

RESILIENCE

“Whole of Community” Approach



All Hazards, All Phases, All Stakeholders

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The Future of Resilience

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Editor's Notes

By James D. Hessman, Editorial Remarks



The term “Resilience” has been defined and interpreted in many ways by many organizations and agencies. Regardless the exact definition, everyone at every level should be taking steps to reduce risk, guard against hazards, and be prepared for whatever known or unknown events may occur within their communities. Returning to normal, or a “new normal,” following a disaster is a journey that must be mapped out to fit the needs of each organization, community, region, and nation.

The ten authors in this month’s printable issue of DPJ discuss various aspects of the “Whole of Community” approach to resilience needed to mitigate and respond to any natural or manmade disaster. They also discuss the separate but complementary roles played by research scientists, the medical community, and the law enforcement, transportation, and emergency management agencies at all levels. The writers clearly demonstrate that maintaining and restoring operability after a disaster is not as dependent on the scale of the event itself as it is on the level of preparedness and the collaborative efforts of all the stakeholders who are affected.

Kay C. Goss starts the issue with specific actions that can be taken to address “All Hazards, All Phases, [and] All Stakeholders.” Marc Glasser follows with a knowledgeable discourse on “The Future of Resilience” and the role that each stakeholder has the opportunity to play. Jeffrey Stiefel adds several essential, and “doable,” recommendations on “Building [and] Improving Community Health Resilience.”

Mara Bún compares lessons learned from the tornado that smashed into Greensburg, Kansas, and the bushfires, cyclones, and colossal floods that have affected various areas in Australia. Joseph Trindal also discusses the “Whole of Community” theme, with a special focus on the advantages provided by intelligence-led policing. Joseph Cahill follows up with his experienced views on disaster resilience as an everyday/everyone approach. Thomas P. Russo continues with an encouraging report on recent breakthroughs in U.S. healthcare capabilities with the help of coalitions.

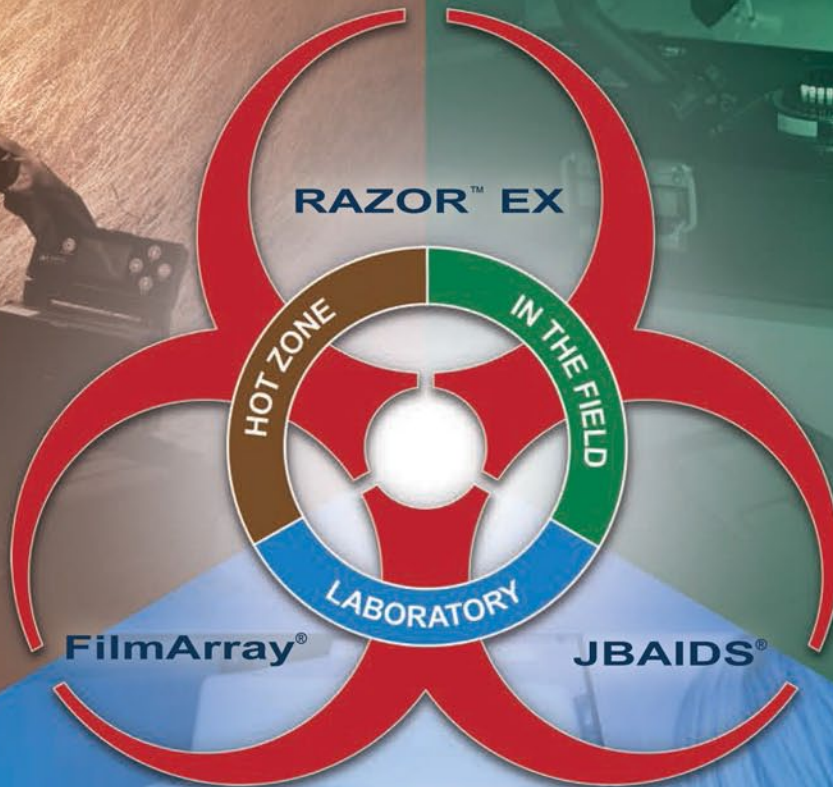
Rounding out the issue are three stand-alone articles – by Laurel J. Radow, Douglas K. McDaniel, and Amy Major – focused on protecting the nation’s ground transportation systems and the U.S. business community, as well as on the vulnerabilities of each. Radow and McDaniel discuss the security threats and planning efforts for mass transit systems and other transportation routes. Whereas, in the final article, Major points out that the new and growing dangers facing the private sector are also, to some extent, opportunities to build, buy, and operate more intelligently.

*About the Cover: “A puzzlement,” as Yul Brynner famously said in *The King and I*. A very real puzzlement these days is how to effectively “bounce back” from any major disaster. Preventing and/or coping with such incidents can be a daunting task that often strains and overwhelms medical, logistics, and resiliency capabilities. By piecing together stakeholders and resources from multiple disciplines and multiple jurisdictions, communities can build effective resiliency plans that fit their specific needs. (iStock photo)*

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All Hazards, All Phases, All Stakeholders

By Kay C. Goss, *Emergency Management*



On the web, search engines find an estimated 3,200,000 references to “resilience” and 213,000,000 references to “emergency management.” What are the similarities, what are the differences? Numerous global and national dialogues, discussions, and seminars are and have been underway to find out.

Several professors of the Executive Master of Science Program in Crisis and Emergency Management at the University of Nevada at Las Vegas have started to explore the possibility of launching a Ph.D. Program in Resilience. At the same time, it has become evident that, although the semantics are not quite clear about exactly what the term “resilience” means, most agree that it involves building the essential strength, stability, and capacity needed to retain certain capabilities throughout the course of a major disaster – and to recuperate as quickly and as efficiently as possible during the post-disaster recovery phase.

