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Collaboration

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Featured in This Issue

About the Cover: Collaboration involves unity of effort toward a common goal. For emergency and disaster preparedness, it means putting the various pieces of the community puzzle together to build resilience within and between communities. (Photo by iStockPhoto)

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Editorial Remarks

By Catherine Feinman

As riots break out in cities across the country, the need for collaboration among all community members and leaders becomes much more apparent. The gaps that still exist between races, social classes, ethnic groups, and other disparate communities hinder efforts to build resilience and prepare for even greater devastation should a catastrophic natural, technological, or human-caused disaster occur. Leading this month's issue of the *DomPrep Journal* is Bruce Martin's summary of what promotes and what prevents effective collaboration and partnerships. He uses the backdrop of the devastating 2011 EF-5 tornado that destroyed much of Joplin, Missouri, to demonstrate how collaborations and team building helped the city more rapidly recover. As he highlights, it is all about the people.

Sarah Tidman then addresses the real-world challenges that incidents like Superstorm Sandy and the D.C. Navy Yard shooting pose on communications, coordination, and situational awareness. For public health responses, though, there is a solution that Greg Burel describes as getting the right supplies in the right hands to avoid public health response gaps. David Howell and Joanna Prasher also share their knowledge about getting resources to the right people when needed.

The whole community – including animals, children, people with disabilities, and people from different cultures and faiths – must be included in community emergency planning and response efforts. Elizabeth Serca-Dominguez and Richard Green address concerns that exist when citizens put the safety of their pets over themselves. Shay Simmons and Ryan Easton show that it is never too early to teach emergency preparedness to the youngest members of society. Then, Kendall Leser shows how planning for people with disabilities involves more than those with preexisting impairments.

In another article, Wayne Bergeron emphasizes the importance of understanding cultural differences through cultural lenses during the planning process. Similarly, Raphael Barishansky and Audrey Mazurek show how various faith-based organizations can help contribute to a community's preparedness, response, and recovery processes.

When it comes to public health threats, lessons learned and identification of vulnerabilities outweigh good fortune, as emphasized by Robert Hutchinson. However, when public health disaster does strike, it is important to know whom to call, which may be an Ebola phone as described by Margaret Davis. For any type of disaster, it is important for emergency planners, responders, and receivers to meet the business community's needs, whether in person or virtually. As the riots in Baltimore, Maryland, continue, the virtual business emergency operations center described by Christina Fabac and Chas Eby will be an invaluable resource to this hard-hit community.

Making Collaboration Work – Enablers & Barriers

By Bruce Martin

The devastating tornado that destroyed thousands of homes in Joplin, Missouri, in May 2011 is a key example of successful preexisting collaboration and after-action team building among city officials, business and community leaders, and residents. Resilient communities: (a) define and nurture collaborative environments; (b) identify collaborative enablers and barriers; and (c) understand the people and factors behind collaboration efforts.

In May 2011, a tornado hit Jasper and Newton counties in Missouri and tragically claimed 161 lives, injured 1,371 people, and displaced 9,000. A number of preexisting collaborative efforts used during the recovery period allowed volunteers to be utilized effectively. Part of the pathway to effectively utilizing volunteer organizations during recovery efforts stems from the area's efforts to develop prepared partnerships among federal, state, local, private sector, voluntary, tribal, and nonprofit agencies and organizations. Collaborative networking existed throughout the lengthy recovery efforts. In terms of smart practices and guidelines to collaboration, these agencies had:

- Established partnerships and communicated with each other before and after the incident to better enable response and recovery capabilities;
- Created agreements between volunteer and state-level agencies that established procedures; and
- Encouraged involvement of levels agencies from federal to local and NGOs in training exercises.

Defining & Nurturing Collaborative Environments

Homeland security and emergency management practitioners and leaders often work in environments where collaboration is necessary to achieve mission goals. In the past, collaboration frequently was limited to emergency incidents. However, an emergency scene is a challenging place in which to build collaboration. Preparedness and planning efforts in multiagency, multijurisdictional processes can be equally demanding. Collaborative efforts take work. It may appear simpler to approach issues from a single-agency perspective, but collaboration has proven to be more effective in preparedness and response. There are a number of models and theories of collaboration, and a pragmatic look at barriers and enablers to collaboration is revealing.

A variety of academic, military, and business literature exist on collaboration and the aspects of teamwork in preparedness and disaster response. The notions of stove-piped organizations and "wicked" problems also have been defined and discussed. In response to complex public problems, collaboration has become integrated into the problem process.

There are a variety of definitions for the word "collaboration." Many authors writing on the topic begin by creating or adapting a definition. A 2006 study specific to homeland security

defined collaborative capacity as, "The ability of organizations to enter into, develop, and sustain inter-organizational systems in pursuit of collective outcomes." That 2006 study is particularly pertinent because the homeland security professionals participating were asked to "think back to a specific DHS [U.S. Department of Homeland Security] or other effort that included at least two other agencies or organizations that you consider to have been a successful collaboration in the preparation phase (not response phase) of DHS."

Themes of success factors (enablers) to collaboration included:

- A "felt need" to collaborate;
- A common goal, or recognition of interdependence;
- Social capital (especially trust);
- Leadership support and commitment;
- Collaboration as a prerequisite to funding; and
- Appreciation of others' perspectives.

Themes of barriers to collaboration included:

- Divergent goals;
- Lack of familiarity with other organizations;
- Inadequate communication and information sharing;
- Competition for resources; and
- Territoriality.

Some barriers are simply opposites of enablers, whereas others are more nuanced. Some are organizational behaviors, and some are purely individual (people) behaviors and actions.

Identifying Enablers & Barriers

Collaborative enablers and barriers are both similar and unique within regions. Using the thematic factors in a 2010 regional study of collaboration revealed strong alignment with most of the themes, and some interesting dimensions to others. For example, in the study region, collaboration was viewed positively, while one mechanism to achieve it (joint powers agreements) was viewed negatively. Although agencies in this study were willing to cooperate around common goals, local needs had to be addressed. What that meant to the region was that, although the philosophy and benefits of collaboration were undeniable, agencies needed to fulfill their own missions as well as contribute to the regional effort.

Often the enablers began as pragmatic items for public administrators. The literature suggests that collaboration takes place when an agency recognizes that some benefit would make collaboration worth the cost. Organizations may seek benefits from collaborative partners and those benefits can be tangible or intangible. Partners may: bring resources or program expertise; enhance

organizational legitimacy; and emerge from legacy relationships that result in lower transaction costs to begin collaborative efforts. Another reason that agencies collaborate is to share resources. That is, agency A has an ambulance that agency B can use and agency B has a radio system that agency A can use. The sharing of resources with many attributes – for example, functionality, importance, tangibility, and availability – can lead to complex relationships between agencies because the sharing partners may perceive each attribute differently.

Resources are not the only motivator to collaborate. In a 2008 book, entitled "The Collaborative Public Manager," Professors Rosemary O'Leary of Maxwell School of Syracuse University and Lisa Bingham of Indiana University-Bloomington observed that agencies may collaborate because they are simply, "unable to accomplish their goals unilaterally, either because they do not exercise complete authority over the policy area or because they lack important resources." Even so, organizations often prefer autonomy to dependence.

"There are a number of models and theories of collaboration, and a pragmatic look at barriers and enablers to collaboration is revealing…. In the end, collaboration is a people process."

In the regional study mentioned earlier, activities that could be enablers and motivators to collaborate included:

- Conducting joint training;
- Developing common standard operating procedures;
- Developing a regional plan;
- Receiving mutual aid;
- Developing a unified regional strategy;
- Reducing program overlaps – for example, redundant plans;
- Filling gaps – for example, deliverables not met;
- Providing mutual aid to uncovered neighbors;
- Developing a unified perspective on missions;
- Merging funding streams from several sources to meet deliverables;
- Gaining economy of scale for purchasing supplies, staffing, and other issues; and
- Increasing capabilities.

Understanding People & Factors Behind Collaboration

With regard to federal collaborative efforts such as the Urban Area Securities Initiative (UASI), the Governmental Accountability Office (GAO) released a report in June 2009 on FEMA's

Table 1: Factors That Characterize Effective Regional Coordination of Federally Supported Efforts

Factors	Definition
Collaborative regional organization	A collaborative regional organization includes representation from many different jurisdictions and different disciplines such as fire, police, and emergency medical organizations.
Flexibility in membership and geographic area	When regional civic and political traditions foster interjurisdictional coordination, allowing localities to choose their membership and geographic area of the regional organization can enhance collaborative activities.
Strategic planning	A strategic plan with measurable goals and objectives helps focus resources and efforts to address problems.
Regional funding	Funding at a regional level provides incentives for regional organizations' collaborative planning activities.

Source: GAO-04-1009. Retrieved from www.gao.gov/assets/300/292039.pdf

measurement of UASI efforts toward collaboration. FEMA stated, "The UASI program directly supports the national priority to expand regional collaboration." The GAO found that FEMA "does not have measures to assess how UASI regions' collaborative efforts have built preparedness capabilities." Therefore, an assessment of UASI collaborative performance was not yet possible at a national level. Even so, the GAO also provided a table (Table 1) that delineates pertinent practices that enhance regional undertakings.

In the end, collaboration is a people process. Although understanding the processes and dynamics within a collaborative effort can be much more complex, beginning the effort with an understanding of why partners would wish to be in the room, or wish to be left out, can be a critical dimension.

Bruce Martin retired in 2012 as fire chief for the City of Fremont. He now works as a project manager for the Bay Area Urban Area Security Initiative (UASI) and as an assistant professor of fire technology at the College of San Mateo. He holds a master's degree in security studies from the U.S. Naval Postgraduate School, a bachelor's degree in business from College of Notre Dame, and an associate's in fire science from Indian Valley. He is a Commission on Professional Credentialing (CPC) chief fire officer and was incident commander with others of the East Bay incident management team (Type 3).

Collaboration's Real-World Challenges

By Sarah Tidman

A superstorm, a Navy yard shooting, and a major transit incident are just three examples of incidents where a breakdown in communications, incomplete common operating picture, ineffective coordination, and lack of situational awareness negatively affected response efforts. Multiagency collaboration and real-time, critical information are needed in both life-threatening and nonemergency situations.

Collaboration is vitally important to a successful and efficient response to a disaster – natural or human-caused such as a terrorist attack. The National Incident Management System (NIMS) – the foundation of the National Preparedness System – was developed to provide response and recovery organizations with a common approach to collaborate and manage an incident. However, despite NIMS, the ability of responders to effectively collaborate among one another is often lost in the chaos, scale, severity, and scope of a disaster. All too frequently, this leads to severe consequences, including a breakdown of communications, an incomplete common operating picture, and an overall inability to provide lifesaving and life-sustaining services to survivors.

