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Business Office

P.O. Box 810
Severna Park, MD 21146 USA
www.DomesticPreparedness.com
(410) 518-6900

Staff

Martin Masiuk
Founder & Publisher
mmasuk@domprep.com

Catherine Feinman
Editor-in-Chief
cfeinman@domprep.com

Carole Parker
Manager, Integrated Media
cparker@domprep.com

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Pictured on the Cover: (top row) Fahnestock & Gill, Source: ©iStock.com/wildpixel; Knox, Source: ©iStock.com/Marc Bruxelle (second row) Howard & Tannenbaum, Source: ©iStock.com/orsonsurf; Center for Domestic Preparedness, Source: CDP

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Combating Public Health & Security Concerns

By Catherine L. Feinman



In 2014, the United States was directly exposed to the Ebola virus, which was at that time relatively unknown on domestic soil. The nation was underprepared to manage the public relations issues associated with this scenario. Since that time, [roundtables](#) have been conducted, [responder trainings](#) have been created, and [information](#) has been disseminated to better prepare responders and inform the public. However, there is a delicate balance when informing the public of potential threats: provide enough information to mitigate new exposure risks, but do not overhype the threat.

Promoting panic through lack of information or misinformation could lead to further crisis scenarios. As such, public health and security must both be considered: a public health outbreak could lead to security vulnerabilities; and a security breach could increase health risks. In the United States, an [E. Coli outbreak](#) linked to romaine lettuce is the latest public health crisis to raise nationwide concern. As the exact source of the contaminated greens remains unknown, public information sharing has been the greatest mitigation strategy to prevent additional cases from emerging.

For a public health or a security crisis, the three key pillars for a strong community resilience foundation are leadership, training, and communication.

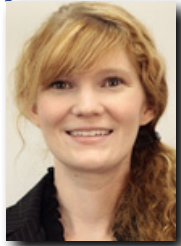
Whether managing a public health or a security crisis, leadership, training, and communication are three key pillars for a strong community resilience foundation. Open communication and information dissemination help prevent or mitigate all-hazard threats. Generalized skills in combination with [specialized trainings](#) provide effective responses when needed.

Combating concerns related to public health or security requires a whole community approach. Informed citizens, trained responders, and effective leaders equip communities with the tools they need to build resilience when faced with any disaster.

Food Safety Alert: Recurring E. Coli Outbreaks

By Lindsay Fahnestock & Gagandeep Gill

Food is essential to life. Its production, distribution, and consumption present unique – and increasingly urgent – economic and public health challenges. Roughly 50% of the world’s assets, 50% of global employment, and 50% of consumer expenditures are related to the food system. Closer to home, the second and third largest employers in the United States are in the food industry. About one-third of Americans eat at least one meal away from home each day. Anticipation, evaluation, and control of food-related infections and contamination are essential functions provided by the governmental public health system.



Ensuring a safe public food supply is the central role of the nation’s estimated [20,000](#) governmental environmental public health professionals. Their charge and responsibility is not trivial. The U.S. Centers for Disease Control and Prevention ([CDC](#)) estimates that annually, “48 million people become ill from consuming contaminated food, over 128,000 are hospitalized, and 3,000 die.” The National Environmental Health Association ([NEHA](#)) estimates that, each year, hospitalizations caused by foodborne illnesses cost over \$3 billion, with lost productivity costing \$20-40 billion. These statistics bring context to the current [Romaine lettuce E. coli outbreak](#).

The Current Crisis

E. coli outbreaks came into sharp focus in the early 1990s, when many individuals became familiar with the [Jack-in-the-Box case](#), among others. The most current outbreak of Shiga toxin-producing E. coli (STEC) O157:H7, which is linked to romaine lettuce, was initially reported in early October 2018. The investigation remains active and, as of [26 November 2018](#), 43 people have reportedly been infected in 12 states:

- Roughly one-third of the cases are in California, with the remaining two-thirds from the Northeast and Great Lakes regions.
- People ranging in age from 1 to 84 years have been infected.
- Two-thirds of those infected are women.
- Of the 16 who have been hospitalized, one developed hemolytic uremic syndrome.
- To date, none of the victims have succumbed to the infection.

