is simple to define: short-term memory loss and long-term memory incongruence, causing a divergence in retained memories and discounting what was experienced. To overcome this dichotomy, contradiction, and irreconcilable clash between public perception and reality, agencies and organizations teach crisis communications courses, prepare spokespersons, provide graphics and media to support, and emphasize the message that people need to be better prepared. Yet, for all these efforts, some members of the public continue to respond in the same manner – with apathy and distrust over the outcome (either positive or negative).

Only one in four Americans or less are concerned that an emergency like a terrorist attack, natural disaster, or health pandemic will affect their communities, according to a SUNYIT/Zogby Analytics Poll. The poll of 1,000 adults nationwide was conducted online on 8-9 May 2013 and has a margin of sampling error of +/-3.2 percentage points. A wide range of national security topics was covered. For example, in case of a neighborhood emergency,

Americans expressed more confidence in their family's preparedness (53%) over local government (44%), their airport (41%), local school (39%), or employer (31%). In case of a national emergency, Americans are most trusting in local law enforcement in case of a shooting (58%), the FBI in case of a terrorist attack (53%), the Centers for Disease Control in case of a pandemic (49%), and the Federal Emergency Management agency in case of a natural disaster (45%).

Empowerment & Resilience

According to Nonprofit Technology Network, a new culture of disaster prevention will have to be created in the home, in school, in the workplace, and in society in general. The education to build up this new culture for disaster reduction must be permanent and integrative, and cut across all formal and informal educational efforts. It is unfortunate, however, that the concept of disaster risk reduction education is sometimes carried out with the notion of disaster professionals as "experts" presenting technical facts, figures, and analyses to "ignorant" citizens.

This has arisen out of a top-down approach to disaster awareness and education that gives "dos" and "don'ts" prescriptions for ordinary people. However, to be effective and integrating, it must go beyond the purely informative or instructive, and promote a new way of perceiving, feeling, thinking, and behaving. It must open the way to a new lifestyle integrating the individual, the environment, and society (see Table 1).

Table 1. A Tale of Two Approaches

Old Thinking	New Thinking
• Disasters are natural events that exceed local capabilities • Top down communications • Preparedness education as an option • Emphasize training over behavior • Increase response funding • Manage recovery performance • Mitigate natural risks	• Disasters are ALL events that compromise individual resilience • Bottom up communications • Preparedness education as a requirement • Emphasize behavior over training • Increase preparedness funding • Reward resilience performance • Mitigate personal risks

Furthermore, preparedness behavior cannot be changed easily, but integration into mandatory school-based curriculums, and even childcare programs will provide a greater sense of preparedness at an early age. Innovations such as game-based disaster learning and trauma-informed solutions should be embraced and funded in lieu of passive approaches of "get-a-kit" messaging. Less focus on managing recovery can be realized when people are better prepared to cope at the onset of a disaster. To empower people to prepare, the message must change and be truthful. For too long, mixed signals have said, "Prepare. But if you don't,

don't worry. We'll rescue you." True resilience is about consistently improving, not just doing things because they are familiar. Stepping out of collective silos and embracing new ideas is often uncomfortable, but necessary to bring about meaningful, measurable change in preparedness behavior.

Vincent B. Davis, CEM, is Emergency Supply Solutions Consulting manager for Ready America, one of the nation's leading providers of disaster supplies. He joined Ready America in July 2016 following a stint as senior preparedness manager for Sony PlayStation. Before joining Sony, he was program manager of emergency preparedness and response for Walgreens Co. Following his career in the U.S. Air Force and Illinois National Guard, with 23 years in military public affairs, he served as: external affairs and community relations manager at the Federal Emergency Management Agency (FEMA); regional preparedness manager for the American Red Cross of Greater Chicago; and private sector consultant to the Illinois-Indiana-Wisconsin Regional Catastrophic Planning Team. He holds certifications as an Illinois Professional Emergency Manager and FEMA Professional Continuity Practitioner, and is a member of the International Association of Emergency Managers Children's Caucus and a lifetime member of the Black Emergency Managers Association. He authored, "Lost and Turned Out, A Guide to Preparing Underserved Communities for Disasters (Amazon 2012)," and the Native Emergency Communications Guidebook (Native Public Media) to be released in the spring of 2017 and founded PreparednessMatters.org Consulting. He also managing partner of PrepWorld LLC, creators of PrepBiz educational gaming APP for children.

Enhancing Incident Management for
Local Responders

By Jeffrey Driskill Sr.