Storms, Shootings & Stranded Trains

During the response to Superstorm Sandy in 2012, responders faced numerous challenges in collaborating across all levels of government. According to the 1 July 2013 Hurricane Sandy After-Action Report, responders across a multitude of response elements (e.g., the Regional Response Coordination Center and the Joint Field Offices) and their senior leaders conducted response operations independently from one another and did not consistently report their actions to the federal coordinating center known as the National Response Coordination Center. To compound this, responders from emergency support functions took a more "department-centric approach to response operations, rather than the integrated functional approach prescribed by the [National Response Framework]." Together, these examples point to a breakdown in communications (among responders but also between responders and senior leaders) and an incomplete common operating picture that contributed to the responders' and senior leaders' inability to fully deliver lifesaving and life-sustaining services to survivors.

During the 2013 Navy Yard shooting, the Navy Yard's emergency call centers did not provide potentially vital information to officers at the scene. The July 2014 MPD Navy Yard After-Action Report stated that, "At the very least, this process created the potential for a significant gap in communications and situational awareness between responding [Naval District of Washington (NDW)] personnel ... and [Office of Unified Communications (OUC)] dispatchers, MPD officers, and D.C. Fire and Emergency Medical Services personnel." In this case, effective collaboration between the Navy Yard's call center and the D.C.'s OUC as the incident unfolded may have proved invaluable to responders at the scene, as they relied on real-time, critical information to adapt and respond to the situation.

Similarly, according to the Initial District of Columbia Report on the L'Enfant Plaza Metro Station Incident on January 12, 2015, the Washington Metropolitan Area Transit Authority failed to report that there was a stranded train to the OUC during the L'Enfant Plaza Metro Station incident. Consequently, responders were unaware of the ongoing situation and the serious perils of the passengers on the stranded train until they arrived at the station platform – revealing a disconnect between field-based incident management and incident support elements (e.g., the OUC and D.C. Homeland Security Emergency Management Agency). This, along with the Navy Yard example, also highlights the importance of collaboration between response agencies during nonemergency conditions (hereafter referred to as "pre-incident preparation").

Building a Common & Consistent Understanding

Pre-incident preparation includes: (a) training responders; (b) conducting exercises; (c) reviewing plans; and (d) building relationships with neighboring jurisdictions or other appropriate, relevant agencies and organizations, including (but not limited to) private and nonprofit sectors, as well as faith-based organizations.

Responders and senior leaders alike should receive frequent, standardized training to ensure there is a common and consistent understanding of collaboration and coordination procedures across various response agencies/personnel. In addition to understanding NIMS principles, it is also important for responders to shadow more experienced personnel in order to truly understand and better execute their individual roles and responsibilities in the midst of an actual disaster.

"Effective collaboration between the Navy Yard's call center and the D.C.'s OUC as the incident unfolded may have proved invaluable to responders at the scene, as they relied on real-time, critical information to adapt and respond to the situation."

Conducting exercises allows agencies and organizations to identify and remedy any shortfalls related to existing plans and procedures, personnel, equipment, or facilities. With regard to collaboration, it is important to use exercises to measure current collaboration and coordination capabilities by choosing an objective(s) focused on the operational coordination core capability. Given the outcomes of the real-world incidents as discussed above, it also is important to exercise (and train to) large-scale, complex incidents – exercising for the worst, prepares for the worst.

Reviewing plans on a periodic but formal schedule is a critical element of pre-incident preparation. A formal process to review plans ensures existing plans are applicable and user-friendly, and include: (a) specificity, outlining the exact procedures for each individual organization; (b) established and formal processes; and (c) uniformity across various levels of government/ neighboring jurisdictions/organizations.

Clearing the Way Through the Chaos & Fog

Building relationships allows jurisdictions an opportunity to better understand the capabilities and capacities of other relevant (often geographically nearby) jurisdictions. In building relationships, there is more frequent interaction with one another, which in turn allows for greater

familiarity with one another's protocols, plans, and procedures. Said frequent interactions also may ensure there is a continuous review and improvement of doctrine. Another positive outcome from building relationships is the development of in-state Emergency Management Assistance Compact (EMAC) procedures. The EMAC, which offers assistance during a governor-declared state of emergency, is one example of effective and successful collaboration that can occur in response to a real-world disaster.

The ability to successfully collaborate in the chaos and fog of a disaster in addition to the inadequacies of currently available collaboration systems such as NIMS remain challenges for responders today. However, one way to overcome these challenges is with deliberate, pre-incident preparation. It is through pre-incident preparation that responders can adequately deliver lifesaving and life-sustaining services and achieve the National Preparedness Goal of a more secure and resilient nation.

Sarah Tidman is a research analyst in CNA Corporation's Safety and Security division. Her work there has focused on emergency management and preparedness. She has expertise in the design and evaluation of preparedness exercises and in the evaluation of real-world events. She has supported numerous exercises for local, state, and federal agencies, including several national level exercises, and she has deployed to observe and evaluate response operations during real-world incidents such as Hurricane Isaac.

The Public Health Response Solution (or at Least a Bridge)

By Greg Burel

Once a public health outbreak occurs, it is too late to prepare. In 2014, Ebola highlighted gaps in the nation's preparedness for an unexpected viral threat that gained worldwide attention. Having supplies on hand or knowing how and where to get them when needed is the best way to protect public healthcare workers. The Strategic National Stockpile bridges these public health response gaps.

When the Strategic National Stockpile (SNS), originally named the National Pharmaceutical Stockpile (NPS), was established in 1999, the primary emphasis was on acquiring pharmaceuticals and other medical material to rapidly deploy to the site of a national health emergency. Although still in the business of stockpiling product for large-scale public health responses, the organization's focus has shifted to the value partnerships bring to the national public health landscape. As the largest stockpile in the United States, the SNS has evolved into a key player in facilitating partnerships and bridging gaps in national preparedness.

The Past 16 Years

The SNS has grown since its inception. In the early years, NPS developed a number of 12-hour push packages, which were filled with a variety of critical pharmaceuticals and medical material to assist responders in making valuable interventions to protect the public's health against chemical, biological, radiological, and nuclear (CBRN) threats. Following the events of 9/11, additional emphasis – and funding – was placed on acquiring product to prepare for large-scale CBRN events such as an anthrax attack. As a result, the federal government made rapid acquisitions of substantial quantities of antimicrobials and other medical supplies that would be needed during an emergency. The cost of these investments and their ongoing management and maintenance are significant.

In 2003, the NPS became the Strategic National Stockpile. At that time the federal government was still very involved in ensuring medical material was rapidly available for use during and emergency. In 2004, through Project Bioshield, Congress established the Biomedical Advanced Research and Development Authority (BARDA) to invest in these materials, collectively known as medical countermeasures, to ensure that appropriate material was available for predictable threats. In partnership with the National Institutes of Health, the Centers for Disease Control and Prevention, and other federal agencies, BARDA has created new medical countermeasures designed to improve public health response to specific threats.

Programmatic focus also evolved from not only making certain to have the right medical countermeasures but also to ensure that partners were able to use the products. Early SNS partnerships focused primarily on state and local public health and other federal agencies. SNS staff worked with state and local public health partners to create a system to deploy, distribute, and dispense/administer the critical assets in the SNS.

Shifting Paradigms in Public Health Response

Over the course of its existence, the mission of the SNS has continued to grow. In addition to preparing for CBRN events, SNS now is positioned to respond to natural disasters like hurricanes and continues to expand to prepare for emerging infectious diseases, including pandemic influenza. Through these experiences, the program has developed expertise and established partnerships with industry to further advance public health preparedness. Staff members have worked to position the SNS as a government leader in medical supply-chain logistics. The growth of the SNS, not only in material held but also in expertise and partnerships, places the SNS in a position to lead the government in new directions for public health preparedness and response. This new role for the SNS came into clear focus in the domestic response to Ebola in 2014.

When the first Ebola patient in the United States was identified, the SNS was called to procure personal protective equipment (PPE) to support the healthcare delivery sector. Product requirements were based on CDC's current PPE guidance to healthcare workers. Upon release of the guidance, demand for products spiked, and SNS staff found that many of these critical materials were not readily available in the commercial supply chain. SNS staff worked with manufacturers to understand the production capability and distribution challenges of this market and recognized very quickly that the supply chain, operating based on just-in-time inventory, was unable to fill the majority of orders placed in the normal expected timeframe with delays to fill orders ranging from 6 to 16 weeks. To increase U.S. Ebola PPE readiness, SNS was charged with stockpiling the necessary PPE supplies to distribute to any facility that needed to care for a patient with Ebola. The first objective in acquiring this stock during an actual event was that acquisitions should not disrupt the commercial market in supplying these vital materials to healthcare partners.

As part of this large PPE purchase, SNS staff collaborated with the Department of Health and Human Services/Assistant Secretary for Preparedness and Response's Critical Infrastructure Program to extend the reach and discuss objectives with important partners representing industry. SNS staff also worked across the federal interagency family to understand what other government PPE requirements and acquisitions were in progress that could impact this supply chain. Armed with this information, the staff worked with CDC's contracting personnel to craft purchases designed to develop small stocks without disrupting orders for healthcare partners and other federal agencies.

Identifying & Filling Gaps

Knowing this would limit the SNS's immediate ability to acquire a stock that could be "the solution" for a hospital caring for an Ebola patient, SNS staff carefully established new relationships with key PPE manufacturers. SNS staff worked with CDC's Rapid Ebola Preparedness Teams to help potential Ebola treatment centers assess their readiness from a PPE perspective. Through these assessments, supply gaps were identified that allowed SNS staff to provide expert advice to industry partners so they could strategically allocate scarce materials to places, defined by the National Tiered Strategy Framework, most likely to encounter an Ebola case in the United States and who needed additional PPE supplies. Staff also worked directly with the healthcare community to synchronize its requirements with the suppliers' capabilities to ensure demand was met in the best way possible.

Even with efforts to help supply keep up with demand, SNS staff realized that if a person under investigation for Ebola presented at a U.S. hospital, a gap may exist between the amount of PPE needed versus what the hospital had on hand and what the market could immediately provide. In this instance, where the amount of product on hand plus what could immediately be provided by distributors and manufacturers was not enough, SNS acted to bridge the gap and provide product to the hospital until the market could deliver these vital supplies. SNS developed PPE kits that could be quickly placed within facilities in order to: allow time to coordinate with commercial suppliers; make rapid delivery a reality; ensure sustained access to necessary PPE; and safely care for patients.

What SNS Does Successfully

In the 16 years since the first 12-hour push packages were developed, SNS certainly has shifted its focus and has grown dramatically in both product and expertise. The SNS will continue to stockpile products for specified threats, especially those events where tight time constraints for delivery and enormous quantities would exceed commercial market capability. The SNS also will continue to hold otherwise unavailable products designed for specific, uncommon interventions.

However, staff members recognize that a wide variety of products are required for successful public health interventions in emergencies, and holding all these products is not feasible – even for the SNS. As seen during the U.S. response to Ebola, the SNS may not always hold the right product or the best product for every given event, especially those that are unexpected. What it can successfully do is work with its partners – industry, healthcare, and public health, specifically – to create a multi-tiered approach and successfully bridge gaps to ensure the best intervention possible.

Greg Burel is the director of the Strategic National Stockpile at the Centers for Disease Control and Prevention. As head of the nation's largest stockpile of medicines and supplies available for emergency use, Burel is a leading expert on supply chain management and medical countermeasure distribution and dispensing in the United States. With more than 30 years of civil service, Burel has risen through the ranks of the federal government, beginning his career at the Internal Revenue Service and serving in leadership roles in the General Services Administration and the Federal Emergency Management Agency. In 2007, Burel assumed the helm of Strategic National Stockpile operations.