The current E. coli outbreak associated with Romaine lettuce is regrettably, not the first in 2018. The Yuma Region Outbreak E. coli O157:H7 was chronicled from March to June 2018. On 28 June 2018, [CDC reported](#) that 210 individuals from 36 states were infected during that episode:

- Patients ranged from 1 to 88 years of age.
- Females comprised 67%.
- Nearly half (96) were hospitalized.
- Twenty-seven developed hemolytic uremic syndrome – a type of kidney failure.
- Five deaths were reported in Arkansas, California, Minnesota, and New York.

After investigation, the CDC and the Food and Drug Administration (FDA) determined that the Yuma Region outbreak was attributed to contaminated canal irrigation water.

Recognizing Signs, Symptoms & Factors

The E. coli bacterium has the capability of inducing both devastating and serious illnesses, as well as death. Signs and symptoms of infection vary greatly, and are dependent not only on susceptible populations, but also on the specific responsible strain. Typically, individuals experience abdominal cramping, severe, watery diarrhea, fever, and nausea. However, most people are [able to recover](#) on their own with plenty of fluids and rest after approximately 6 days. Some infected people may be asymptomatic.



Public health and clinical professionals recognize that the strain of E. coli drives the severity of symptoms. Of the thousands of strains of E. coli, the [STEC](#) varieties are typically of greatest concern. If someone develops this type of infection, he or she may end up experiencing [symptoms](#) including severe watery, bloody diarrhea, little to very infrequent urination, and excessive vomiting. In severe cases, patients should seek prompt medical attention. If clinical care is not sought after this phase of infection, [serious consequences](#) are possible, including possible renal failure and hemolytic anemia.

Given the serious implications of STEC, consumer education is important. Caretakers and the dining public should ideally be able to recognize high-risk sub-populations. Risk factors include, but are not limited to, the following:

- *Age* – Older adults and young children are more likely to experience serious complications.
- *Immune system* – People with weakened immune systems (or those that are compromised due to disease, such as HIV, or use of pharmacotherapy for organ transplant and autoimmune diseases) are more susceptible to E. coli infections and are more likely to experience serious complications and outcomes.

- *Stomach acid* – People with low stomach acid levels, as is commonly observed in those taking medications for gastroesophageal reflux disease (GERD) are more susceptible to E. coli infections.

Food Safety Precautions

Although the general consumer does not have the ability to control the production of foods from large industries, there can be ways to ensure a safer environment for individuals and their families. The World Health Organization ([WHO](#)) and the CDC highlight the important issues of cross contamination, personal hygiene, cooking and holding temperatures, and consumption of raw products. Many food safety circles also maintain that scrubbing and peeling raw produce and avoiding consumption of raw dairy products can help in [reducing the chance of developing a STEC infection](#).

The consequences of the current romaine lettuce E. coli outbreak will ripple through corporate pocketbooks, home kitchens, and local health care facilities for the foreseeable future. Although there are things consumers, and highly susceptible people in particular, can do to minimize avoidable risk, the truth is that the next foodborne bacterial or viral outbreak is never very far in the future. It is also true that committed professionals from the CDC, the FDA, and local environmental health professionals throughout the country and its territories work tirelessly everyday to track down the source of these organisms, and eradicate them. These public servants are the backbone of America's health promotion and disease prevention systems, which serve to ensure every person in their care reaches their full human potential.

Lindsay Fahnestock (pictured above), DrPH, MPH, received her MPH in Environmental Health and a DrPH in Nutrition from Loma Linda University. She is full-time assistant professor at California Baptist University and teaches classes in public health, environmental health, and health science. With a background in biology, environmental health, and nutrition, she has been involved with many research opportunities, in topics centered on food safety, environmental toxicology, environmental nutrition, integration of primary care and public health, and emergency department overcrowding. Email: lfahnestock@calbaptist.edu

Gagandeep Gill, DrPH, MPH, earned a Bachelor of Science in Biochemistry from UCLA, and a Master's of Public Health in Biostatistics and DrPH in Preventive Care from Loma Linda University. He is a certified public health administrator and has been a researcher with the Loma Linda University Research Group, Office of Public Health Practice at Loma Linda University. He has worked on the (AHS2) Adventist Health Study, served as a statistician at San Bernardino County of Public Health, worked with associates from UCSF and LLU in collaboration to research "South Asians in the Masala Study," and works as GIS analyst at the Department of Public Works in the County of San Bernardino. Email: gagandeepsg@gmail.com

Significant contribution to this article was provided by:

Semran K. Mann, PhD (c), MPH, CHES, is a transdisciplinary researcher.