In this same vein, the United Nations’ International Strategy for Disaster Reduction – an organization that oversees the development of disaster reduction policy – created a “top ten” list of actions that cities, states, and other political jurisdictions can take to reduce the risk of a major disaster. Included on that list (available in the United Nations *Resilience Tool Kit for Cities, 2012*) are the following overarching themes: (a) *Budget* for risk reduction; (b) *Invest* in the physical infrastructure; (c) *Implement* risk-compliant building requirements; and (d) *Protect* the ecosystems that serve as natural buffers for various hazards. Those requirements boil down to a longer list of specific actions that should be taken, including the following:

1. Put in place the organization needed and the coordination required to understand and reduce the risk posed by various types of disaster. These actions should be based on the participation of specific citizen groups and civil society in general. Build local alliances and ensure that all of the government agencies and departments involved fully understand their own roles and responsibilities in disaster risk reduction and overall preparedness.
2. Develop a realistic budget to build disaster risk reduction capabilities, and provide various incentives for homeowners, low-income families, communities, and businesses as well as the public sector to invest in reducing the risks they are likely to face.
3. Maintain up-to-date data on likely hazards and current vulnerabilities. Prepare risk assessments, and use this information as the basic foundation for urban development plans and decisions. Also, ensure that the same information, as well as the city’s plans for resilience, are readily available to the public – and are fully discussed at public forums that are open to all citizens.

4. Invest in and maintain the components of the critical infrastructure that reduce risk – flood drainage systems, for example – and adjust this information, when, where, and as needed, to cope with climate change.
5. Assess the current safety systems of all schools and health facilities in the community – and upgrade those systems if and when necessary.
6. Develop, apply, and enforce realistic, risk-compliant building regulations and land-use planning principles. Also, identify “safe land” areas for low-income citizens and upgrade informal settlements, wherever feasible.
7. Ensure that current education programs and training classes on disaster risk reduction are in place both in schools and elsewhere throughout all local communities.
8. Protect the ecosystems and natural buffers already in place to mitigate floods, storm surges, and the many other hazards to which a city may be vulnerable. Also, adapt to climate change, if and as needed, by building on the various risk-reduction practices already in place.
9. Install early warning systems – and enhance emergency management capabilities – throughout the city, and schedule public preparedness drills on a regular basis. Also, encourage as many residents as possible to both attend and participate.
10. After any disaster, ensure that the needs of survivors are given highest priority on the list of reconstruction requirements and responsibilities, and that community organizations help to design and implement the responses – specifically including the rebuilding of homes and personal livelihoods.

The ability to “rebound” quickly following a disaster begins with effective leadership. Determining risks and making plans to mitigate those risks will lead to greater resilience – regardless of the exact definition of that term.

higher education, exercises, and evaluations – as well as standards, technology, interoperability, partnership, and outreach – to the “Whole of Community” by the “Whole of Government,” FEMA’s current organizing principles. *Mitigation*, the flagship of emergency management, encompasses not only the risk assessments that identify hazards, threats, and vulnerabilities but also floodplain management and dam-safety initiatives, mapping and warning systems, and – last but not least – rigorous planning, training, education, and the various drills and exercises that build on a strong preparedness foundation. When *response* is swift, efficient, and effective, the potential for a community to become and remain

resilient is significantly enhanced – in large part because the downtime will be minimized and the *recovery* process can start immediately after a disaster strikes that community.

All of this comes with and is the direct result of practice: experiencing disasters firsthand; learning from disasters; planning and carrying out disaster exercises; creating strong social networks; and using the social media now available. At the top of the pyramid, dedicated professionals – public administrators, emergency managers, and both private and nonprofit-sector leaders – should be working in close collaboration within the community to

build and maintain the resilience needed for effective long-term recovery and resilience.

One example: Two years ago, the New York City Office of Emergency Management (OEM) conducted a full-scale exercise, “NYC Resilience 2010.” A few months later, in February 2011, the OEM leadership carried out a no-notice tabletop exercise testing the lessons learned in Resilience 2010. The OEM leadership is now preparing “Facilitator Guides” for six different exercise scenarios, and is validating the Guides by using the NYC OEM’s Citywide Incident Management System Simulator.

A Firm Foundation & Some Heroic Examples

Numerous federal agencies also are putting greater emphasis on the need for improved recovery and resilience in the wake of a major disaster, natural or

Minimizing the Downtime & Accelerating the Recovery

In short, disaster resilience – locally, nationally, and internationally – spans all phases of emergency management: preparedness, mitigation, response, and recovery. *Preparedness* encompasses planning, training,

manmade. FEMA, the Oak Ridge National Laboratory's Community and Regional Resilience Institute, the U.S. Army Corps of Engineers, the U.S. Forest Service, the National Oceanographic and Atmospheric Administration, the U.S. Geological Survey, and the National Aeronautics and Space Administration formed an ad hoc committee in 2010 that is overseen through collaborative efforts of the National Academy of Sciences' Disasters Roundtable (DR) and the Committee on Science, Engineering, and Public Policy (COSEPUP).

The committee conducted a study, titled "Increasing National Resilience to Hazards and Disasters" (2011), to build an actionable consensus report, integrating multidisciplinary information from the natural, physical, technical, economic, and social sciences to identify the most effective ways to build and improve national resilience to hazards and disasters across the United States – at all levels of government. By deliberately using a broad definition of resilience – basically, the phases of emergency management – the committee found that strong social networks, previous disaster experience, exercises focused on disaster preparedness, and strong local leadership are among the most important building blocks needed to create and improve resilience capabilities.