The Evolution of Planning for Animals in Disasters

By Elizabeth Serca-Dominguez & Richard Green

A man runs into an evacuation zone to rescue his dog. A woman refuses to leave her home in the face of danger because she cannot find her cat. A family is turned away from a shelter because they do not want to leave their pets behind. In all of these cases, people are willing to sacrifice themselves and, in some cases, endanger responders for the good of their pets, so related emergency plans must be in place.

Animals are a large part of daily life in the United States, whether kept for livelihood or companionship. In many households, they are considered part of the family, no different than children. In the 2013 Black Forest fire outside Colorado Springs, CNN interviewed a man that went back into the evacuation zone to rescue his dogs. When asked why he would put his own life in danger, he quickly responded that they were part of the family. People willing to intentionally endanger themselves also endanger responders and compromise the management of an emergency or disaster. Through collaboration and communication, emergency management professionals can reduce or eliminate such situations that endanger their community members, animals, and first responders.

The Human-Animal Bond

The American Veterinary Medical Association (AVMA) defines the human-animal bond as, "a mutually beneficial and dynamic relationship between people and other animals that is influenced by behaviors that are essential to the health and well-being of both. This includes, but is not limited to, emotional, psychological, and physical interactions of people, other animals, and the environment." In an article (2006) entitled, "Placing the Human-Animal Bond in Context in the Face of Disasters," AVMA noted that, due to a lack of more traditional support systems in modern society, companion animals for many people are the sole source of emotional and social support, providing significant psychological and physical health benefits, especially to children, the elderly, the disabled, the mentally and physically ill, and the incarcerated. Given this bond, they believe that, "When disasters strike, saving animals means saving people."

Since the passage of two key animal-related pieces of legislation shortly after Hurricane Katrina in 2005, the human-animal bond and the critical importance of planning for human and animal needs in emergencies and disasters is more at the forefront of emergency management than ever before. The Pet Evacuation and Transportation Standards (PETS) Act was signed into law in October of 2006 to amend the Stafford Disaster Relief and Emergency Assistance Act to, "ensure that state and local emergency preparedness operational plans address the needs of individuals with household pets and service animals following a major disaster or emergency." The Post-Katrina Emergency Management Reform Act (PKEMRA), also passed in 2006, strengthened Federal Emergency Management Agency's (FEMA) preparedness and response capabilities and identified new responsibilities for the U.S. Department of Homeland Security/FEMA in coordinating implementation of the PETS Act.

Post-Katrina Initiatives

Pre-Hurricane Katrina, there was very little effective communication, collaboration, or partnership between the groups involved in animal rescue and sheltering – let alone in combination with the emergency management community. In those days, very few communities were actively addressing animal issues. Typically, those who arrived at the disaster area first declared themselves as the lead agency and assumed "command." Self-deployment occurred too frequently and teams were not adequately trained in incident management or command. Times have certainly changed. Communication and collaboration are at the core of these changes. It became widely accepted that no one group could do it all (and do it well) by working in a vacuum but, by communicating with one another and working together, more animal lives were saved. Two national post-Katrina initiatives that have affected all levels of animal emergency planning were the formation of the National Animal Rescue and Sheltering Coalition (NARSC) and the National Alliance of State Animal and Agricultural Emergency Programs (NASAAEP).

NARSC has developed and grown into a strong coalition of 14 national, nongovernmental organizations representing millions of animal welfare, animal care, and animal control professionals, volunteers, and pet owners. Participants in the coalition include the most experienced, qualified animal rescue and sheltering management professionals in the country, including the American Society for the Prevention of Cruelty to Animals® (ASPCA®). This collaborative approach among the groups offers opportunities for emergency management to have one-stop shopping when considering back-up resources to what they have locally. It also offers a wide variety of subject matter expertise and opportunities for training.

NASAAEP continues to foster and construct a national network of state-level stakeholders to promote effective, all-hazards animal and agricultural emergency management; nearly all states have participated in the monthly calls or summits since its inception. In addition to enhancing communication and collaboration among states, NASAAEP has published best practices for key animal issues that occur during emergencies such as sheltering, transportation, and even zoo preparedness, among others. The best practices working groups are an assembly of the best and brightest in animal and agricultural issues in emergency management today. NASAAEP state representatives often reside within the state department of agriculture or board of animal health, and agencies should connect with them and keep abreast of state planning efforts and resources.

Organizing Community Animal Response Teams

Although there have been significant national strides, it is imperative for local communities to have the capability and plans to respond to animals during disasters. Many communities have formed animal coalitions tasked with planning and responding to animals in disasters. The group or committee may eventually earn the name of Community Animal Response Team (CART) and be an integral piece of community planning and response. If there is no CART, there are many resources available now to help initiate and sustain a CART's development, whether by simply asking a successful neighboring community to borrow their paperwork for reference or turning to a group like the ASPCA, which can help assist with the process as well. The ASPCA not only funds disaster-related grants, but also has a special Midwestern Disaster Resiliency Program geared toward helping states and communities create animal response teams, providing training, and funding disaster equipment. Since launching the program a few months ago, the ASPCA has given more than $50,000 to communities in disaster-prone areas to enhance their ability to respond to animals and pet owners affected by disasters.

Attending to animals in disasters has certainly changed in the past 20 years. An overall shift in the thought process has occurred, recognizing the human-animal bond as being a safety issue for the community at large and first responders. Where there are human issues, animal issues will follow. Communication and collaboration on all levels of government have provided useful resources, more training, and stable relationships from which to build and improve planning efforts to keep people, their pets, and first responders safe. By continuing to work together, government and nongovernment agencies can keep this trend going and continue to save more lives.

Organizations interested in applying for funding or assistance through the Midwestern Disaster Resiliency Program may contact Disaster.response@aspca.org

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Richard (Dick) Green (pictured), Ed.D., senior director of disaster response at the American Society for the Prevention of Cruelty to Animals, leads the efforts of the Disaster Response Department, which covers natural and manmade disasters as well as large- and small-animal rescue operations. He also oversees the ASPCA's internal disaster readiness program and develops partnerships with national and local agencies to enhance the country's disaster response capabilities. Following Hurricane Katrina, he established and chaired the National Animal Rescue and Sheltering Coalition (NARSC), the first coalition in the nation dedicated to working with all levels of government and nongovernment agencies in finding collaborative solutions to major human-animal emergency issues. He is a frequent speaker on such topics as best practices in animal evacuations, relief, and recovery efforts. He has a doctorate in education from Brigham Young University, and was an assistant professor at Gonzaga University and the University of Puget Sound.

Elizabeth Serca-Dominguez, disaster response manager at the American Society for the Prevention of Cruelty to Animals, works to strengthen the disaster response capacity of Midwest states most vulnerable to natural disasters by providing disaster response training, rescue equipment, and disaster planning expertise to local animal response teams. Prior to joining the ASPCA, she led the state animal response teams in both Florida and Texas – two of the most hurricane-prone states. She was a founding member of the Board of Directors for the National Alliance of State Animal and Agricultural Emergency Programs (NASAAEP), a collaborative alliance of state programs charged with planning for, preparing for, and responding to disasters involving animals. She received a Bachelor of Science with honors from the University of Florida (UF) in Environmental Management in Agriculture, as well as a Master of Science with honors from UF in Agricultural and Biological Engineering.

Prepare Them While They Are Young

By Shay Simmons & Ryan Easton

Emergency preparedness is not boring – it is fun, interactive, and educational! In Illinois, preparing for a disaster involves games, parks, and day camps for children. With collaborative efforts and partnerships with a variety of community organizations, these valuable teaching opportunities instill family preparedness practices that last for generations.

In 2011, a survey conducted internally by McLean County Health Department (MCHD) and the Illinois State University Mennonite College of Nursing found that fewer than 50 percent of county residents had plans in place for emergencies. This finding was consistent with national trends – in response to a 2013 Ad Council study of 800 Americans, six out of ten admitted they had done no family emergency preparedness planning. To remedy this shortfall, the MCHD Bioterrorism and Emergency Preparedness (BT-EmPrep) team began looking for effective ways to get the message of emergency preparedness to families. One of the strategies under discussion involved increased outreach to children ages 6 to 12.

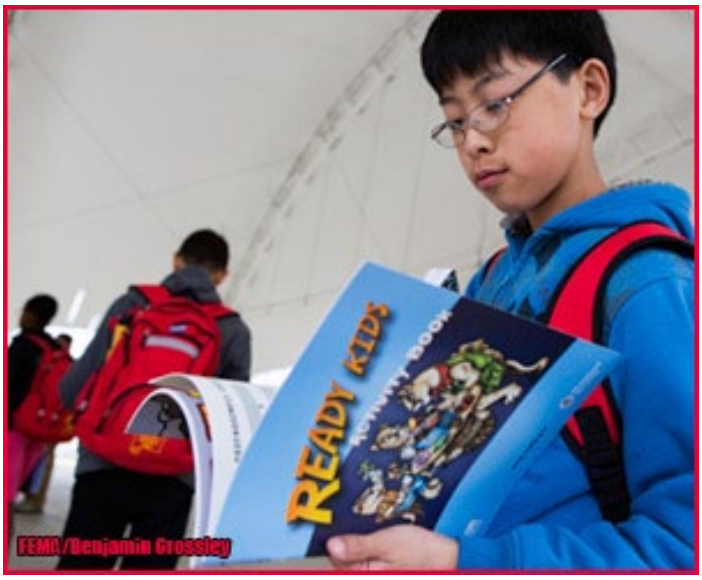
Planting & Growing Preparedness

A 2013 United Nations International Children's Fund (UNICEF) study indicated that children represent 50 to 60 percent of those affected by emergencies and disasters. For this reason, preparedness organizations should consider targeting agencies providing children's programs for collaboration on family-focused emergency preparedness training and education. This can serve a threefold purpose by: (a) influencing positive changes in the way families prepare for disasters; (b) planting seeds for a long-term commitment to safety and preparedness; and (c) providing children with emergency preparedness skills.

Evidence for successful children's outreach programs can be found at the American Lung Association and the American Cancer Society. Both organizations have used children's outreach programs to discourage tobacco use and promote smoking cessation among students and adults. According to the Centers for Disease Control and Prevention, since the year 1998, tobacco use among all students has fallen from approximately 37 to 18 percent. Additionally, over the same time period, the U.S. adult population's tobacco use has dropped from approximately 25 to 19 percent.

"In response to a 2013 Ad Council study of 800 Americans, six out of ten admitted they had done no family emergency preparedness planning."

Based on this model, the BT-EmPrep team concluded that educating children with an eye toward improving long-term family decision-making would produce positive results. Since the team normally works with adult organizations, this would require seeking new partnerships for



collaboration, with agencies where children are the central focus. The BT-EmPrep team sought to convince potential partners that the outreach was flexible enough to meet their program goals, such as teaching child safety.