Bhakti Dattani, MPH, is currently an MBA in Healthcare Administration student at Loma Linda University.

Manjit S. Randhawa, MD, MPH, is currently the principal consultant with National Environmental Health Association (NEHA).

David T. Dyjack, Dr.PH, CIH, is executive director and CEO of the National Environmental Health Association (NEHA).

The Importance of Swift Water Rescue Teams

By Allison G. S. Knox

Emergency management is a complex, collaborative network of agencies, levels of government, nonprofit organizations, and volunteers coming together following a disaster. In addition to general plans and practices that can be applied to many emergency responses, some emergencies require more specialized training that may not be available in every jurisdiction. Swift water rescue teams are assets that may be needed now more than ever.



Most emergencies require a certain level of specialization to effectively manage the scene. [Medical or traumatic emergencies](#), for example, may require the specialization of a paramedic or a flight team based on the seriousness of the traumatic or medical emergency. In other instances, specialization of a scene may include rescue techniques such as [technical large animal emergency rescue](#) to rescue a large animal in distress. Among the numerous specializations that a public safety agency may have, swift water rescue is, perhaps, one of the most important areas of training as it can significantly help in numerous types of emergencies.

Many fire departments across the United States have individuals trained in water rescue at their departments. According to [Rockingham County, Virginia](#), swift water rescue teams can respond to “surface water rescue, flood water rescue, search operations on or near waterways and small boat operations.” During the right types of emergencies, these techniques are essential to managing the emergencies. Considering the types and [frequencies of large-scale disasters](#) that have occurred in the past few years with hurricanes and other major flooding events, [swift water rescue](#) is a specialization that is critical to emergency management efforts.

Balancing Needs With Costs

Emergency Medical Services ([EMS](#)), an essential public safety component at the local level of government provides the immediate care and transportation of sick and injured patients. This area of public safety often experiences numerous budgetary issues throughout the country. In an effort to condense funds, some jurisdictions have [moved EMS agencies into fire departments](#) to help bring together these two critical areas of public safety together.

It appears, though, that swift water rescue teams have even more of challenge than EMS. Most jurisdictions only offer swift water rescue teams if they already have the budget for them. According to a 2011 article written by [Battalion Chief Trixie Lohrke](#) of Dallas Fire-Rescue, “Special operations teams [like swift water rescue teams], are comprised of highly trained members with advanced skills that come at a high cost to fund and operate.” Like so many other sections of emergency management, it can be particularly costly to train an entire department – only to have personnel leave for positions at other public safety agencies.



However, not every jurisdiction can afford such specialized training teams, especially for low-frequency teams. This only adds to the strain felt by other rescue teams. As a result, some municipalities have difficulty justifying the expense to create, train, and manage such teams. For example, in [Bakersfield, California](#), where search and rescue teams have limited funding, volunteers provide most of the funding and effort to maintain the team and assist during emergencies.

According to a 2009 article written by [Gerald Dworkin](#), an expert and instructor in swift water rescue, “The Keene Fire Department first identified swift water rescue as a low frequency/high risk incident type in the Spring of 2000 when they were confronted with a motor vehicle incident involving a vehicle, with an ill and injured trapped victim, in the middle of a fast moving river.” Dworkin continued to explain, “Although the department had training and equipment to respond to cold water and ice rescue incidents, they had no training or equipment for response to swift water rescue incidents.”

As with other specialized emergency management teams, swift water rescue is an asset to any public safety department and is ultimately needed for numerous types of water-related emergencies. Some departments with stronger budgets or those having a regular need for swift water rescue may have their own teams, with individuals from the department designated to handle such types of emergencies. For example, Blacksburg, Virginia, has [the Blacksburg Volunteer Rescue Squad has a Swift Water Rescue Team](#).

At the state level, swift water rescue teams incorporated into task forces can assist jurisdictions during water emergencies. During Hurricane Michael in 2018, [teams from Maryland and Virginia deployed](#) to assist public safety agencies working the hurricane emergency. Swift water rescue teams from across the country are often deployed to help manage emergencies during hurricanes or other large-scale emergencies that incur excessive flooding. [Because of debris and other items that can be in the water](#), teams trained in swift water rescue are essential because water can move surprisingly fast under numerous types of conditions.