DHS, the Department of State, and the Department of Defense's Wide Area Recovery and Resilience Program (WARRP) seek to build and facilitate a timely return to functionality, to restore basic services, and to re-establish social and economic order following a catastrophic event. The WARRP correctly focuses on a coordinated-systems approach to the recovery and resiliency of broad urban areas – including all types of critical infrastructures, key resources (both civilian and military), and high traffic areas (transit/transportation facilities) – in the period immediately following a CBR (Chemical, Biological, and/or Radiological) incident.

Interagency partners – including federal, state, local, and tribal governments; the U.S. military; private industry; and non-profit organizations – work together to develop the solutions needed to reduce the time and resources required for the recovery of urban areas, military installations, and other critical infrastructures. The training and exercises associated with this program, and others across the nation, certainly serve to build emergency management capability and result in enhanced resilience.

Among the better known examples of communities that already have distinguished themselves by demonstrating a high and rapid rate of recovery, return, and rebuilding are:

- Princeville and Tarboro, North Carolina, both of which displayed an admirable devotion to historic preservation in the period immediately following Hurricane Floyd in 1999;
- The Vietnamese fishing village within New Orleans, which – possibly because of its membership's shared history of survival during the Vietnam War – manifested an uncommon ability, and the collective will, to recover from the wreckage caused by Hurricane Katrina in 2005;
- Greensburg, Kansas, which demonstrated the ability to come back stronger than ever, and even to become a "green" community, after being the victim of several deadly tornadoes in May 2007; and
- The indestructible determination of the citizens of Joplin, Missouri, to open their schools on time in the Fall of 2011 after tornadoes devastated their community that summer.

The real lesson learned from the preceding, and from numerous other examples that might be used, is simply this: Resilience is achieved primarily through bottom-up and top-down daily commitment – by all agencies, organizations, and other stakeholders in the community. That commitment starts with individual responsibility and rapidly expands to include robust, professional emergency management leadership and "Whole of Community" participation, with each component of the process, and of the community, working together to build individual, group, neighborhood, community, city, county, regional, and, at the top of the ladder, national resilience.

Kay C. Goss, CEM®, is President of World Disaster Management and an internationally recognized lecturer and author on emergency management and resiliency in general. She has served in numerous high-level positions in the private and nonprofit sectors as well as in both state and federal governments – including tours of duty as: Senior Principal and Senior Advisor for Emergency Management and Continuity Programs at SRA International; Senior Advisor for Emergency Management, Homeland Security, and Business Security, at EDS; Associate FEMA Director in charge of National Preparedness, Training, and Exercises; and Senior Assistant for Intergovernmental Relations for Arkansas Governor and, later, U.S. President William Jefferson Clinton.

The Future of Resilience

By Marc Glasser, *Viewpoint*



There is no one universally accepted definition of leadership, emergency management, or terrorism. There also is no one universally accepted definition of resilience. The term “resilience” is most effective, in fact, when defined in terms of sector-, organizational-, and/or mission-specific factors. Although the concept of resilience often encompasses such abstract factors as vulnerability, adaptability, and recovery, specific resilience definitions and initiatives are typically based on organizational and/or stakeholder objectives and needs.

Various research projects have been based on, or created, a number of appropriate definitions of resilience. However, the foundation of a successful resilience initiative necessarily includes at least a few general resilience concepts tailored to specific purposes related to the sector, organization, and/or individuals involved. However, it seems clear that defining resilience in terms of “specific objectives” has the advantage of helping senior management “buy into” the term, and approve associated resource allocations, thus ensuring that resilience will be included in an agency’s future planning efforts.

Timing, ROI & the Inclusion Factor

Nonetheless, the resilience concept is still relatively new. Among the earliest disciplines to explore resilience as a planning factor are those in such fields as biology, psychology, and the material sciences. More recent disciplines – such as those related to emergency management, homeland security, and business continuity – are also beginning to implement various resilience initiatives. Simply being on the “resilience opportunity cusp,” in fact, provides a major opportunity for many organizations to educate their own personnel and initiate resiliency programs for other employees and organizations currently unaware of how to incorporate resilience into their daily operations.

To be successful: (a) in incorporating resilience concepts into what is termed “profitable practice,” which includes nonprofit entities as well; and (b) in promoting specific objectives as indicated above, the cost of a specific resilience initiative must generate a positive return on investment (ROI). For planning purposes, this means that the quantified cost of a resilience program must generate a greater benefit, as measured in dollars, than the actual monetary cost of that program. One way to achieve this essential goal is to incorporate many specific disciplines into the organization’s overall “resilience umbrella,” thereby creating greater efficiencies in mutual areas of concern as well as eliminating duplication.

The resilience-umbrella partners should include those involved not only with numerous closely related activities – e.g., enterprise risk management, information technology, security, safety, supply-chain management, and public relations – but also with others where inclusion would: (a) save resources by increasing efficiencies; and (b) increase the overall effective responses by each area of management during times of crisis or other “adaptive” induced circumstances.

Becoming a Leader – Now & in the Foreseeable Future

The future of resilience is to a large extent stakeholder specific, but at the same time slightly ambiguous, especially considering the fact that resilience is still a concept somewhat foreign to the previous experience and mindset of most organizations and decision-making officials. Therefore, there is a significant opportunity available for forward-looking leaders willing to initiate, manage, and carry out a broad scope of resilience initiatives.

Whether associated with companies, specific decision-making officials, or other senior leaders who already include robust resilience initiatives in their own plans and operations, the increasing complexities and challenges of today’s world will undoubtedly add to the increased demand for highly qualified resilience managers and subject-matter experts. That demand will extend to and beyond the public, private, and nonprofit sectors – including all levels of government, all types of businesses, various training programs, the academic world, and private consultants – to meet the growing U.S. and international need for and reliance on more effective resilience capabilities.