Partnerships – Laying the Groundwork

Overtures were initially made to a faith-based organization (FBO) day camp and a Vacation Bible School for autistic children. Both organizations welcomed the idea, which was promoted as a free, fun experience for the kids. Although there was a great deal of informal feedback testifying to the success of the program (conducted during June and July 2013), there was no formal tool to measure its overall effectiveness. With this in mind, the team decided to expand the 2014 outreach to non-FBOs and to create a feedback mechanism.

In January 2014, the team began laying the groundwork for the summer's activities by contacting the Parks and Recreation Departments of the two largest towns in the jurisdiction, as well as the two town libraries and several local churches with Vacation Bible Schools. Based on the initial queries, a program manual and a letter template were created to emphasize that:

- The program had been successful;
- It offered long-term benefits not just to children, but to the community; and
- The program was free – materials, instructions, and volunteers would be provided by the Health Department.

The last was intended to be a major selling point. Although the outreach did not focus on at-risk children, the team was actively seeking partnerships with agencies serving families that cannot afford many traditional summer activities.

The letter asked prospective collaborators for the following information to help the team better understand the agency's needs:

- How many children will be participating in our one-day program and what are their ages?
- Will this require more than one day?
- Which activity style best fits your organization's needs? Game, classroom, or combination?
- What timeframe will our volunteers have to implement the activities?
- Is there a recommended staff/volunteer-to-child ratio per group that you recommend? We welcome your agency's staff to assist in facilitating our activities, but we have the capability of providing volunteers.

- Will your agency allow children to participate in surveys to help measure program success? McLean County Health Department is in the process of obtaining local grants to fund our summer outreach program. In order to qualify, we would like to distribute before and after questionnaires to the children participating in our program.

Keeping It Fun, Interactive & Educational

Once the collaborator agencies were identified, the decision was made to leave the design and implementation of the program in the hands of a college-aged AmeriCorps Member and a volunteer intern at MCHD. This allowed these creative and energetic young people to design an outreach program that was fun, interactive, and educational for the children attending the program. A trial run was conducted at a local home improvement store's Family Preparedness event in January 2014 and again – based on informal attendee feedback – the event was a great success. Immediately following the event, the AmeriCorps member Cecilia Montesdeoca and MCHD volunteer intern Kera Spafford, began tweaking the plan and incorporating supply lists, instructions for the different games, and sample pre- and post-tests into the program manual.

For implementation, volunteers were recruited among high school and college students belonging to the local Junior American Red Cross Chapter. The 2014 program included the two venues from 2013 and added a local community parks and recreation day camp, effectively tripling the number of children reached. Outreach activities began on 28 June and concluded on 29 July.

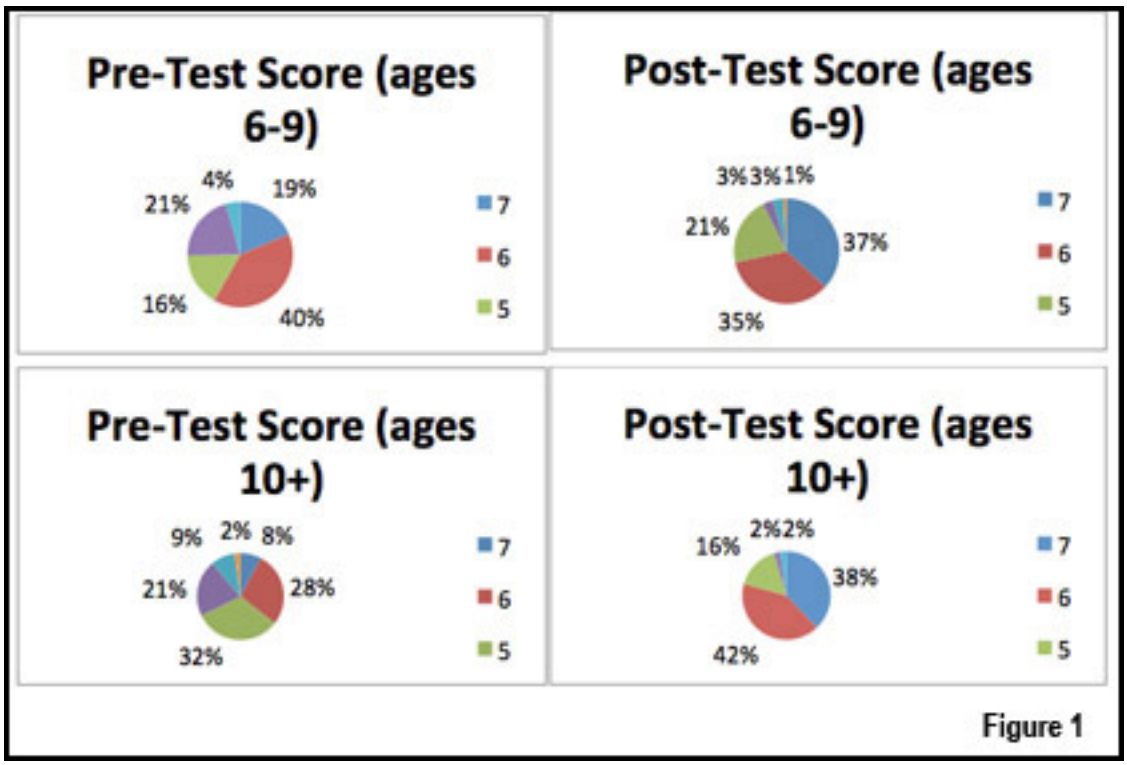


Figure 1

Pre- and post-tests were split between age groups 6-9 and 10-12. The results from the parks and recreation program are shown in Figure 1. Red and blue indicate children who scored six or higher out of seven questions on the test. The improvement in scores among younger children jumped from 59 to 72 percent. For the older children, the improvement was from 60 to 78 percent. Several of the partner venues have asked for this program to be conducted in summer 2015.

Lessons learned from the 2014 summer outreach program:

- Create a feedback tool to be administered to parents/caregivers, which will help measure the outreach's impact on family emergency planning;
- Plan for more youth volunteers, perhaps from the Boy Scouts as well as the junior Red Cross;
- Begin planning the summer activities early;
- Establish a calendar for initial contact; some agencies begin planning February, some not until April; and
- Consider a rotation, with some partners being put on a three-year cycle.

The BT-EmPrep team's goal again for summer 2015 is to double the number of children in the program. Recruiting venues has helped immeasurably by the fact that not only do kids enjoy the program, but it is free for the collaborating agency and very inexpensive for the team. The cost to the Health Department was limited to minimal supervisory time on the part of the emergency preparedness coordinator, mileage for the volunteers, and a box of stickers. All other supplies were provided through donations or low-cost items on hand (construction paper, duct tape, and markers). Federal and state program funding no longer allows for the purchase of giveaways, so the MCHD graphic artist designed a colored sticker that was affixed to several flats of bottled water. This water was distributed to the children during program activities.

The most carefully designed children's outreach will fail if it is not enjoyable. The BT-EmPrep team will continue to adapt the program based on comments from children and collaborator agency staff.

Shay Simmons grew up in southeastern Michigan. After her military service (USMC), she relocated to Illinois and has been the emergency preparedness coordinator for the McLean County Health Department since September 2009. She completed the Emergency Management Institute's Professional Development Series (PDS) in December 2012, and is currently working on her Illinois Professional Emergency Manager certification.

Ryan Easton is an AmeriCorps Member specializing in emergency preparedness for the McLean County Health Department in Bloomington, Illinois. Before accepting his position with AmeriCorps, Ryan served five years in the United States Army as a paratrooper. His tour of duty included two deployments in support of Operation Iraqi Freedom. He received his Bachelor of Science in biology from the University of Michigan, and is an admitted masters student at the University of Illinois – Chicago School of Public Health.

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People With Disabilities – Laws, Plans & Partnerships

By Kendall A. Leser

As testimony continues in the 2013 Boston Marathon bombing case, memories of that day are still fresh in many people's minds – especially for the 16 people who lost limbs on that tragic day. By law, every jurisdiction must have plans and partnerships in place to ensure that those with existing or newly acquired disabilities are properly cared for in any emergency.

According to 2010 U.S. Census estimates, 56.7 million Americans – or, approximately one in five – live with disabilities. Analysts, such as the Population Reference Bureau, expect this number to rise as the baby-boomer population ages. People may experience physical disabilities (using wheelchairs or special equipment for mobility), cognitive disabilities (difficulty learning/remembering), intellectual disabilities (such as Down syndrome), and sensory disabilities (such as deafness or blindness). Emergency planners and responders must account for all of the different types of disabilities that members of their community experience at any point in time. Planning and response efforts must account for those who have existing disabilities or impairments, as well as for those with newly acquired disabilities as a result of an emergency or disaster – for example, an amputation or traumatic brain injury caused by an explosive device.

As part of their preparedness planning efforts, local health departments must adhere to the Centers for Disease Control and Prevention's Public Health Emergency Preparedness Capabilities. In a 2014 nationally representative survey of local health departments, approximately 70 percent of those surveyed reported including people with disabilities in their emergency preparedness planning and response efforts. Even though findings from this National Association of County and City Health Officials (NACCHO) survey suggest that local health departments are more likely to include people with disabilities in emergency preparedness planning and response efforts than any other type of program, there is still room for improvement. Emergency planning for people with disabilities is the law. The purpose of this article is to provide a general overview of the legal aspects of preparedness planning for people with disabilities and raise awareness about the importance of community partnerships when planning for emergencies and disasters.

"Planning and response efforts must account for those who have existing disabilities or impairments, as well as for those with newly acquired disabilities as a result of an emergency or disaster – for example, an amputation or traumatic brain injury caused by an explosive device."

The Law – Accessibility & Discrimination Concerns

According to the *Americans with Disabilities Act Title II Regulations: Part 35 Nondiscrimination on the Basis of Disability in State and Local Government Services*, emergency planners must ensure that emergency plans and response efforts provide: (a) physical access; (b) programmatic access; and (c) effective communication for people with disabilities. In essence, the law states that everyone must be given equal access to emergency services and emergency communications. When planning for people with disabilities, it is important to note that "accessibility" for one person does not necessarily mean "accessibility" for another. At a shelter, for instance, the concept of accessibility for a person who uses a wheelchair may mean having an entrance ramp, but it may mean having large-print or audio-communication materials available for someone with vision impairment.

There have been a number court cases over the past few years that called attention to the importance of including people with disabilities in emergency response efforts. In 2011, a California court ruled that the city and county of Los Angeles was discriminatory because that jurisdiction did not have a plan in place to notify, evacuate, or provide transportation for people with disabilities in the event of a disaster. As a result of this lawsuit, Los Angeles was ordered to coordinate with organizations: (a) to ensure that necessary sheltering resources would be accessible to *all* people in a disaster; (b) to provide accessible communication and transportation; and (c) to plan for continuity of care services for people with disabilities.

In 2013, the U.S. District Court, Southern District of New York, ruled that the City of New York discriminated against people with disabilities by failing to plan for their needs in disasters such as Hurricane Sandy. This ruling specifically noted a failure to provide information about the existence and location of accessible services during an emergency. More recently, in September 2014, disability rights activists filed a complaint against the District of Columbia stating that the jurisdiction did not specifically include residents, commuters, or tourists with disabilities in emergency response plans (a ruling has not yet been made in this case).