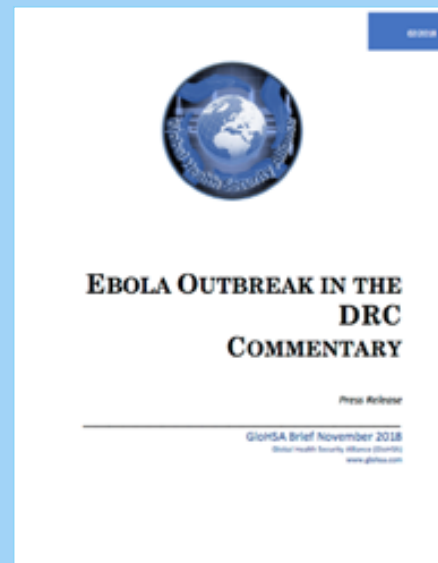
A Versatile Asset for Both Small-Scale & Large-Scale Incidents

Although swift water rescue teams are used nationwide for serious flooding emergencies, such teams are not in abundance because of the notion that most municipalities would not regularly need them, nor can they afford them. These teams, however, are critical to local government municipalities and can be utilized in a number of different emergency scenarios. For small-scale emergencies, these teams are ideal because they provide a lot of skill behind a rescue – an issue that allows a team to effectively maintain and manage the scene.

As climate change continues to shift, the need for swift water rescue teams will continue to change. It will become particularly important for local governments to have a swift water rescue program – especially for managing mutual aid agreements when small-scale emergencies become too much for any one jurisdiction to handle. Like many other sectors of emergency management, local officials must review their needs carefully to consider whether they can justify creating a swift water rescue team. With increasing frequency and severity of [flood events](#) and water-related emergencies over the past few years, perhaps the expense is now warranted despite already tightening budgets.

Allison G. S. Knox is an instructor of fire science and emergency and disaster management at American Military University and American Public University. Prior to teaching, she worked in a level-one trauma center emergency department and for a member of Congress in Washington, D.C. She holds four masters degrees in emergency management, national security studies, international relations, history, a graduate certificate in homeland security, and a Bachelor of Arts in political science. She is an Emergency Medical Technician and Lifeguard Instructor and is trained in Technical Large Animal Emergency Rescue. She serves on the Board of Trustees for Pi Gamma Mu International Honor Society as Chancellor of the Southeast Region and serves as Vice Chair of the Tactical Emergency Medical Support Committee with the International Public Safety Association. She also serves on the Advocacy Committee with the National Association of Emergency Medical Technicians and as the Advocacy Coordinator of Virginia for the National Association of Emergency Medical Technicians.

On 6 November 2018, the United States Centers for Disease Control and Prevention suggested the current Ebola outbreak in North Kivu and Ituri Provinces of the Democratic Republic of the Congo (DRC) might not be contained due to lack of cooperation from local communities and an unstable security situation. Assertions such as these have driven the Global Health Security Alliance, an independent network of international experts, to distribute a commentary about the “Ebola Outbreak in the DRC.” Driven by the shared understanding that health and security issues have increasing and interrelated global impacts, the Alliance separates facts from hyperboles in this informative document on this international public health threat.



A 2017 Best Practice for Private Sector Communications

By Kathryn Howard & Ira Tannenbaum

Coordination between the public and private sectors are essential to communicate effectively to the public during emergencies. It is important for government agencies to build relationships with private partners during “blue skies” to ensure that proper plans and messaging are in place in the event of an actual emergency. New York City (NYC) Emergency Management has worked extensively to build a robust network of private partners from various industries that can assist with the dissemination of critical information to the public before, during, and after emergencies. In 2017, NYC Emergency Management conducted a communication drill with private sector partners to test the potential reach of New York City’s emergency messaging.



The responsibilities of the NYC Emergency Management Department, which coordinates the citywide emergency planning and response for all types and scales of emergencies, include the widespread dissemination of critical information. To fulfill this mission, NYC Emergency Management employs several notification tools, including but not limited to: Notify NYC, which is the City’s official source for information about emergency events and important City services; press releases; and social media.