The key question for preparedness professionals is simply this: “What role would you like to play in the future of resilience?” For those who would welcome the opportunity to significantly influence the development and growth of this still relatively new “discipline,” at the macro or even micro level, the timing could not be better. Each person and each organization is and for many years to come will be, and embody, the real “future of resilience.”

Marc Glasser, MS, CPP, CEM, CORE, FABCHS, is Managing Director at RM (Resilience Management) LLC. He is also: Associate Professor at University of Maryland University College (UMUC); Council Member at ASIS International Crisis Management and Business Continuity Council; Founding Board Member at American Board for Certification in Infrastructure Protection; Founding Board Member at American Board for Certification in Dignitary and Executive Protection; Adjunct Professor at University of Nevada, Las Vegas (UNLV); and an Adjunct Professor at Henley-Putnam University. He is also leading UNLV’s exploratory research that could lead to the establishment of a PhD in Resilience. Previously, he was a U.S. Department of State Special Agent/Federal Law Enforcement.

Building/Improving Community Health Resilience

By Jeffrey Stiefel, Public Health



After a disaster, a community must focus on recovery and returning to normal – or what will become its “new normal” – as quickly as possible. This new normal may be similar to, better than, or worse than the state of the community before the event. The community’s ability to return to this new normal is called resilience – the capacity to withstand, respond positively to, and recover from a crisis.

The impacts of a disaster on a community are not necessarily determined by the scale of the event but are significantly influenced as well by the preparedness of the organizations, institutions, families, and individuals that comprise the community and enable it to thrive and grow. In an increasingly interconnected world of rapidly advancing technological change and diverse threats, resilience – particularly health resilience – has emerged as a major priority in communities around the world.

Creating community health resilience depends on several critical components, specifically including the following:

- Developing and implementing a *whole community* framework approach to response and recovery after a health incident or event;
- Developing a common operating picture;
- Using current research, best-practices, technological tools, workshops, and training events not only to increase and improve response, recovery, and resilience capabilities but also to strengthen the *whole community* framework;
- Addressing critical findings and lessons learned from the framework development processes and pilot programs; and
- Charting a path forward to support community health resilience even more effectively in the future.

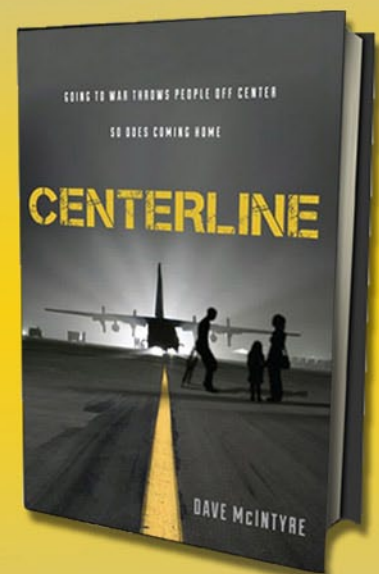
CENTERLINE

DPJ Book Review, By Randall Larsen

“Everybody who goes to war gets shot,” one soldier says. “Some in the body. Some in the head. Some in the heart.” The National Center for Veterans Analysis and Statistics (NCVAS) estimates that, as of 30 September 2011, the nation’s veteran population is more than 22.2 million. Although the journey home for each soldier, airman, and medical caregiver is different, “Centerline” depicts the individual, yet common, story of many of them.

David (Dave) McIntyre, a name well known in the field of homeland security, has written his first novel. Many in the U.S. armed forces who have already read the book have highly recommended it.

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Developing & Implementing the Whole Community Framework

A systematic approach is needed to determine the actions required to improve community and broader societal capabilities to withstand events that significantly impact community health and safety. This approach involves the development of a holistic health-resilience framework by a broad group of stakeholders, including government agencies, utilities, businesses, and non-profit organizations.

The framework should not only articulate the risk management, mitigation, and continuity strategies agreed upon but also serve as the foundation for a sustainable ongoing process – centered on a public/private/non-profit partnership – to incrementally move communities toward health resilience.

The framework's development should consist of a multi-step process that builds upon various regional initiatives and uses the lessons learned from both past and current efforts by several organizations. This process also enables stakeholders to: (a) develop working public/private/non-profit partnerships; and (b) conduct collective and coordinated hazard analyses, risk and capabilities assessments, educational workshops, and various model and simulation exercises.

Developing a Common Operating Picture

Community health resilience requires improved preparedness, response, and recovery capabilities – all of which depend in large part on the timeliness, validity, and availability of information. Moreover, as the focus by state and local authorities on community health resilience has increased, so has the interest in information operations generated among healthcare, public health, and other government, business, and community organizations. As a result, this community of interest has sought out and invested in the development of cost-effective and robust information-sharing and data-exchange capabilities.

Several states already have invested in the development and application of electronic health information systems to streamline, accelerate, and make more cost-effective the reporting of laboratory information, the record keeping of patient-related data, and the analysis of recent healthcare trends.

The lessons learned from recent health-related events – e.g., the H1N1 pandemic response and several food-borne disease outbreaks – continue to emphasize the need for shared situ-

ational awareness. Communities can make informed decisions on health-related issues during an emergency situation only through the development of a common operating picture. These better-informed decisions should help to facilitate and expedite future response and recovery operations.

Using All of the Data & Resources Available

Until recently, the development of health resilience frameworks has been carried out on an ad hoc basis, and the frameworks developed had not been implemented or assessed in any holistic or rigorous manner. The potential for the application of such frameworks to the preparedness and response continuum existed, therefore, but had not been rigorously explored. However, the focus of these frameworks has now shifted to the continuity and sustainment of health services during a crisis, and that shift has resulted in a significant health impact – i.e., health resilience.