Trusted Sources, Valuable Resources & Community Partnerships

NACCHO has found that one of the most effective strategies for emergency preparedness planning and response at the local level is for health departments to establish and maintain close partnerships with community members and community-based organizations representing the interests of people with disabilities. Consistent with the decades-old disability rights adage, "Nothing about us without us," NACCHO recommends that emergency planners reach out to community members with disabilities and invite them to participate in planning meetings and exercises in order to test already-existing response plans.

In addition, NACCHO also emphasizes the importance of building strong partnerships with community-based organizations – for example, The Arc, Centers on Independent Living, Easter Seals, Meals on Wheels, Special Olympics, Goodwill, Family Voices. These community-based organizations are trusted sources within the disability community and often best know the location and needs of their members with disabilities. Involving these community-based organizations as well as people with disabilities in all phases of preparedness planning and response assists emergency planners in tailoring plans to meet their communities' specific needs. This in turn ensures that all people have equal access to resources during an emergency or disaster.

In order to help local health department emergency planners better integrate community members' needs in their preparedness response plans, NACCHO developed two resource guides. The first, Strategies for Successfully Including People with Disabilities in Health Department Programs, Plans, and Services, provides basic action steps that health departments can take to become more inclusive in health promotion and emergency preparedness programs and plans. The second, Directory of Community-Based Organizations Serving People with Disabilities, provides a list of community-based organizations that health departments should consider partnering with in order to better include people with disabilities in emergency preparedness planning and response. NACCHO also offers one-on-one technical assistance to health departments that are interested in learning how to better include people with disabilities in response plans.

As mentioned throughout this article, the population of people with disabilities must be considered in *all* aspects of emergency preparedness planning and response. Localities may experience legal ramifications for not carefully including people with disabilities in their emergency planning and response efforts. One of the best ways for local health departments to start including people with disabilities is to reach out to these community members and community organizations.

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Cultural Communities: Small Considerations Equal Big Benefits

By Wayne P. Bergeron

Culture profoundly affects human behavior. Disasters also profoundly affect human behavior. From the beginning stages of a crisis situation – planning and preparations through execution of operations – emergency management decision makers from government agencies and private sector organizations must be able to view their jurisdictions through various cultural lenses.

Simply put, people are who they are as the result of their culture or system of values, beliefs, behaviors, and norms that provide a worldview shared with others who are similar to them within society. Through this cultural lens, people perceive and interpret the world around them. Programs such as the U.S. Army Cadet Leadership Course integrate cultural awareness into its curriculum. This lens is used on a daily basis to make decisions. In many cases, this occurs in a normal and routine manner to determine the appropriate actions and responses – both individually and collectively as a society – to common events. Although this is an important, yet often overlooked aspect of daily life, it is in the aftermath of a crisis, disaster, or emergency when culture can have the biggest impact. However, the immediacy and confusion of emergency management situations rarely offer emergency managers the time or ability to consider the effect that culture ultimately may have on the effectiveness and outcome of response efforts.

The Cultural Competency Continuum

"Cultural competency" within emergency management organizations refers to a requisite level of sophisticated interactions with diverse populations and cultural communities. Therefore, these organizations should recognize the significance of and, if possible, help to facilitate the cultural understanding of its members to employ culturally competent actions to assist the affected cultural community in the aftermath of a crisis. According to the U.S. Department of Health and Human Services, cultural competence refers to "a set of values, behaviors, attitudes, and practices that enables an organization or individual to work effectively across cultures." When incorporated in planning mechanisms from the onset, such an approach can have a huge impact on situational outcomes when these organizations understand the range of effects culture has on organizations and their members.

As the first step in the process of building cultural competence within an organization, it is important for both the collective body as well as individual members to understand the "five principles of cultural proficiency," as defined in the publication, *The Culturally Proficient School: An Implementation Guide for School Leaders* (2005):

- Culture is the predominant force in people's lives.
- The dominant culture serves people in various ways.

- People have both personal identities and group identities.
- Diversity within cultures can be vast and significant.
- Each individual and each group has unique cultural values and needs.

The second important concept concerning cultural understanding is that cultural competence/proficiency can best be illustrated by the use of the "Cultural Proficiency Continuum." This continuum contains six degrees or levels that progress from left to right toward ever-increasing ability within the cultural realm to the ultimate goal of cultural proficiency:

- *Cultural destructiveness* is the level that is furthest from the ideal and is the tendency to negate, disparage, or counteract cultures other than one's own culture.
- *Cultural incapacity* can be seen as less sinister, with the propensity to elevate the superiority of one's cultural values and beliefs while either knowingly or unknowingly suppressing the culture of others.
- *Cultural blindness* is important because it is seen by many (especially within the government realm), as a reliable standard of fairness or equality, which tends to produce an environment where cultural differences are not only not recognized, but are actually seen as not existing or not having any effect on society.
- *Cultural pre-competence* begins when the differences in culture are recognized and there is at least some realization that the lack of cultural knowledge, understanding, and experience can actually limit one's ability.
- *Cultural competence* is achieved when individuals and organizations begin to employ behavior and practices that recognize cultural differences in ways that begin to enhance and optimize performance.
- *Cultural proficiency* is the final level on the continuum and entails "honoring the differences among cultures, seeing diversity as a benefit, and interacting knowledgeably and respectfully among a variety of cultural groups" (quoted from *The Culturally Proficient School: An Implementation Guide for School Leaders*).

Ideally, cultural proficiency is the state or condition that officials involved in emergency management would strive to achieve in dealing with different communities. The cultural continuum concept also serves as a balance scale, or seesaw, with a corresponding middle or "tipping point," where individuals and organizations begin to emerge from cultural blindness into cultural pre-competence, thus realizing the benefits of considering these communities within emergency management.

Starting From Here & Now – Taking Stock

In many ways, the key factor in reaching the cultural tipping point begins with a necessary evaluation of one's own individual or organizational cultural environment in comparison with the culture of the target community or individual. In many cases, emergency management organizations come from a paramilitary or pragmatic emergency response culture, so it is useful to understand some of the differences between such cultures and more traditional civilian cultures.

Table 1: Cultural Comparison of Communities

Pragmatic/Paramilitary Culture	Traditional/Civilian Culture
Mono-chronic: Very focused on time, punctuality, and efficiency of effort; "Time is money"	Poly-chronic: Focused more on consensus, inclusion, and harmony of effort; "We'll get around to it, in time."
Task oriented: Get down to business; get the job done	Process oriented: Get to know each other first; build trust and confidence
Rule of law: No one is above legal authority	Rule by law: The authorities make the law; can change the rules as necessary
Highly mobile: Go where the opportunity is as able based on socioeconomic status	Tend to be tied to specific areas: Multigenerational family ties
Value and respect accomplishment and achievement: Ask the question, "What do you do?"	Value status, wisdom, and cultural ties: Ask the questions, "Who are you?" and "Who is your family?"

Source: Table format adapted from Corwin Press (2014).

Such comparisons are outlined in Table 1, which was presented by the author in a previous work, entitled "Cultural considerations in consequence management and emergency response." Interestingly, these concepts have been incorporated into various training programs targeted at military members preparing for overseas deployment to other cultural communities, but are equally applicable to many U.S. domestic cultural communities.

Types of Cultural Communities

There are many different types of cultural communities – largely determined by the geographical, demographic, and political environment within organizations' jurisdictional areas and operational space – that emergency management organizations may need to consider and ultimately will have to interact with. In addition, smaller subcommunities may exist within larger overarching cultural communities. One of the first steps in effectively dealing with diverse communities is to conduct a thorough inventory and analysis of the cultural landscape within a jurisdiction to identify significant factors, which include but are not limited to the following considerations:

- Ethnic and immigrant groupings;
- Separate racial minorities and groups;
- Religious belief communities;
- Language communities and groups;
- Education level and literacy;

- Gender considerations (i.e., women and children with no accompanying male family member);
- Age considerations (specific age-related communities such as senior citizens); and
- Socioeconomic groupings (e.g., areas of poverty, working poor).

Danger & Opportunity

Arlene Silva and Mary Beth Klotz with the National Association of School Psychologists stated in a 2006 article that, "the Chinese word for crisis comprises two symbols: wei, which means danger, and ji, which means opportunity." Considering cultural communities in emergency management planning in the wake of a natural or manmade disaster or even a terrorist incident presents both. Silva and Klotz further described that the way in which individuals, organizations, and communities "respond to a crisis dictates in great measure the degree to which risk is transformed into opportunity."

The first step is to understand the risk presented by not considering cultural communities in the process of planning, training, and operations. Once this risk is realized, emergency management organizations can begin to mitigate and eliminate the risk by building programs and incorporating cultural communities into their everyday efforts and interactions, as well as into their planning and crisis response operations. Unlike stockpiling massive amounts of supplies or purchasing rescue equipment, this may take very little commitment of physical resources. Instead it requires awareness and a change in thinking when it comes to culture.

Considering cultural communities within emergency management operations can provide big benefits to culturally astute organizations with only a small investment in time and resources.

When considering cultural communities within an emergency management context, current research and practice is in its infancy and more rigorous and expansive study, as well as refined standards and best practices, are needed when it comes to cultural communities. However, emergency management response organizations simply cannot wait to begin to incorporate at least basic understanding and considerations of cultural communities into their organization planning models. This is ultimately when the risk begins to transform into opportunity.

For more information about cultural considerations, read:

Bergeron, W. P. (2012). Cultural considerations in consequence management and emergency response. In D. Čaleta & P. Shemella, editors, Managing the Consequences of Terrorist Acts – Efficiency and Coordination Challenges. Ljubljana, Slovenia: Institute for Cooperative Security Studies, 29-37.

Lindsey, R. B., Roberts, L. M., CampbellJones, F. L. (2004). The Culturally Proficient School: An Implementation Guide for School Leaders. Thousand Oaks, CA: Corwin Press.

Wayne P. Bergeron, lieutenant colonel, retired from the United States Army in May 2011 after a 23-year career within the Military Police Corps and Special Operations Forces. He currently serves as an instructor teaching both criminal justice and security and emergency management at the University of North Alabama in Florence, Alabama. His education includes undergraduate degrees in criminal justice and political science, a master's degree in international relations from Troy University, and he is currently a doctoral candidate in emergency management at Jacksonville State University.

Disaster Preparedness & Response Require Having Faith

By Raphael M. Barishansky & Audrey Mazurek

With people regularly attending services each week at faith-based organizations around the world, these organizations must have plans in place to provide safe egress of large crowds of attendees from their buildings on a regular basis. Much can be learned from and implemented into such organizations to provide greater community resilience.

The world of emergency response is ever expanding with governmental responsibilities to communities increasing on an almost daily basis. However, whether the emergency is naturally occurring or human-caused, there are times when the governmental agencies that are set up to provide help to communities will be overwhelmed. It is during times like this when citizenry, through established volunteer-based groups such as the Community Emergency Response Team (CERT) and the Medical Reserve Corps (MRC), swing into action to act as an adjunct to local, state, regional, territorial, tribal, and federal government response agencies.