The agency’s Public/Private Initiatives Unit supplements this capability by leveraging the trusted communication channels it actively maintains with private sector organizations. This distribution network is built around a core of 24 private sector umbrella organizations representing major segments of the City’s economy, such as real estate, financial, and legal services. To assess the reach and reliability of this network, the Public/Private Initiatives Unit conducted four no-notice, or impromptu, communications drills between 2010 and 2017. Following each drill, the umbrella organizations provided feedback via an online survey, then distributed the survey to its member organizations. The survey sought to identify the number of people within the private sector that could receive direct communications from NYC Emergency Management and its partners in the event of an emergency.

Overview

New York City’s private sector possesses unique resources, knowledge, and subject matter expertise that are essential to the City’s preparedness and response capabilities. As such, NYC Emergency Management partners with a number of umbrella organizations represent key sectors of the City’s economy, including but not limited to: finance, real estate, legal services, cultural organizations, private higher education, hospitality, and airlines. These organizations are collectively referred to as the private sector Emergency Support Function (ESF).

The agency also organizes several other ESFs as well, such as transportation, health and medical services, and infrastructure. The agency’s Public/Private Initiatives Unit actively maintains relationships with its private sector ESF partners to ensure that trusted lines of

communication remain open. In an emergency, these ESF partners may deploy representatives to the Emergency Operations Center (EOC) at the NYC Emergency Management headquarters to facilitate information sharing and accelerate damage assessment, emergency response, and recovery (see Figure 1).

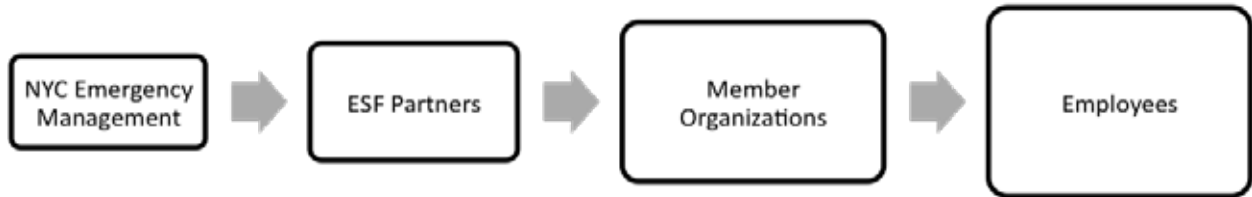


Figure 1. Source: New York City Emergency Management 2017

Each ESF partner may represent hundreds of member organizations in its sector. Therefore, each member can also serve as a powerful force multiplier in both collecting and disseminating information in an emergency. The department’s relationship with its ESF partners constitutes a network for emergency notification with the potential for an extremely wide reach. In a citywide emergency, NYC Emergency Management’s private sector ESF partners can amplify emergency messaging, potentially reaching millions of employees, tenants, students, and other individuals served by the private sector.



Figure 2. Source: New York City Emergency Management 2017

Figure 2 is a stylized network diagram showing connections among the agency, its private sector ESF partners, and the member organizations belonging to each of those partners. In this network, a message sent by NYC Emergency Management to its 24 private sector ESF partners is relayed to thousands of its member organizations, expanding the audience of recipient organizations (see Table 1).

Table 1. Private Sector ESF Partner Organizations	
Airline Consortium	NY State Department of Financial Services
Alliance for Response NYC (Cultural Organizations)	New York State Restaurant Association
Business Networks of Emergency Resources Inc. (BNET)	New York Stock Exchange
Building Owners and Managers Association (BOMA)	NYC Department of Consumer Affairs
Consortium of Independent Schools	NYC Department of Cultural Affairs
Consortium of Private Universities	NYC Economic Development Corporation
U.S. Department of Homeland Security Infrastructure Protection Services	Real Estate Board of New York (REBNY)
Food Industry Alliance of New York State	Securities Industry and Financial Markets Association (SIFMA)
Hotel Association of New York City	Charter Communications/Spectrum
NYC Department of Small Business Services	Legal Forum

For this dissemination strategy to be effective, the network of ties among NYC Emergency Management, its private sector ESF partners, and those organizations' member organizations must include decision makers authorized and prepared to disseminate emergency messages.

Methodology

The survey consisted of between 8 and 10 questions, depending on the differing composition of employment and tenancy across sectors. All respondents were required to identify the organizations for which they work and their job titles, as well as to report the number of people their organizations employ in the New York metropolitan area, and whether they are able to directly disseminate emergency information to their entire organizations. Additionally, educational, real estate, hotel, and cultural organizations were required to report the number of students, tenants, guests, and patrons their organizations serve, and whether these populations can be reached with emergency information, if necessary.