Since 2003, the National Incident Management System (NIMS) has required local officials to report NIMS compliance actions to their respective emergency management agencies, which in turn reported these results to the state.

The National Incident Management System is entering its 14th year with varied degrees of accomplishment. Seminal research has documented diverse implementation and applications by local jurisdictions, and across functional disciplines. Recent studies have revealed that, in many cases, the success of implementation of NIMS-related efforts can often be traced to the attitudes of agency leadership. The NIMS has five constituent parts: Command and Management, Preparedness, Resource Management, Communications and Information Management, and Ongoing Management and Maintenance. Local responders have achieved varied levels of compliance and competency in meeting these principles. The 2016 study titled "Evaluating the Efficacy of the NIMS Implementation for Law Enforcement Officers in Virginia" was law enforcement centric, but the results and methodology have lessons learned for emergency managers – particularly if they want to influence greater NIMS compliance among agencies with which they coordinate.

Law Enforcement Applications

This study used an anonymous 70-question online survey to query local police chiefs and sheriffs about their attitudes that supported the NIMS, and the importance of local capacity and written policy. The qualitative correlational study used linear regression to analyze data from 34 respondents, with 176 agencies invited to participate. Descriptive statistics were used to analyze data and identify strength of relationships between the independent variables of executive attitudes that supported the NIMS, written policy, and local capability to the dependent variables of intended and actual NIMS implementation.

Although there was no single agreed upon social theory that explains implementation behavior, the theories of planned behavior and expectancy theory of motivation helped make sense of the responses. In the theory of planned behavior, Professor Emeritus Icek Ajzen of the University of Massachusetts-Amherst explained actual implementation behavior would be preceded by an intent to act, and that behavioral intent was influenced by attitudes and subjective norms. This study found a significant correlation between the intent to implement the NIMS and actual implementation behaviors.

In the expectancy theory of motivation, Victor Vroom, business professor at Yale University, explained implementation behavior would be influenced by perceived rewards or risks. Normative beliefs such as the likelihood that important persons or groups approved

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of a behavior then become important. Examples of these would be the perceived support of fire, police, and emergency management associations, as well as state agencies in providing policy, funding, training or exercise support. In 1964, Vroom suggested an agency executive's view of an outcome, or valence, determined the level of motivation to act (e.g., if a police executive perceived his agency would receive grants or funding, he was more likely to encourage NIMS-related activities). The following are important findings for emergency managers.

NIMS Doctrine & Local Capacity

Agencies felt that the mandated federal (NIMS) policy improved emergency local response, and that the NIMS was worth implementing. The NIMS training was felt to help implementation; while written policy strongly correlated with both NIMS implementation intent and actual implementation to a lesser extent. Having a written NIMS policy is the most important factor for influencing the intent to implement, whereas local capacity and attitudes correlated strongest with actual implementation behaviors.

Local capacity was defined in the study as being resources and characteristics unique to an organization, which enable the organization to conduct emergency response and disaster preparedness efforts consistent with the NIMS. Elements of local capacity included operational budget, completion of NIMS-related training, levels of training completed, size of the agency, support of government executives and elected officials, to name a few.

Since respondents felt that local elected officials were less supportive than state agencies (Department of Criminal Justice Services, for example), then it would benefit local emergency managers to educate these officials on the value of the NIMS, and light the fire of support for greater budgeting for NIMS staff, training, etc. Many agencies are dependent on mutual aid for leveraging finite resources. On the other hand, it would benefit emergency managers to examine the issue of over-dependency on mutual aid resources to determine if it is related to operational limitations due to fiscal constraints that prohibit increasing staffing or purchasing equipment such as patrol cars, for example. Overall, agencies felt their funding for daily operations was sufficient; however, funding for NIMS implementation was not.

Executive Attitudes

Findings revealed that there was: (a) a significant correlation between actual implementation, policy, and executive attitudes; (b) a high correlation between actual implementation, policy, and staffing levels; and (c) a high correlation between intent, policy, and staffing levels. Additional perspectives shared by participating law enforcement executives included:

- Police and sheriffs saw value in the NIMS, but emphasized the need for having a model policy.
- Law enforcement agencies felt some of the NIMS and Incident Command System (ICS) concepts were more fire centric than police relevant.
- Discipline-specific NIMS and ICS training could enable better understanding of doctrine.