There is now additional focus on how the resilience of health systems contributes to and ultimately affects the overall resilience of a community. The Office of Health Affairs (OHA) of the U.S. Department of Homeland Security (DHS) and other important stakeholders have sponsored pilot projects and national workshops that allowed implementation and refinement of “the framework approach” as an initial step toward creating a model holistic approach to health resilience that could be used anywhere.

The pilot projects mentioned above ranged in length from one year to several years and were carried out in various states throughout both the northwest and southwest areas of the United States.

Addressing the Critical Findings & Lessons Learned

A wide range of critical observations and lessons learned were identified during the course of the pilot projects and the workshops. Among the most significant lessons learned were the following:

- It is critical to engage and empower the *whole community* in partnership – private/public sector and non-profits, including social service organizations.
- Community health resilience must include mental as well as physical health, and should address such topics as behavioral needs, children and families, and the nation's “at-risk” populations.

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- There are many useful and innovative health information exchange (HIE) and resilience initiatives and capabilities that can be leveraged – and, therefore, provide a valuable starting point for an information-sharing and situational-awareness framework. HIE and broader resilient and secure information-sharing systems must be part of the framework process.
- State HIE programs and activities are currently fragmented across the nation; they also vary significantly in goals, focus, and technical capabilities, and possess little or no coordination. Standards are needed for information sharing, and helpful guidelines also are needed to determine what community characteristics or functions are critical to support community health resilience.
- Emergency managers and public health officials must ensure that critical messages reach all populations, including special needs populations – more specifically, persons with physical or mental disabilities, suffering from various medical conditions, and/or those with limited language proficiency – who may require assistance in planning for or responding to an emergency.

In the preceding context, it should be emphasized that different constituencies not only need different types of information but also use different communications mechanisms, including trusted information sources. Social media are for that reason rapidly becoming an important element in health resilience information-sharing, but they also pose certain challenges – partly because they vastly increase the number of communicators involved, any of which can dilute or alter the message. Also, many groups (e.g., the elderly, the homeless, and the impoverished populations) may not have access to or be able to operate a computer or smartphone – in addition to which, internet connectivity may be interrupted during a crisis.

Charting a Path Forward

The initial results from pilot projects and workshops have been promising. However, efforts must be expanded to further develop, refine, and assess the *whole community* framework approach and adapt the model created for regional, multi-state, and even national application.

Moreover, stakeholders at all levels of government should work, more diligently as well as more effectively: (a) to

address the research areas and lessons identified during these pilot projects and workshops; and (b) to ensure that the solutions created are implemented into framework development efforts – and then reassessed for efficacy. Finally, a toolkit also should be developed to enable state, local, tribal, and territorial stakeholders to scale and implement their own *whole community* frameworks.

DHS OHA, working in partnership with federal agencies and other interested stakeholders, is currently exploring how best to initiate and carry out these activities – and then move forward with development and implementation of an improved framework that will better prepare communities across the nation not only to withstand a health-related disaster but also to thrive in its aftermath.

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The Path to Longer-Term Resilience

By Mara Bún, *Emergency Management*



On 4 May 2007 an EF5-rated tornado – equivalent to a category 5 cyclone – tore through Greensburg, Kansas, leveling 95 percent of the town and killing 11 of its 1,400 residents.

Soon after the storm hit, Public Square

Communities – a Kansas-based organization that helps towns build social capital through “positive conversations” about the future – assisted in a process that pulled together the town’s disparate groups to map a somewhat optimistic, but achievable, vision for recovery. The goal was to become America’s most sustainable and tornado-resilient town, deploying the most advanced clean technologies now available and encouraging other groups and organizations, as well as individual citizens, to join the effort.

The Greensburg recovery plan included an intensive 12-week process involving discussions between and among: long-term recovery planning teams; local, state, and federal officials; business owners; civic groups; and private citizens. As a result of that effort, Greensburg established a Sustainable Development Resource Office and assigned it the job of developing sustainable building programs and following the certification processes required to ensure that the new public facilities would be built to the highest standard and be powered by renewable energy. In an area that endures both bitter winters and very hot summers, several household energy alternatives also were developed to ensure affordability, but resilience of property, commerce, and community is at the heart of the Greensburg recovery plan.

Bushfires, Cyclones & Floods Down Under

Australia is exposed to climate change effects, both gradual and severe, given the continent’s hot, dry, and flood-prone terrain, combined with its exposure to cyclones, which are fueled by the warming oceans. Recent disasters that are not likely to be once-in-a-century occurrences include: (a) the 9 February 2009 “Black Saturday” bushfires that killed 173 people and injured more than 400 more; (b) cyclones Larry in 2006 and Yasi in 2011; and (c) the 2011 floods along Australia’s eastern shore. Following disasters such as these, the initial goal tends to favor a fast and low-cost, or “value for money,” recovery.

However, a relatively quick recovery does not always address the longer-term needs of disaster victims. Following the devastation caused by Cyclone Yasi and other major disasters,

the Queensland Reconstruction Authority was established (under the Queensland Reconstruction Act 2011), with the principal political purposes being to speed up the recovery and to keep costs under control. Then-Premier Anna Bligh (whose term in office expired in March 2012) stressed, “The authority would have the powers to cut through red tape and would be required to report publicly on its progress. We want to be standing here in twelve months’ time being able to say that the reconstruction task is proceeding as fast as humanly possible, not stuck in someone’s ‘in’ tray waiting for an approval.”

One early result of the Act was that students from all 93 of the schools affected in the state were back in class by early March 2011. By August 2011, 92 percent of the state’s devastated road network had been reopened.