Additional optional questions included whether respondents subscribe to CorpNet and Notify NYC, how frequently they share the information with their organization, and the type of information they share (see Table 2). CorpNet notifications provide business collaborates

with current, accurate information about emergencies to enhance awareness and aid decision-making. Notify NYC offers similar notifications but for public consumption.

Table 2. Do You Subscribe to the following?		
	CorpNet	Notify NYC
Yes	35%	58%
No	46%	31%
Don't know	19%	11%

Finally, respondents were asked to provide feedback on improvements NYC Emergency Management could make in communicating with the private sector.

Results

The 2017 survey, sent to 24 organizations, yielded 429 responses from different organizations, representing more than 3.2 million employees, tenants, students, and patrons. As with all drills, especially those done with no-notice, response rates can vary. Unquestionably, transitions in organizational leadership or within the industry impede the maintenance of relationships, as does new leadership understanding their roles.

The most recent survey shows that the network:

- Represents a diverse population of more than 3.2 million people, including approximately:
 - 2.43 million direct employees and tenant employees
 - 786,000 university/college students
 - 10,000 hotel guests
- Continues to expand its reach:
 - 2010's drill represented 699,821 individuals
 - 2011's drill represented 1,682,663 individuals
 - 2014's drill represented 2,154,004 individuals
 - 2017's drill represented 3,227,386 individuals

Population represented by responding organizations. The responding organizations reported a total of 3,227,386 employees, students, tenant employees, guests, and patrons (see Table 3).

Respondents' ability to widely disseminate emergency information. Respondents overwhelmingly indicated that they have the ability to reach all employees, tenants, students, guests or patrons in their organizations with emergency information. In total, 84% of respondents said they personally have the ability to forward emergency information widely in their organization.

Direct employees	1,032,497
Tenant employees	1,398,268
University/college students	786,347
Hotel guests	10,274
Total	3,227,386

Subscription rates to additional sources of emergency information. NYC Emergency Management offers two emergency notification services available on a free subscription basis – CorpNet for businesses and Notify NYC for the general public. CorpNet is intended for company decision makers such as C-suite executives, business continuity professionals, and life safety managers whose role is to manage a disruption to their organization. Notify NYC is designed for a more general audience and, therefore, does not provide the frequency or level of detail as CorpNet.

Respondents’ roles within their organizations and their relationships to umbrella organizations differ across various industry groups. For example, in some organizations, these liaisons play a role in emergency planning and response, whereas others are industry focused. Respondents who do subscribe to the notification services are highly likely to forward emergency information on to members of their organization. The most commonly forwarded messages pertained to severe weather, mass transit disruption, and police activity. Partners not registered for either notification service only receive alerts from the ESF.

Suggestions for improvement to NYC Emergency Management’s efforts. When asked what NYC Emergency Management could do to improve communication with organizations, some suggested expanded communications – for example, more timely notifications, notification



choice in terms of incident type and geographic location, and more communication exercises. Typical examples included: “Improve the ability for an organization to choose which notifications they receive, based on incident type [CorpNet]”; “One centralized place to communicate and check for updates”; and “Develop opportunities for the private sector to get involved in communication exercises with NYC Emergency Management under blue-sky conditions.” Additionally, there were several requests for NYC Emergency Management staff to conduct preparedness presentations.

Challenges

This strategy is not without its limitations. The failure of any one partner to forward the emergency information he or she receives can potentially leave a large number of “downstream” individuals in the dark. Still, the drill likely underestimates the number of people who could be reached through this channel.

Generally, response rates for any internet-based survey are low, so the no-notice drill may have received a narrower circulation than information in a true emergency. Emergency information distributed through the formal private sector ESF partner network would likely be shared through informal communication channels between professionals in different firms and even different sectors. These relationships provide a meshed network of communications ties that overlay the formal “star” structure described in Figure 2.

Each ESF partner represents hundreds of organizations in its sector. Therefore, each is a force multiplier in collecting and disseminating information.

This mesh is an indirect benefit of another NYC Emergency Management’s programs. Partners in Preparedness is a nationally recognized program that supports building relationships by regularly bringing together employees from private sector organizations across many industries before emergencies. Social science research has routinely shown that communities with strong relationships are more resilient in disasters. NYC Emergency Management’s networks complement the work of private organizations in this space – including the Association of Contingency Planners, the Contingency Planning Exchange, and the Disaster Recovery Institute-International – that work to enhance ties among emergency preparedness and business continuity professionals.