The last perspective does not reflect the professionalism or attitudes of all law enforcement executives, and the NIMS and ICS purest could argue the counterpoint – that this is portrayed as an excuse for not completing the existing FEMA training as recommended in the NIMS Training Program. The perspective of requesting law enforcement related – or any other discipline specific training – may appear to be in deference to the well constituted and standardized FEMA training courses. However, the participants were merely suggesting that some of the scenarios (such as those used in the ICS 300 course) be introduced in such a way that would make it more relevant to them. The learning point here is to not resist the curriculum, and to cooperate and graduate – knowing that the ICS concepts are scalable and flexible, and certainly relevant to all disciplines.

It is important to realize that NIMS implementation is influenced by agency culture, governance, and perception of importance – both in theory and in practice. Local Virginia law enforcement executives participating in the research study felt a model NIMS policy would promote implementation, although this finding does not reflect the attitudes of all local Virginia law enforcement officials. Participating agencies suggested that the Virginia Department of Criminal Justice Services (VA DCJS) could support this guidance by creating a model policy, which DCJS has done for other topics. An expression of advocacy that aligns with this study's outcomes can be viewed on the Virginia Department of Criminal Justice Services Standards, Policy and Homeland Security webpage. The Virginia DCJS focuses on the law enforcement community needs, with a primary mission to include, "developing a conduit for law enforcement leaders to express needs and concerns as they relate to homeland security and emergency management, National Incident Management System (NIMS) implementation."

> *Research examining NIMS compliance by local law enforcement agencies in Virginia provides hope for improving actual implementation.*

A promising finding was that Virginia agencies intended to implement the NIMS to a degree greater than actual implementation. Agencies intended to implement NIMS between 60% and 80% of the time; however, actual implementation varied between 40% to lower 60% of the time. This suggested that local capacity and executive attitudes affected implementation rates, and that emergency managers could assist agencies by socializing these concepts.

Future Research
Researchers could benefit from using this study's methodology, while:

- Expanding the inventory of questions to identify which elements of the NIMS doctrine are most important to specific agencies;

- Asking if agencies have a NIMS policy, and identify differences in content and implementation;

- Exploring the degree to which agencies made modifications in how and when NIMS was implemented, and the outcomes of such actions;

- Identifying the degree of reliance on mutual aid;

- Using methodology to evaluate other emergency management or response policies; and

- Comparing survey responses between functional disciplines (law enforcement and fire departments), or between groups (comparing police to sheriff executive responses).

The results have currency for all functional disciplines and emergency management at large. Taking the social theories of human behavior and results into consideration, the emergency manager through introspection can provide strategic guidance to their agencies to improve future NIMS implementation. Local emergency managers could use the lessons learned to educate agencies and elected officials to improve implementation efforts.

The 2016 study, "Evaluating the Efficacy of the NIMS for Law Enforcement Officers in Virginia," can be viewed on ProQuest and questions directed to Jeffrey Driskill at jeffdriskill@usa.com

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Jeffrey Driskill Sr., Ph.D., CEM®, is currently a government contractor working as an exercise planner with the National Guard Bureau in Arlington, Virginia. Before his current position, he served as Deputy Emergency Management Coordinator with the City of Alexandria, Virginia and is a retired Chief of Police, Certified Emergency Manager (CEM) and Master Exercise Practitioner Program (MEP) graduate. He holds a Doctor of Business Administration in Homeland Security Policy and Leadership from Northcentral University and is a subject matter expert in the NIMS doctrine.

Examining Coastal Resiliency: How Policy, Education, Partnerships, and Data Can Help Change the Future

This report examines coastal resilience and highlights opportunities to improve planning through effective partnerships and data sharing. By recognizing the magnitude of the challenges related to sea-level rise that coastal communities face in developing resilience measures, communities are better equipped to take actionable steps to change the future.
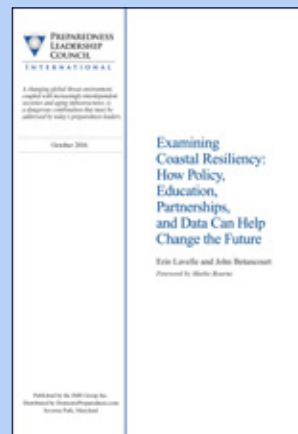
Ghosts of Old Vulnerability

By Douglas K. McDaniel

There are few conversations today capable of surfacing guttural emotional responses quite like a discussion related to bias and inequalities. The challenge is clear. From the most elementary perspective, if the existence of bias and/or inequalities is acknowledged, it is illogical to then ignore the possibility that adverse impacts are possible as well.