Statistical Significance of Congregations

When even more assistance is necessary, faith-based organizations (FBOs) are a good resource to be used in conjunction with governmental responders. According to the Pew Research Center's Forum on Religion & Public Life, an estimated 5.8 billion adults and children are religiously affiliated around the globe, representing 84 percent of the 2010 world population of 6.9 billion. The largest religions are: 2.2 billion Christians (32 percent), 1.6 billion Muslims (23 percent), 1 billion Hindus (15 percent), nearly 500 million Buddhists (7 percent), and 14 million Jews (0.2 percent) around the world as of 2010. In addition, more than 400 million people (6 percent) practice various folk or traditional religions, including African traditional, Chinese folk, Native American, and Australian aboriginal religions. An estimated 58 million people – slightly less than 1 percent of the global population – belong to other religions, including the Baha'i faith, Jainism, Sikhism, Shintoism, Taoism, Tenrikyo, Wicca, and Zoroastrianism, to mention just a few.

The faith-based community perhaps may be the single greatest representative cross-section of a community, and comprises roughly 350,000 congregations in the United States. FBOs are generally active in the disaster phases of preparedness, response, and recovery. Preparedness includes activities such as creating disaster plans, conducting training or educational activities, or collecting disaster supplies. Response activities generally include immediate disaster relief and mass care – for example, water, food, and safe shelter – but, in the case of some groups such as CERT and MRC, they can include lifesaving activities such as search and rescue, triage, and first aid or basic life support.

Moreover, these organizations may be better able to reach: individuals with access and functional needs: the economically disadvantaged; groups with limited English proficiency or low literacy; those with certain medical issues or disabilities; and groups characterized by cultural,

geographic, or social isolation. In addition to having close ties to their communities and having the mission of helping the most vulnerable, FBOs are recognized as trusted agents for the communities that they serve (in comparison to government agencies). FBOs also have access to resources for, and from, the community – for example, facilities, volunteers, a donor base, and others. These resources can be critical to any local government agency's efforts to help its community prepare for, respond to, and recover from a disaster.

Megachurches Filling Critical & Daily Operation Gaps

There are multiple ways to establish FBOs as critical elements in preparing for and responding to the many emergencies that could confront communities. Following are examples of what some jurisdictions have done in regard to moving this asset into operational mode:

- Prince Georges County (Maryland) uses multiple faith-based organizations in its preparedness and planning for public health emergencies. With a population of almost 1 million and a preponderance of churches and so-called "megachurches" – defined as having 2,000 or more people in average weekend attendance – it was intuitive to reach out to these organizations to assist in emergencies. Members of these organizations have been trained to set up their houses of worship to act as closed points of distribution (PODs) during an emergency where antibiotics would need to be dispensed to their communities' populations. Taking this a step further, various members of the congregation – both medical providers and those with no medical background – have been trained to staff these closed PODs with limited support needed from the county Health Department and county Office of Emergency Management. Additional perspective on the utilization of FOBs in the context of public health preparedness comes from NACCHOs Advanced Practice Centers.
- The state of Missouri uses a unique program, highlighting FBOs, to assist in sheltering those affected by various emergencies including flooding, hurricanes, and the like. Various FBOs throughout the state have developed safety teams and all-hazards plans and made themselves an element in their local and county emergency operations plans. Interested volunteers from the FBOs are taught about the safe handling of food after a disaster, psychological first aid, emergency planning, and even what is involved in long-term recovery after an incident. Furthermore, although FBO facilities are used primarily as shelters and food stations, many continue their religious services to help people maintain some continuity in their lives after suffering through a disaster.

It is clear from the examples mentioned above that FBOs can be a critical element in the various phases of emergency management, but there are additional areas that FBOs can be used based on community need:

- Using FBOs during the preparedness phase to train and work with government staff and other volunteers to learn how to maintain relationships with the community, allow them to assist in brainstorming ways to do better outreach, act as conduits for building trust and communications, etc.
- Using FBOs during the preparedness phase to help brainstorm ideas for how to reach individuals that have access and functional needs in the most efficient, trustworthy, and quick way – but most importantly how to identify these groups now and maintain that throughout response and recovery efforts.

- Using FBOs to help with logistics planning – for example, megachurches often have the task multiple times per week of funneling hundreds (or thousands) of people and cars in and out of services. Besides examining how they do this efficiently and with what tactics, these same operational tactics can be used in a mass-dispensing situation. Also, many FBOs may have large events like charity drives or other mass gatherings. Emergency planners should be asking, "What do they do for planning, logistics, demobilization, etc., and how can these be used in an emergency?"

- FBOs can even serve to provide community services – for example, meals, medication pick up/drop off, behavioral health support, spiritual health support, pet care, childcare – for those in isolation or quarantine. They should be included in emergency operations plans as potential partners that can help provide these services during events requiring nonpharmaceutical interventions.

On the Ground & Ready to Move

> ***"An estimated 5.8 billion adults and children are religiously affiliated around the globe, representing 84 percent of the 2010 world population of 6.9 billion."***

Hurricanes Katrina and Rita in 2005 showed how effective FBOs could be in regard to emergency preparedness, response, and recovery efforts following a large-scale incident. Since then, there has been a concerted effort made on both federal and state levels to ensure that these nongovernmental organizations have been folded into various plans and exercises to ensure overall readiness. During large-scale events, governments could potentially require time to mobilize, gather personnel and supplies, and move these resources to the affected area. In contrast, the FBOs are already there on the ground, and in a position to immediately assist those in need. More information is available at the Homeland Security Institute document on Heralding Unheard Voices: The Role of Faith-Based Organizations and Nongovernmental Organizations During Disasters, 18 December 2006.

Emergency preparedness professionals would be wise to see where the gaps in their planning efforts lie and use these organizations to assist in filling those gaps, include FBOs in their training and exercise cycles, and take a holistic approach in understanding the unique challenges that FBOs may face as well as how to overcome these challenges. The effort on the front end will be paid off multifold during a crisis situation.

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Relying on Good Fortune – Not an Acceptable Preparedness Strategy

By Robert C. Hutchinson

When hundreds of people fall ill from a mysterious biological agent, public health and law enforcement agencies work seamlessly to implement the established policies and enforce any necessary quarantine procedures that they have planned and trained for well in advance of the current threat. At least that is what should happen.

During a short-notice tabletop exercise for the Ebola virus threat in late 2014 in a major metropolitan area, numerous federal, state, local, and private sector partners met to discuss the expanding viral threat and organizational responsibilities. The conversations were both useful and concerning due to the limited amount of experience with such an expanding pathogenic threat and effectiveness of existing emergency plans. Surprisingly, most of the representatives did not perceive many, if any, direct responsibilities for their organizations and looked to others to address the emerging threat.

One of the largest disconnections was between the different fields of public health and law enforcement. Public health officials are masters of their field on many diverse fronts, but the execution of involuntary quarantines involving resistant persons was not one of the areas with a well-established track record. Similarly, law enforcement officials are expected to address numerous diverse public safety issues that evolve, but the enforcement of involuntary quarantines involving noncompliant persons was not on their radar. A few thoughtful exercise injects quickly identified this critical disconnection and the serious impact of it if a quarantine order were issued for multiple resistant persons with a serious infectious disease.

Disconnect – Expectations, Responsibilities & Execution

During the exercise, the local law enforcement representatives were unexpectedly advised that they would be enforcing any local quarantine orders executed by local public health officials. This unanticipated assignment caused some fascinating conversations, and facial expressions, for this topic had not been discussed before the exercise or in the past. The law enforcement officials were unaware of this expectation and had not planned or trained for it. The public health officials, who rarely execute a quarantine order, expected that law enforcement officials were aware and prepared to enforce an order with little or no notice.

The exercise progressed past this discussion point with the topic not resolved, but the public health expectations were formally provided to the law enforcement officials. The public health officials also were advised of the issues that required their attention to plan and prepare for this joint responsibility. The valuable exercise demonstrated a great need for further collaboration and partnership for complex threats.

At a March 2015 homeland security conference attended by a diverse group of senior federal, state, local, tribal, and private sector leaders, this same topic was discussed with similar results. Interestingly, the same disconnection was identified and debated in search of a solution. The

execution and enforcement of mandatory quarantines were so rare that the majority of participants had never contemplated the serious challenges of the issue.

With the current Ebola threat apparently diminishing, it remains to be seen what the results will be for future preparedness levels. The lessons learned from the Ebola virus, if implemented and retained, shall be beneficial for future pathogenic and biosecurity threats. However, if these lessons learned and vulnerabilities identified are not fully understood and truly addressed, organizations may be exposed to legal liability – along with political, financial, and social consequences.

Possible Legal Ramifications

A nurse who contracted Ebola while working at a Dallas, Texas, hospital filed suit against her employer for not providing appropriate training and equipment for the disease. The merits of this tort claim will be argued both inside and outside the courtroom. This lawsuit should be a notice for public officials and leaders in all related fields to assess their intentions, planning, preparedness, and training for future public health and homeland security threats. There are consequences for ignoring these clearly identified threats and conditions under legal terms such as "failure to train" and "deliberate indifference."

"If these lessons learned and vulnerabilities identified are not fully understood and truly addressed, organizations may be exposed to legal liability – along with political, financial, and social consequences."

Research and analysis in 2010 indicated that court rulings involving failure to train and deliberate indifference could become relevant in future tort claims and actions regarding the failure to adequately prepare and train personnel for incidents or events that have already occurred or are likely to occur within jurisdictions. The recent, and probable future, shrinking of grants, funding, and budgets for preparedness and readiness shall not likely reduce an organization's potential exposure, possibly assisting legal liability to join political and financial consequences as ramifications for actions or inactions.

The foundation of preparedness is established with the training of personnel to a basic and then advanced level or standard. Research has shown that, if appropriate or required training is not provided and subsequent injury occurs, the organization may be liable for the actions of its organization and employees through the legal concepts of failure to train and deliberate indifference. An analysis of the relevant case law identifies an area of interest regarding tort claims against organizations for their training, or preparedness, to execute their expressed or expected duties and responsibilities.

Beyond the accusation of failure to train, a finding of deliberate indifference may be more serious in that it can result in stronger consequences for an organization that has been provided notice of a training issue and chooses to ignore the need or requirement. "Deliberate indifference" is defined by U.S. Legal Forms Inc. as, "the conscious or reckless disregard of the consequences of one's acts or omissions." In the early court case of *Estelle v. Gamble*, 429 U.S. 97 (1976),

the Supreme Court found that deliberate indifference can result in an agency's liability under 42 U.S.C. § 1983 (civil rights violation). The court ruled that it was only such indifference that can offend "evolving standards of decency" in violation of the Eighth Amendment. Numerous subsequent court cases have expanded this concept and concern for organizations and individuals.

Confusion Over Quarantine Enforcement

Although there are several areas for enhancement and improvement for the next serious public health or biosecurity threat, the implementation of an involuntary quarantine remains one of the most significant ones. The arrival of Ebola in the United States in 2014 caused immense debate and confusion about quarantine and isolation laws and policies, especially with the early state quarantine guidance announced in New Jersey, New York, and Maine.