Conclusion

The survey results from these drills show that the communications network maintained between NYC Emergency Management and its private sector ESF partners is robust and capable of reaching a wide audience across the New York metropolitan area. The strategy is successful because it draws on trusted relationships that NYC Emergency Management cultivates with the private sector. These partners know that in a serious citywide emergency, seats are available for them in the City’s EOC, where they will work closely with City

officials to coordinate response efforts. The private sector ESF partners in turn have trusted relationships with the security, safety, business continuity, and operations personnel within their member organizations. These individuals have the authority, capacity, and habit of making emergency information widely known in their organizations.

Reaching New Yorkers via the institutions where they live, work, learn, and play on a daily basis is a valuable augmentation of existing emergency communications efforts. The survey reached a population yet to be engaged by NYC Emergency Management's existing emergency notification channels (CorpNet and Notify NYC), underscoring the importance of this distribution strategy. Multiple and sometimes overlapping channels of communication may be necessary to reach the widest audience. This overlap should not be a source of confusion as long as the messaging generated by the City is consistent. Ensuring that the City is speaking with a unified voice is a priority for NYC Emergency Management.

Ultimately, the survey results show that this strategy increases NYC Emergency Management's reach and has proven to be a useful strategy for rapid dissemination of a message across multiple organizations in a range of sectors. The survey not only represents the potential to reach 3.2 million individuals; it also extends to their families, friends, and personal networks, and helps make New York City more prepared and resilient.

Kathryn Howard, MPA, CBCP (pictured above), is the Deputy Director of Public/Private Initiatives at the New York City Emergency Management Department. Howard works to enhance the resiliency of NYC's private sector, most notably through the nationally recognized Partners in Preparedness program. She has responded to many emergencies in NYC as a member of the agency's leadership team, and deployed to Puerto Rico to assist in Hurricane Maria response efforts. Howard is a Special Advisor to the DRI Young Leaders in Resilience Committee, and holds a B.S. in Political Science from Binghamton University and an M.A. in Public Administration from Baruch College.

Ira Tannenbaum, MBA, CBCP, is the Assistant Commissioner for Public/Private Initiatives at New York City Emergency Management. As the primary liaison between the city, businesses, and private sector organizations, Tannenbaum coordinates the integration of private sector concerns, interests, and resources to support New York City's emergency planning, preparedness, response, and recovery activities. In 2013, he was recognized as a White House Champion of Change in Community Resilience and Preparedness for his innovative work to increase private sector participation in emergency planning. Tannenbaum has served as an adjunct professor at CUNY's John Jay College of Criminal Justice and holds a bachelor's degree in biology from Yeshiva University and a M.B.A from Baruch College.

Amanda N. Coats, MPA, ABCP, is the Analyst of Public/Private Initiatives at NYC Emergency Management and an alumna of the John D. Solomon Fellowship for Public Service. At NYC Emergency Management, she works to integrate the private sector into NYC's emergency planning and response by overseeing the Private Sector/COOP Emergency Support Function and supports the members of the Partners in Preparedness program through targeted outreach and program development. Coats is a member of the DRI Young Leaders in Resilience Committee, holds a B.A. in Sociology from the University of Massachusetts, Amherst and an M.P.A. in Emergency and Disaster Management from Metropolitan College of New York.

Ryan Hagen is a Paul F. Lazarsfeld fellow in the department of sociology at Columbia University, with research interests in risk, organizational behavior, and the construction of expertise. His research has been published in the journals Social Forces and Sociological Science.

Courses That Mirror Real-World Ebola Outbreak

By Center for Domestic Preparedness

When faced with cases of highly infectious diseases, emergency responders and medical receivers need to know how to protect themselves and prevent the disease from spreading to others. One training facility is focusing on this topic with courses that instruct healthcare workers and other responders about infection-control barrier guidelines and isolation protocols.

In Anniston, Alabama, the Center for Domestic Preparedness' (CDP) Highly Infectious Disease Theme Week (27-31 August 2018) focused on Ebola. The 81 students enrolled in the Barrier Precautions for Highly Infectious Diseases and the Healthcare Leadership courses filled out the staff at Noble Hospital. They practiced the skills they learned in the two courses during an Integrated Capstone Event, which was a full-scale exercise featuring several "patients" suspected of having been exposed to the Ebola virus.