The Cyclone Larry recovery, on the other hand, was developed using an intensive community-engagement process outside the media’s eye – involving local leaders, civil servants, nongovernmental organizations, politicians, and private citizens. Instead of a command-and-control response, “circles of learning” were created to help public servants better serve their communities, and their own operational preferences, by: building legitimacy; creating the opportunity for a purposeful dialogue; sharing information; forging a common identity; and providing a voice to the general public. In return, the government was fairly responsive to the community concerns that emerged from the on-the-ground dialogue.



Speed, Costs & Long-Term Results

Deliberation takes time, but can enhance resilience. For example, in a 28 April 2011 article published by the BBC, Mayor Robert Dixson discussed Greenburg's progress four years after the tornado. His advice to people making big decisions as they put their lives back together was, "Take your time. Don't make life decisions quickly. Think of the long-term ramifications as an individual or a community. What is the legacy you want to leave? Make sure as you rebuild you are building a better, stronger community."

Spending a bit more slowly and a little more upfront to save even more costs later makes sense when a community has to rebuild not only homes but also its infrastructure. However, that point is still at odds with the objective of avoiding extra costs to achieve faster short-term delivery results and the punishing, and politically potent, reality of the suffering endured by those who have already lost so much.

One Step Forward, Two Steps Back

Soon after the bushfires of Black Saturday, the small Victorian town of Flowerdale held a number of community meetings to determine how the town's residents could help develop a safer and more sustainable future. This inspired Green Cross Australia – an organization that helps people build sustainability and community resilience – to create the "Build It Back Green" initiative. In addition to community-rebuilding workshops, this initiative includes an online portal used by 25,000 people that features sustainable and bushfire-resilient products, services, and practices, and case studies inspiring bushfire-exposed Australians.

In March 2011, following the Queensland floods, Green Cross Australia joined 100 corporate and community partners and government representatives at a workshop designed to catalyze ideas for a sustainable flood recovery. Within months, though, the momentum toward environmentally resilient, exemplary, and cost-effective long-term projects was overcome by an urgent desire

to replace like with like as soon as humanly possible. Obviously, there is still a long way to go, but case studies of eco-resilient retrofitted homes are emerging.

As mentioned earlier, Queensland students were back in class in record time after the January 2011 floods, and that was good for morale. However, haste has a price. Milton State School, which was damaged by floods in 2008, 2010, and 2011, has two classroom blocks located in a lower level of the school where water still builds up rapidly whenever it rains heavily for 20 minutes or so. The new

classrooms were not elevated or rebuilt to a higher level because doing so would have delayed the primary objective of getting the children back to school quickly and would have increased costs, as well.

The \$60 million new investment in multi-purpose cyclone shelters – which will sit alongside schools – could have been designed to help communities reach a common ground on environmental resilience, as well as on economic, cultural, and community development aims. However, the pressing political pace took precedence, and work was assigned to the Queensland Government Department of Housing and Public Works and is on track for delivery in late 2012.

Engineering services and infrastructure companies are prepared to prototype

new forms of transport and infrastructure that: (a) are more resilient; (b) create meaningful and connected places; and (c) help ensure strong sustainability outcomes. This combination of achievable goals would enhance the resilience in the event of future natural disasters. However, at this stage, no exemplary sustainable infrastructure projects have yet materialized in Queensland due to narrow rebuilding criteria. One promising sign, though, is that the state's previously sub-standard roads are now being rebuilt to national standards during the current recovery process. (Unfortunately, those national standards may not set a high enough benchmark to be effective in many of Australia's hazard-prone areas.)

When communities rebuild following disasters, there is much more to consider than simply "bouncing back" quickly. With proper planning – and taking into consideration specific environmental concerns – the next disastrous incident does not have to be so devastating.



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Making resilience and sustainability primary goals demands a fundamentally different approach – beginning with new models of post-disaster community deliberation, including timescales and engagement models that fit the scope of each individual recovery operation. The difficulty with a one-size-fits-all approach is apparent when considering the Black Saturday bushfires that hit a relatively small area and the Queensland floods and Cyclone Yasi that covered three-quarters of an entire state. Moreover, achieving the best fit between local consultation and use of effective processes that minimize red tape is a challenge not well suited to the immediacy demanded by political goals (and media news cycles).

The bottom line: Expanding the scope of integrated recovery support to address the needs of the tens of thousands of Australians whose homes, businesses, schools, and communities are significantly affected, if not totally destroyed, by large-scale natural disasters can and should be considered. Residential recovery offers an opportunity to retrofit not only for resilience but also to meet various environmental concerns.

Broadening the existing “betterment” aspects of the so-called Natural Disaster Relief and Recovery Arrangements (through which the Australian Government provides significant national funding) would ensure that good money is not spent after bad as the recovery efforts from repeated natural disasters overlap. Currently, additional spending can be justified if a designated piece of critical public infrastructure is restored to a more disaster-resilient standard than in the past. This common-sense premise could be extended not only to support community development aims – including sustainability and public safety – but also to meet several policy objectives, beyond the provision of immediate humanitarian relief. In short, various goals could be addressed simultaneously to minimize additional funding.

In January 2010, the U.S. Institute for Sustainable Communities – a nonprofit organization headquartered in Montpelier, Vermont – convened an expert group funded by the Rockefeller Foundation (in cooperation with the U.S. Department of Housing and Urban Development and the U.S. Department of Homeland Security). The group found that, after a disaster, “the focus of the federal government is [usually] on immediate response and

rebuilding, not on assisting communities with sustainable long-term recovery.”