The mere suggestion that bias and/or inequalities exist may also require – from a social responsibility perspective, and certainly for emergency managers – that an examination occur and the issue be addressed. The issue that must be realized is that a close companion of inequality before, during, and after disasters is vulnerability.

Vulnerable Segments of Society

"Vulnerability" as a term has myriad definitions depending on how it is applied to people or groups that lack the ability to mitigate a specific challenge or group of challenges. Whether vulnerability resides in a group's inability to acquire the necessary financial resources to address everyday household needs, or in instances where the elderly are unable to manage the physical demands of life, many people or groups can be assessed as vulnerable. Sometimes vulnerability results from a lack of power and not being part of the decision making process.

In a "post-racial society," concerns about vulnerable populations still exist. This correlates with emergency management because vulnerability is not simply an inability of impacted groups to cope with an emergency and can frequently be the inescapable capacity of an individual or group to resist and recover from mitigation decisions of others. For the emergency manager, planning must begin with a whole community perspective that provides for the entire population. Although a number of factors seem to affect vulnerability among individuals and groups during emergencies, issues such as sociological, economic, gender, political, and ethnic limitations increase the adverse impact of disasters on individuals and groups.

Each of the previously listed categories is noteworthy, and any two or more in concert may significantly influence vulnerability. It is hypothesized that all groups have a reasonable expectation of preparedness and safety before, during, and after a disaster. However, sociological, economic, gender, political, and ethnic vulnerabilities can adversely create a disenfranchisement of sorts that may limit preparedness. Just-world theory, system justification, and systematic ignorance must not be an explanation for planning failures.

Victim Blaming & Self-Preservation

There are tangible examples of victim blaming when planning fails to provide the mitigation strategies proposed to protect the population. However, perspectives that default to expectancies in vulnerability related to social representation and judgment must be avoided at all costs.

Although there seems to be a significant amount of research that focuses on personal preparedness vulnerabilities related to sociological vulnerabilities, research that identifies the vulnerabilities in planning and response are limited. In certain instances, planning can be as much a cause of vulnerability as a natural or manmade hazard, or an unprepared community. In system justification theory, system-justifying mechanisms such as victim blaming and defending the system at all costs are needed to achieve this end.

Conscious or unconscious protectionism can be a vehicle used to perpetuate and defend features of the existing structural and/or social arrangements. In these instances, the real root causes of vulnerability may be glossed over for more acceptable and easily digestible explanations. It is critical that emergency managers and other community leaders ensure everyone in the community is prepared.

Leadership & Social Equality

How governments prioritize may not be the result of the social groups that are impacted the most. From a social perspective, the struggle for all groups is to fight for better positions within the cultures where they live. However, because of previous inequalities, biases, or even discrimination, this battle can be difficult, yet not impossible. In essence, the battle for improved preparedness is not wholly on the socially disenfranchised groups to fight for improvement alone through self-determination and sheer willpower. There is also a requirement for the education of politicians and governments to ensure they understand not only the limitations inherent to the disenfranchised group(s), but also the additional limitations that may be imposed on the group(s) by their decisions.

> *Vulnerable populations that are not openly acknowledged and addressed can hinder mitigation before and stall recovery after a disaster.*

Potential failings of the political/government establishment to vulnerable groups during times of great change can exacerbate the impact on these groups. Avoiding these hard conversations all together and offering reactionary affirmative responses without examination would cause mitigation strategies to be reactionary and superficial as well.

Ultimately, open communication and education about social inequalities that exist before a disaster – and how these factors can affect the mitigation, response, and recovery efforts when a disaster strikes – are necessary in order to protect all vulnerable groups within communities. Emergency management is and should remain grounded in whole community preparedness.

Douglas McDaniel brings 18 years of leadership, management, and public service experience to his role as Assistant Director of Emergency Management. In this position, he serves as program manager for the development and maintenance of all George Mason University emergency plans, procedures, and related university policies. Douglas joined George Mason from Frederick Community College (FCC), where he served as Academic Program Manager for Emergency Management Programs. As part of his responsibilities, Douglas oversaw the management of emergency management degree programs and provided expertise in the development of college emergency preparedness plans. Douglas holds a Bachelor of Science in Criminal Justice from South University and a Master of Arts in Emergency and Disaster Management from the American Military University. He is also International Association of Emergency Managers (IAEM) Certified Emergency Manager (CEM).