The temporary quarantine of a nurse in New Jersey after returning from West Africa ignited a firestorm of controversy regarding laws, policies, procedures, risks, and priorities. The later quarantine of the same nurse at her residence in Maine only expanded the confusion and controversy due to her actions and statements. Maine later reached a settlement with the nurse allowing her to travel freely in public.

Fortunately, with the very limited number of infected persons in the United States, due process and civil rights conversations shaped the discussion and political skirmish without a serious public health consequence. Unfortunately, this good fortune permitted many to ignore this critical subject and the nation's vulnerabilities to execute a quarantine for a more serious and immediate public health or biological threat. This underlying issue has not gone away and cannot afford to be ignored due to its enormous difficultly.

Training Before the Next Threat Arrives

Before the arrival or emergence of the next natural or human-caused biological threat, it may be advantageous to conduct a tabletop exercise utilizing a scenario similar to the nurse arriving in New Jersey from West Africa. The quarantine actions in New Jersey and Maine transitioned and terminated long before the various partners in the public and private sectors could provide many crucial answers and determine possible solutions. Additionally, this exercise scenario involves both domestic and international concerns to challenge participants.

To begin the conversation and design an exercise with a law enforcement and public health focus, the following points would be beneficial to discuss and address before the next consideration of quarantine execution and enforcement:

- Sufficiency of laws, authorities, regulations, and procedures
- Federal vs. state and local execution
- Leadership and command structure
- Coordination with wide-ranging partner organizations
- Establishment of clear and agreed upon policies and procedures

- Use of force and rules of engagement guidance
- Procurement and distribution of proper resources
    - Personal protective equipment
    - Medical countermeasures
    - Residential, medical, and detention facilities
- Assessment of realistic personnel resources
    - Reduction due to ill, worried well, and family care
    - Surge capacity and cross-certification
    - Reduction due to collateral and military reserve/guard duties
- Sufficient pre-event training and exercising
- Messaging to partners, public, and politicians
- Clear acknowledgment of capabilities and intentions

A tabletop exercise or working group based on the events in Texas, New Jersey, and Maine, with the points listed above, may be a good place to start the honest and valuable discussion. Whether it is Ebola, Middle East Respiratory Syndrome, severe acute respiratory syndrome, or any emerging influenza, the risk of life-threatening epidemics and pandemics continues globally – so should robust planning and tangible preparedness.

There are potentially serious legal, political, financial, and social ramifications for ignoring these known homeland security threats. This subject remains a serious challenge that can only be resolved through collaboration and partnership within the entire homeland security community, especially public health and law enforcement. Action is required before the next event. Relying on good fortune is not an acceptable preparedness strategy.

The opinions expressed herein are solely those of the author in his individual capacity, and do not necessarily represent the views of his agency, department or the United States government.

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The Ebola Phone – Coalitions & Communication

By Margaret Davis

The National Institutes of Health has been saving the lives of patients diagnosed with Ebola virus. At the same time, Walter Reed Army Institute has been developing and testing a new Ebola vaccine. Montgomery County, Maryland, is home to these world-renowned facilities as well as a leading healthcare coalition that continually prepares for emerging public health threats.

Created in response to the 11 September 2001 attacks and anthrax attacks later that year, the Hospital Preparedness Program (HPP) has increased hospital emergency preparedness nationwide. After Hurricane Katrina in 2005, the U.S. Department of Health and Human Services' Assistant Secretary for Preparedness and Response heavily promoted hospital coalitions as an integral part of community emergency preparedness across the nation, and there are now nearly 500 healthcare coalitions across the country. These coalitions play a critical role in preparing for and responding to public health crises.

More Than a Decade of Collaboration

Like many healthcare coalitions, the Montgomery County Healthcare Collaborative for Emergency Preparedness (MOCEP) in Maryland was crucial in responding to the Ebola crisis in Fall 2014. Founded shortly after 9/11 in 2001, MOCEP brings together representatives from local hospitals, public health, emergency management, fire rescue services, and other organizations to prepare for and respond to emergencies. Through more than a decade of collaboration, MOCEP partners developed strong working relationships and worked together to increase the county's response capacity to health-related emergencies. For example, MOCEP hospitals have utilized mutual aid agreements to share resources – such as linens or personal protective equipment – during events ranging from hospital fires to severe weather. Through more than a decade of collaboration, MOCEP partners found it easy to work together in responding to the Ebola crisis and beyond.

The core strength of MOCEP is its ability for facilities and departments to share information and best practices. During the 2009 H1N1 pandemic, the coalition quickly recognized the need for open and consistent communication so that all partners could convey a unified message to the public. For example, during the pandemic, many hospitals enacted visitor restrictions to control the spread of the diseases, but it was not a uniform policy. By sharing each hospital facility's visitor policy, the MOCEP partners were able to explain the differences in policy to the public and help quell public concern.

After the H1N1 pandemic in 2009, MOCEP integrated discussions of emerging infectious diseases into the coalition's monthly meetings. Although the general public did not hear much about the Ebola outbreak in West Africa until Fall 2014, MOCEP first discussed the outbreak at its June 2014 monthly meeting, relatively early in the crisis. These proactive discussions focused on monitoring the situation and assessing the likelihood of Ebola reaching the United States. Through these conferences, hospital emergency managers were able to identify their gaps in knowledge

about the disease, request more information from trusted partners like the county's public health department, and begin thinking of how to respond if Ebola reached the United States. This pre-planning enabled Montgomery County, which is home to the federal critical healthcare facilities National Institutes of Health and Walter Reed Army Institute, to effectively and quickly respond to the Ebola crisis.

In addition to MOCEP, many of the Montgomery County agencies and hospitals also participate in the Maryland Region V Hospital Emergency Preparedness Coalition. The Region V Emergency Preparedness Coalition includes both urban and rural jurisdictions, only a portion of which are part of the well-resourced National Capitol Region. During the Ebola crisis, both Region V and MOCEP facilitated coordination phone calls between healthcare providers and public health officials. Early in the crisis, Montgomery County Department of Health and Human Services convened a meeting of the local hospitals, Emergency Medical Services, Emergency Management, and other partners to inform them about the course of the disease and establish a coordinated response. This coordination led to several beneficial operational changes in the county.

The Creation of the Ebola Phone

In Montgomery County, one such operational change was the creation of the Ebola phone. The Montgomery County Department of Health and Human Services Public Health division began operating the Ebola phone in October 2014. It is a simple cellphone that is passed between managers in the Public Health Emergency Preparedness and Response Department, with a number only provided to first responders and hospital personnel. During the height of the Ebola fears in Fall 2014, many healthcare providers

and emergency responders were unsure of best practices for identifying Ebola and preventing transmission of Ebola if and when they were to encounter a patient with symptoms or a positive travel history. This concern was quickly identified through the coalition partners, leading to the implementation of a dedicated phone line for first responders/receivers to reach public health officials with specialized knowledge of Ebola infection and mitigation.

Through these phone calls, first responders were able to quickly identify whether or not a patient with whom they are interacting carries a risk of Ebola. For example, early on in the crisis law enforcement encountered a disruptive individual in at a shopping center that claimed to have Ebola. Law enforcement was then able to quickly contact Public Health to discuss the actual risk of Ebola exposure the individual had and Public Health was able to then check with the Maryland Coordination and Analysis Center (MCAC) to verify the individual's travel history. MCAC verified that the individual in question had not left the country within the time of concern and public health officials were able to assure the law enforcement officers that the individual in question did not pose a public health risk.

"This concern was quickly identified through the coalition partners, leading to the implementation of a dedicated phone line for first responders to reach public health officials with specialized knowledge of Ebola infection and mitigation."

This consistent communication line among healthcare providers, first responders, and public health has already shown benefits outside of the Ebola crisis. For example, partners have used the line to reach public health officials about measles and other emerging infectious diseases in the region. Having a dedicated communication line from public health to other coalition members has further strengthened relationships between hospitals, fire rescue services, and law enforcement. Quick, consistent access to public health specialists have assured these coalition partners that they will be provided with the information necessary to safely and effectively carry out their duties.

Although news reporting of the Ebola crisis has lessened, public health officials are still actively responding to individuals potentially exposed to the diseases as they return to the United States from impacted West African countries. In Montgomery County, the crisis has tested the public health response capabilities of the county and led to an even stronger collaboration between first responders, public health, and hospitals.

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A Proven Method for Public-Private Virtual Collaboration

By Christina Fabac & Chas Eby

During a disaster, private sector companies may not have access to valuable public sector resources and information. Government agencies may want to build an online portal that provides businesses with situational awareness, such as real-time weather forecasts, road closures, and emergency alerts, and a chat room to increase public-private collaboration and private sector resilience.

The ability of businesses to prepare for, maintain operations during, and recover from disasters and emergencies is vital to the safety and well being of the public. Private sector preparedness also is fundamentally aligned with the mission of many emergency management agencies: to help ensure community members have access to resources and services during incidents and to collaborate and build preparedness with stakeholder groups, including those outside government. Emergency management agencies can accomplish this in many ways. The Maryland Emergency Management Agency (MEMA) focuses on providing training, hosting regular meetings, issuing alerts, and building relationships with the private sector. Many of the aforementioned activities contribute to the goal of including businesses in emergency management and are similar to tactics used to engage government agencies outside the homeland security and emergency management discipline.

Still, risk managers and continuity experts in the private sector may not have much time to commit to traditional, scheduled meetings and conference calls, especially during crises that distress their companies. For this reason, MEMA has developed an asynchronous platform using commercially available technology to create a virtual business operations center (VBOC). Members of MEMA's Private Sector Integration Program (PSIP), who are private sector employees with responsibility for their business' emergency preparedness, can access the VBOC at any time during a disaster for situational awareness, incident-specific documents, and access to government officials staffing the state emergency operations center (SEOC).

Engaging & Integrating Businesses

MEMA started PSIP to engage and collaborate with companies operating in Maryland. The mission of PSIP is to increase communication between government and business sectors during normal operations, and leverage these established partnerships to increase information exchange during emergencies and disasters. PSIP is a continuous effort and the program includes ongoing engagement with members and specific operations during emergency activations. During such activations, PSIP uses three components to integrate businesses into state emergency operations: (1) the Business Operations Center (BOC), which includes the VBOC; (2) Operational and Situational Preparedness for Responding to an Emergency (OSPREY) Business, a geographic information system tool that maps business locations and their operating status; and (3) the BOC representative program, which allows vetted PSIP members to assist in the staffing of the BOC desk in the SEOC.

The BOC is responsible for providing businesses, nongovernmental organizations, and trade associations with situational awareness and for coordinating government agencies to help solve issues affecting these stakeholders during emergencies. The goal is to provide PSIP members with information appropriate to the private sector in order to assist them in making decisions regarding business operations and continuity. The BOC is a physical location within Maryland's SEOC.

One of the key factors contributing to the success of PSIP – and likely an important characteristic for any emergency management program that incorporates the private sector – is that the majority of situational awareness products, information, and interaction are accessed asynchronously. PSIP members can log into the VBOC at any time, as opposed to establishing set times to distribute information or convene conference calls.