“The emphasis on the speed, rather than the quality, of recovery,” the group also found, “impedes the ability to integrate hazard-mitigation measures into rebuilding processes.” The solutions recommended by the expert group include the following: (a) institutionalizing processes that build community support around a common vision; (b) allowing communities to capitalize on opportunities that disasters present to rebuild better and minimize the impact of future disasters; and (c) integrating climate adaptation and mitigation to ensure that the new, and renewable, energy systems provided can withstand climate changes. As the histories of the U.S. Midwest Tornado Alley and Australia’s flood-prone eastern shore have amply demonstrated, communities hit by natural disasters can be encouraged both to share innovative recovery stories and to visualize what may be possible if environmental resilience is advanced. The desire to build back quickly can be tempting, but supporting communities that are willing to take the extra time needed to imagine, and then work for, a more compelling alternative can make all the difference in Australia and around the world.

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www.griffithreview.com.

For additional information on:

The complete essay that this article is based on, “The Path to Resilience – More Haste, Less Speed,” by Mara Bún, visit
<http://griffithreview.com/edition-35-surviving/the-path-to-resilience>

The final report of the January 2010 U.S. Institute for Sustainable Communities referred to above, visit
http://www.iscvt.org/resources/documents/isc_report_to_hud.pdf

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Intelligence-Led Policing: Contributions to Community Resilience

By Joseph Trindal, Law Enforcement



Law enforcement's role in expanding and improving "Whole of Community" resilience is continuing to develop at a rapid rate. In most communities, incorporating the concept known as "intelligence-led policing" continues to progress. Therefore, today's police service agencies are now in an ideal position to contribute substantively to strengthening community resilience across the nation's public and private sectors.

Throughout U.S. history, the nation's police service profession has been primarily reactive in nature: a call for help is made, and police service resources respond. An analysis of previous crime trends suggests that crime prevention patrols and other police resources have been mostly reactive in nature, rather than proactive. In contrast, intelligence-led policing is a forward-thinking, strategic, and targeted approach to "crime-based" risk management. Two noted British criminologists, Michael Maguire and Timothy John, stated in the March 2006 issue of *Policing & Society* that intelligence-led policing is "built around analysis and management of problems and risks, rather than reactive responses." Intelligence-led policing in action incorporates: (a) the principles and best practices of community-oriented policing; with (b) strategic problem solving through improved data collection and predictive analytics.

The term "resilience" is defined in President Obama's 30 March 2011 Presidential Policy Directive 8 (PPD-8) on National Preparedness as "adaptability to change," while at the same time maximizing the ability to "withstand and recover from disruptions due to emergencies." PPD-8 establishes a firm foundation for a more holistic national focus on community-based resilience to deal with any and all emergencies.

In describing this new Whole of Community approach, Federal Emergency Management Agency (FEMA) Director Craig

Fugate stated on 30 March 2011 before the U.S. House Transportation and Infrastructure Committee, Subcommittee on Economic Development, Public Buildings, and Emergency Management, that the "government can and will continue to serve disaster survivors. However, we fully recognize that a government-centric approach to disaster management will not be enough to meet the challenges posed by a catastrophic incident. That is why we must fully engage our entire societal capacity."

The Whole of Community approach itself is described in FEMA publication FDOC 104-008-1 (December 2011) as a "means by which residents, emergency management practitioners, organizational and community leaders, and government officials can collectively understand and assess the needs of their respective communities and determine the best ways to organize and strengthen their assets, capacities, and interests."

Intelligence-led policing, including a new focus on gathering and analyzing information provided by local citizens, can help law enforcement agencies not only improve their own efficiency but also strengthen the resilience of communities throughout the entire nation.

Expanding & Enhancing Resource Efficiencies

Considering the extent to which police resources are already constrained in many ways, the allocation of strategic resources that are based on predictive intelligence should enhance local effectiveness and maximize efficiencies, particularly when operational strategies include collaboration with other locally based public-sector and private-sector agencies and organizations. Moreover,

as local emergency managers and political leaders become more familiar with the relatively new federal shift to community-wide involvement, police officials have much to contribute in leveraging police-led intelligence assets and processes to the community-based resilience planning for all emergencies.

Security, which is defined in PPD-8 as "the protection of the [community] and its people, vital interests, and way of life," is a law-enforcement-led function that also is widely shared. The security function crosscuts all emergencies and risks. Therefore, community leaders and police officials can

benefit greatly in planning and improving community-based resilience for all emergencies through the input of police-led intelligence. During the crisis-management phase of an emergency, intelligence-led policing networks, developed across the community's public and private sectors, are invaluable for efficiently forecasting security requirements and contributing in many other ways to improve the overall situational awareness. Applying the predictive analytics inherent to intelligence-led policing programs – e.g., security and safety decision making leading up to (preparedness), during (response), and after (transition to recovery) the crisis management phase of an emergency – significantly enhances overall Whole-of-Community resilience.

The Path Ahead: Incorporating Intelligence-Led Policing

Community policing initiatives are designed primarily to spur collaboration and cooperation between police services and their surrounding neighborhoods and business districts. From an operational point of view, intelligence-led policing: (a) builds upon networks developed under the community policing initiatives mentioned above; (b) applies predictive analytics to data collection; (c) generates better resource allocation decisions; and (d) strengthens community resilience to the risks posed by terrorists and other criminals. All aspects of FEMA's Whole-of-Community initiative incorporate strategic networking across the local bases of the public and private sectors to improve the community-level resilience needed to cope with any and all emergencies.