Sailing Toward Port Resilience

By Yuri Graves

A sturdy boat and a knowledgeable crew increase the odds for a safe voyage. To build a sailboat with a strong, sturdy foundation, the keel is laid and the hull is made to balance and support the entire boat while at sea. Similarly, community preparedness also needs a strong foundation on which to build.

A strong foundation for community preparedness starts in the home with individuals and families. Personal preparedness begins with a family communications plan and knowing how to locate and communicate with loved ones and friends. Knowing evacuation routes from the house, community, and city, and establishing rally points are critical to family stability during a crisis. Personal preparedness also includes meeting family or household basic needs by building home emergency supply kits. In addition to essential items such as food, water, first aid kit, and radio, specific family needs must be considered. Items such as prescription medicine, pet supplies, and even games and books for children are often forgotten but are important parts of a kit.

Another key aspect to personal preparedness is knowing how to stay informed during a crisis. Access to radio, television, cellphones, and social media for emergency alerts help create a sense of awareness, which leads to appropriate actions by the entire community. Personal preparedness at this basic level allows first responders and other key personnel to be able to respond without reservations because they know that their family is prepared and can function without them during a crisis. Personal preparedness serves as the "keel and hull" and provides foundational support for subsequent whole community planning, response, and recovery efforts.

Navigating the Waters

A sailboat usually has a small motor that allows it to maneuver safely in close quarters while in a port or harbor. Although typically used at the beginning and end of the voyage, the motor is also available for emergencies. The community preparedness "motor" is the emergency management professional. Often the catalyst for preparedness efforts, emergency managers propel community outreach and educational programs by reaching out to a wide variety of stakeholders that ultimately act as a force multiplier for such programs. Emergency mangers connect once disparate community groups and other nontraditional stakeholders to well established organizations such as Local Emergency Planning Committees, community advisory groups, and industry partners in the pursuit of planning efforts to address relevant hazards found within their communities to reduce risk and build resilience.

Navigation equipment then helps crews chart courses to particular destinations and avoid becoming lost at sea. In lieu of a compass or global positioning system, community preparedness navigates using established plans such as emergency operation plans, hazard mitigation plans, recovery plans, or continuity of operations plans. These plans are built through multi-stakeholder processes that utilize the skillsets of the entire community.

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Filling the Sails

Crewmembers use their seamanship and experience to set the sails appropriately, take advantage of the wind, and move the ship to its planned destination. Without the crew, a sailboat would simply float on the water at the mercy of the current, waves, and weather. Likewise, the majority of the "crew" in community preparedness is comprised of trained staff and volunteers, who have a variety of skills that fulfill the needs at all phases of emergency management. These staff and volunteers are trusted partners and play essential roles in successful community preparedness programs.

Speed and direction of a sailboat are both dependent on the sails, which capture the strength of the wind and enable the boat to fulfill its primary function of movement over the water in a pre-determined direction. Community preparedness "sails" are based in the whole community planning process, thus bringing together traditional and nontraditional stakeholders and building momentum that moves the community toward resilience. This process entices others to participate and highlights connections and skills that were once either ignored or unknown.

Reaching the Destination

A sailboat and its sails are idle without wind. In community preparedness, training and exercises are the "wind": training teaches and enhances relevant skills; and exercises test all aspects of a community's preparedness efforts and help participants further hone these skills. Training and exercises transport trainees to where they want to be and ultimately allow for a safer place for those who live, work, and play within the communities they serve.

Community preparedness begins with individual and family preparedness, much like a sailboat begins with the keel and hull. On similar foundations, the community "sailboat" with its community members can reach the safe harbor at Port Resilience. It is time to chart a course, set the sails, and embark on a voyage of preparedness.

Yuri Graves has been an emergency management practitioner for over 23 years. During the first 20 years of his professional life, he served in the United States Coast Guard, leading many different missions related to disaster preparedness and response, salvage, wreck and debris removal, environmental protection, law enforcement, search and rescue, maritime safety, illegal migrant and drug interdiction, and port security. He retired as a commander from the U.S. Coast Guard and joined the city of Henderson as the city's emergency manager. He earned a bachelor's degree in geology from Edinboro University of Pennsylvania, a Master of Science degree in environmental geology from Ohio University, and a Master of Science degree in environmental policy and management from the University of Nevada, Las Vegas (UNLV). He is a Certified Emergency Manager, a Type III incident commander, an Incident Command System (ICS) instructor, Emergency Management Accreditation Program (EMAP) assessor, and emergency operations center (EOC) manager/planning section chief. He also teaches a community preparedness course in UNLV's Executive Crisis and Emergency Management Master's Degree program.

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