From a Training Perspective

The students had to manage the receiving, testing, and treating process for the potential Ebola patients while following infection-control barrier guidelines and isolation protocols to protect fellow healthcare workers and lessen the chances of a potential outbreak.

"We knew that with any highly infectious disease patient, we were going to need at least two people dressed out in personal protective equipment to care for the patient, two additional people to help them don and doff their protective equipment, another two people to be transporters (for the patient), and so on," said Patti Thames, director of the Highly Infectious Disease Unit for the exercise, whose real-world role is serving as director of infection prevention at Thomas Hospital in Fairhope, Alabama.

Students scripted a choreographed route to transfer contagious patients in and out of the hospital and scripted roles for each student, as they filled out their hospital staff from the healthcare leadership course.

"This exercise has really helped expand on what I need to do. One person can't do it all," said Debbie Trau, incident commander for the exercise and director of emergency services at Saint Francis Medical Center and Children's Hospital of Illinois in Peoria. For Trau, one of the invaluable resources was her deputy incident commander, who was the lead nurse when the exercise scenario started.



Students at the Center for Domestic Preparedness move a potentially infectious patient into an Isolation Ward in the Noble Training Facility here. (Source: CDP, August 2018)



Students work through treatment protocols in an isolation ward, using a mannequin to simulate a patient infected with the Ebola virus, at the Center for Domestic Preparedness. (Source: CDP, August 2018)

World Health Organization, [Ebola outbreaks in 2018](#) have resulted in 244 confirmed and 35 probable cases, and 179 deaths as of 30 October 2018. According to the World Health Organization, the Ebola case fatality rate is around [50 percent](#).

The CDP's Barrier Precautions and Controls for Highly Infectious Diseases course was created after the 2014 Ebola outbreak in Africa reached the United States. That occurred when a traveler who was unknowingly infected in Africa flew to the United States. Two healthcare workers in Dallas, Texas, were infected as they were treating that Ebola patient.



A student at the Center for Domestic Preparedness receives assistance in properly donning Personal Protective Equipment, before entering an Isolation Ward to work with patients suffering from a highly infectious disease. (Source: CDP, August 2018)

“Often, these incidents happen during off hours, and you use the resources at hand to take command and respond to that incident. And then when your incident commander does arrive, then you make that previous incident commander your deputy. I think it’s very wise to consider your resources at hand to command the incident ... to use all the assets you have available,” said Trau.

Why Training Is Critical

The Highly Infectious Disease Themed Training Week was timely. The Democratic Republic of Congo is undergoing its second outbreak of Ebola in 2018. According to the nation’s Ministry of Health and the

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The CDP offers its “Barrier Precautions for Highly Infectious Diseases” course monthly now through March 2019. With a mix of live actors and mannequins in the role of patients during its training, CDP prepares healthcare, public health, and environmental health workers to respond to highly infectious disease outbreaks, mass casualty events, and natural disasters. Online enrollment is underway for this course and the Healthcare Care Leadership course, at: <https://cdp.dhs.gov/find-training>

The Center for Domestic Preparedness (CDP) specializes in mass-casualty hospital training and tactical operations training in all-hazards environments. The CDP provides advanced, all-hazards training to approximately 50,000 emergency responders annually from state, local, tribal, and territorial governments, as well as the federal government, foreign governments, and private entities, as available. The scope of training includes preparedness, protection, and response. Training of state, local, tribal, and territorial responders is fully funded by the Department of Homeland Security. Training of federal, foreign, and private sector responders is on a fee-for-service basis. Since it opened its doors in 1998, the CDP has trained more than 1,000,000 responders.

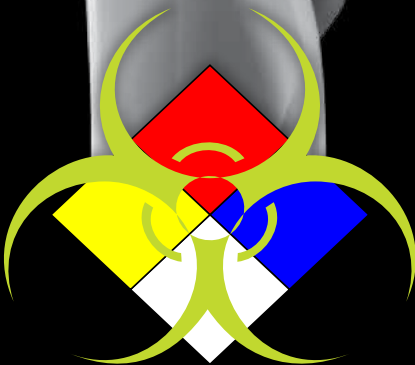
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