Emergency management, homeland security, and related agencies that would like to establish an effective private sector preparedness program may want to consider developing an online or virtual method for collaborating with and providing information to businesses during disaster or emergency operations. MEMA has accomplished this by establishing the VBOC and operationalizing this system during emergency operations center activations for threats or hazards that could potentially impact businesses throughout the state.

Components of a Virtual Business Operations Center

The MEMA VBOC is hosted on the Homeland Security Information Network Adobe Connect platform and is a trusted method for sharing sensitive but unclassified information with PSIP members. The purpose of activating the VBOC is to give businesses the ability to pull real-time information during an emergency so they can make informed decisions related to business operations and continuity. Much of the information provided, such as situation reports, live traffic cameras, and real-time radar, are sources typically used by government response agencies, and that may not be easily accessible to private companies. All members of PSIP have access to the interactive, online VBOC as soon as it is activated by MEMA.

MEMA's collaborative virtual operations center for the private sector includes a variety of information, components, and screens that are useful to businesses, including the following:

- *File-sharing database*. A database that can store important documents issued by government is useful because it allows businesses to enter the VBOC and download the files at their convenience. Such documents have included situational reports, weather forecasts, and press releases. In addition to files from the SEOC, private sector members are able to post information to the database.

- *Chat room*. A chat feature is important to an asynchronous operation because it allows businesses to post questions, concerns, or feedback at any time without necessitating that the user wait for a response. Posts and answers are saved in the chat room so that other users entering the VBOC later may see previous posts, questions, and answers.

- *Live traffic maps, highway cameras, and collision reports*. One advantage to the Maryland VBOC, which uses multiple data sources and screens, is that it becomes a single site with pertinent information for businesses' decision making. Though traffic congestion maps

may be readily accessible, these maps, in conjunction with live-streaming traffic cameras and collision reports, provide an easy way for businesses to identify transportation issues that could impact their business operations.

- *Weather radar*. Direct access to National Weather Service or other trusted weather agency forecasts and live radars provide important information to the private sector from the same source that government agencies use to make operational and emergency response decisions.

- *Emergency operations center webcam*. The Maryland SEOC uses a live-streaming webcam of the activated emergency operations center, which is made available to businesses through the VBOC. Though this may have less direct benefit than other information streams in the VBOC, it also may augment engagement. Some businesses yearn to be part of the emergency management process and this partnership is advantageous to both government agencies and private sector partners.

Regular collaboration between government agencies involved in incident response and private sector businesses is an essential component of whole-community emergency management. However, this partnership cannot be effectively established by traditional methods. Private sector employees may not be able to shift work schedules and obligations around meetings, conference calls, and even emails. A solution to these issues is to develop an online virtual business operations center that can be accessed intermittently and includes all of the information that businesses need to make informed decisions during emergencies. MEMA's PSIP and the Maryland VBOC enhance the important partnership between government and the private sector, which is critical to the successful resolution of emergencies and disasters.

The Maryland Emergency Management Agency's Virtual Business Operations Center provides businesses access to situational awareness documents and tools, such as real-time information from the National Weather Service, road closures, and emergency alerts, and a chat function, among other features.

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How One Enterprise Ensures Medical Products for Emergencies

By David R. Howell & Joanna M. Prasher

Pandemic influenza, an aerosolized anthrax attack, a nuclear detonation, chemical or radiological exposure, and other known and emerging threats and disasters are all potential threats to the United States. To combat these, one enterprise – comprising many collaborating federal agencies – is preparing to provide the necessary medical products when and where they are needed.

As the Ebola outbreak spread to multiple countries in West Africa and became a public health emergency of international concern, federal agencies in the United States pulled together quickly to review the vaccines, diagnostics, and therapeutics the agencies were supporting. Collectively known as medical countermeasures, these products were in various states of early development; none had reached clinical trials. The agency representatives quickly made decisions about how to use the authority, funding, and technical expertise from each agency to move as many products as rapidly as possible into clinical trials and get them into the hands of doctors and patients to prevent or treat this potentially deadly infection.

The National Institutes of Health (NIH), Biomedical Advanced Research and Development Authority (BARDA), Centers for Disease Control and Prevention (CDC), and Department of Defense provided funding, facilities, and technical support to private sector companies to bring three vaccines to phase 1 and 2 clinical trials to test safety and efficacy. BARDA also began working with the companies to scale up and improve manufacturing processes and support other advanced development work to increase the supply of candidate countermeasures. BARDA and NIH provided funding and technical assistance to private companies to move forward with development of therapeutics, including ZMapp, a monoclonal antibody cocktail, the components of which are manufactured in tobacco plants. BARDA also is partnering with companies on ways to make similar therapeutics in Chinese hamster ovary (CHO) cells, a modern, scalable monoclonal antibody production platform that will facilitate manufacturing large quantities of the drug.

An Enterprise, a Strategy & a Plan

That collaboration, speed, and empowerment are the strengths of the Public Health Emergency Medical Countermeasures Enterprise (PHEMCE). In one way or another, all of the agencies involved in the PHEMCE support the development and use of medical countermeasures for military or civilian populations or both. The PHEMCE is led by the U.S. Department of Health and Human Services (HHS) Office of the Assistant Secretary for Preparedness and Response (ASPR), including ASPR's BARDA, and includes three primary HHS internal agency partners: the CDC, the Food and Drug Administration, and the NIH. Other partners include the Departments of Defense, Veterans Affairs, Homeland Security, and Agriculture.

This group plans together to ensure that development of the most critical medical products takes place as quickly as possible and in a coordinated fashion. PHEMCE processes, which facilitate dialogue between developers and end users, ensure that these products can be effectively used to address health threats from chemical, biological, radiological, or nuclear agents and emerging infectious diseases (including pandemic influenza). Members of the PHEMCE consult with state and local health agencies and other ultimate users of the medical countermeasures to ensure the federal government is pursuing medical countermeasures that make sense in the field. The type and amounts of medical countermeasures to stockpile is determined through a PHEMCE-wide process, led by ASPR, which considers the anticipated need, the national abilities to use the medical countermeasures effectively, and the benefits and limitations of different types of products in a public health emergency. An annually updated plan, known as the PHEMCE Strategy and Implementation Plan, provides the blueprint the federal agencies will follow to make the best use of available resources to enhance national health security.

The PHEMCE Strategy and Implementation Plan not only identifies goals and objectives, but also describes the activities and programs PHEMCE agencies will undertake over the next five-year horizon to identify, develop, stockpile, and effectively use the medical countermeasures communities across the nation will need to protect health from manmade or naturally occurring threats. In addition, the PHEMCE Strategy and Implementation Plan describes progress federal agencies are making against previous priorities, including developing products to meet the medical needs of particularly at-risk populations, such as children, pregnant women, and people with weakened immune systems. The plan also outlines what the federal government has purchased and what can be made available to local communities facing a public health emergency.

Product Development & Strategic Stockpiles

The drugs, vaccines, and medical devices people use every day require years, often decades, to develop, and private industry spends billions of dollars bringing these products to market. For each product that reaches the market, many others fail, for any of a variety of technical, business, and regulatory reasons. Developing products needed for public health emergencies can be even more difficult. Yet, by collaborating through PHEMCE, federal agencies have made tremendous progress since the first PHEMCE Strategy and Implementation Plan in 2007. More than 80 products – including new classes of drugs – have reached advanced development stages and a dozen types of products have been added to the Strategic National Stockpile in just eight years. These products will help combat anthrax, smallpox, botulism, pandemic influenza, radiological and nuclear incidents, and chemical nerve agents. Twenty products have moved through advanced development with support from PHEMCE agencies like BARDA to receive approval or licensure from the Food and Drug Administration and are either stockpiled in the Strategic National Stockpile or available on the commercial market for nonemergency uses.

To ensure the safest and most effective use of limited medical countermeasures following an attack, PHEMCE partners developed up-to-date clinical guidance for using these medical countermeasures in children, pregnant women, and/or the general population under mass-casualty conditions caused by agents such as anthrax, and bacterial infections such as glanders and meliodosis. In 2015, the agencies are collaborating on clinical guidance for products to be used in mass-casualty incidents involving botulism or to treat blood-related injuries after a radiological or nuclear incident.

To ensure the federal government is pursuing products that can be used effectively in public health emergencies, the PHEMCE agencies are collaborating to strengthen the feedback loop between end users and product developers. BARDA – the PHEMCE agency that supports the last stages of product development – partners with private industry and end-user organizations to ensure that product development plans take into account the most up-to-date utilization policies, response strategies, regulatory guidance for use, and other relevant factors.

ASPR, in collaboration with the Department of Homeland Security's Federal Emergency Management Agency, is supporting the development of regional medical countermeasure plans to complement dispensing plans developed by ten large metropolitan areas currently included in Tier One of the Urban Areas Security Initiative areas under the Cities Readiness Initiative program. This planning initiative develops community-based operational plans under which the federal government will rapidly augment the capabilities of the affected area in response to an incident such as a widespread aerosolized anthrax attack. Partners involved in this effort include state and local health department, regional healthcare coalitions, emergency management offices, public information offices, and federal agencies.

Such planning may include closed or open points of dispensing. Closed points of dispensing rely on large private or public sector employers in the community to receive medical countermeasures from government stockpiles and distribute those countermeasures to employees and their families. Open points of dispensing are open to the public to pick up medical countermeasures. Plans to dispense medical countermeasures are essential to national health security, ensuring that the medical countermeasures developed or stockpiled by state and federal governments reach impacted community members as quickly as possible after an incident.

International Collaboration

During public health emergencies, such as the 2009 H1N1 pandemic, the international community may request medical countermeasures from the United States. PHEMCE agencies partnered to develop the official U.S. policy for responding to these international requests in order to share public health emergency countermeasures. The policy covers how the U.S. government receives, considers, decides, communicates, and responds to such requests. Vital efforts continue and are reflected in the latest PHEMCE Strategy and Implementation Plan. Learn more about the work completed, underway, or planned – from Ebola to influenza and from sarin to radiation – under the 2014 PHEMCE Strategy and the Implementation Plan.

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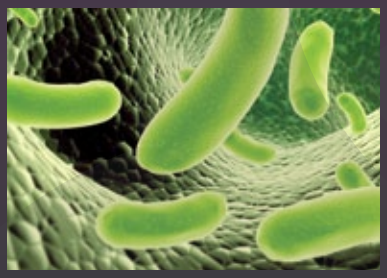
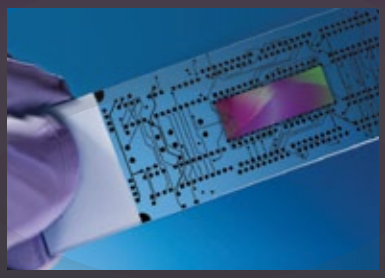


23RD INTERNATIONAL

Biodetection Technologies:

Pathogen and Biothreat Detection



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Biodetection Technologies:

Point-of-Care for Biodefense

4TH ANNUAL

Biosurveillance Integration:

Integrated Management of Threats

KEYNOTE SPEAKERS

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