Local law enforcement agencies that maximize community access through social networks are already leveraging: (a) an incredible force multiplier – i.e., the local population – for near real-time situational awareness; and (b) a significantly expanded data source that can provide more, and improved, predictive analytics applicable to all emergencies. Also, through the use of broader source data that is effectively analyzed, greater clarity and accuracy of the situation is achieved. This contributes to clearer common operating pictures with cascading improvements to each response discipline's user operating picture of any and all emergencies. During protracted emergencies,

assigning a unit of the police agency's intelligence section to the Incident Command System (ICS) Planning Section can greatly enhance the forward analytic accuracy and recommendations provided to the ICS General Staff. Thereby, police agencies become an integral component of the incident management decision processes.

All emergencies, regardless of their size, necessarily entail at least a few security function requirements. Nonetheless, the integration of intelligence-led policing processes and capacities into the Whole of Community initiatives now coming to the fore greatly enhance local resilience in, across, and throughout all five pillars of the overall national planning framework: prevention, protection, response, recovery, and mitigation.

For additional information on:

Presidential Policy Directive 8 (PPD-8): National Preparedness (30 March 2011), visit <http://www.dhs.gov/presidential-policy-directive-8-national-preparedness>.

FEMA publication number FDOC 104-008-1 (December 2011), visit <http://www.fema.gov/library/viewRecord.do?id=4941>.

Maguire and John's "Intelligence led policing, managerialism and community engagement: Competing priorities and the role of the National Intelligence Model in the UK" article in Policing & Society, March 2006, visit <http://www.tandfonline.com/doi/abs/10.1080/10439460500399791>

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The Fallacy of Disaster Resilience

By Joseph Cahill, EMS



The term “resilience” refers to the capacity to return to equilibrium after a displacement of some type. When faced with an overwhelming disaster, a system, agency, or community cannot achieve true resilience if it is not already resilient in carrying out its day-to-day operations.

Resilience plays a key operational role on a daily basis and, for that reason, must be integrated into the everyday fabric of how staff conducts business so that resilience strategies are automatically implemented as an almost reflex action. These common smaller-scale challenges, repeated often enough, will enhance overall operational effectiveness – before, during, and after a crisis.

The Key Factor: Multi-Level Resiliency

To achieve true resiliency, efforts must be made at every level of an organization – from the individual EMT (Emergency Medical Technician) to the department or agency assigned operational responsibility to that agency’s decision-making officials and other community leaders. Every EMT and Paramedic within the system should develop the individual discipline needed of planning for the possible failure of each piece of equipment that is used. By constantly thinking through a “Plan B” for each equipment item, system, or other working tool, the on-scene responder should be able to smoothly implement that plan if and when the equipment actually does fail.

Taking this principle to a higher level, agency and community leaders also must make important decisions well in advance – and those decisions should be based on more than simple politics and/or budgetary considerations. Here the most obvious example is purchasing decisions, which in the modern marketplace involve not only the type of product – a stretcher system, for example – but also the specific brand and model that would best fit the community’s needs.

In far too many instances, unfortunately, the final but invisible “arbitrator” for the product selected is the price of that product. This practice often puts the agency, and individual responder, in a less desirable resiliency position. Obviously, cost and funding decisions cannot be avoided in the decision-making process.

However, by including an additional step in that process to review the impact on resilience capabilities *before* purchasing an equipment item might, in the long run, save more than just money. It also might help to save lives.

Advance Planning on Purchases – And Pooling Resources

Continuing the stretcher system example, several important questions that can help build greater resilience during the purchasing process include the following:

- Are the parts interchangeable with the current legacy system?
- Will members of the line staff have to be re-trained on the new system – and, if so, what would the training cost?
- Will the new system interface smoothly and effectively with existing systems, devices, and other ancillary equipment?

The answers to these and other questions that might be asked not only dictate the pace of upgrade that is possible, but will also control, to at least some degree, the system’s ability to press legacy equipment into service during future times of crisis. For these and other reasons, it will sometimes be advantageous to override a decision that is based solely on the initial purchase price of a product.

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Here it must be emphasized that, in order to revise the current procurement system, the budgetary and political leaders involved must fully understand the legitimacy of the resilience factors that should also be considered. And educating those decision-makers is not always an easy job.

Backup Plans, Geographical Factors & “As Needed” Policies

Even something as simple as the disbursing of spare resources has a resilience component. Spare resources within a system allow for expansion during a crisis and/or other times of increased daily call volume. These extra resources also act as a backup – in the Plan B mentioned earlier – for the replacement of failed equipment during routine daily operations. For example, in situations where a station is geographically isolated from the rest of the system – on an island or other area with limited access, for example – that location should be provided, in advance, the additional supplies and equipment likely to be needed to ensure that weather and/or other circumstances and conditions do not create an inability to function both quickly and effectively.

In today’s difficult economic climate, of course, many Emergency Medical Systems simply do not have the financial resources needed to purchase and/or store additional caches of equipment at every station. To address this concern, a true system-wide plan would permit the deployment of such resources to various locations and jurisdictions on an “as needed” basis.

The bottom line is that resilience is not just another planning tool that can be simply dusted off during a disaster and put safely back on the shelf until the next major crisis occurs. It is, rather, an unavoidable operational stance that must be adopted every day – by everyone involved – and in every decision.

Joseph Cahill is a medicolegal investigator for the Massachusetts Office of the Chief Medical Examiner. He previously served as exercise and training coordinator for the Massachusetts Department of Public Health and as emergency planner in the Westchester County (N.Y.) Office of Emergency Management. He also served for five years as the citywide advanced life support (ALS) coordinator for the FDNY – Bureau of EMS. Prior to that, he was the department’s Division 6 ALS coordinator, covering the South Bronx and Harlem. He also served on the faculty of the Westchester County Community College’s Paramedic Program and has been a frequent guest lecturer for the U.S. Secret Service, the FDNY EMS Academy, and Montefiore Hospital.

Improving Healthcare Sector Interoperability

By Thomas P. Russo, State Homeland News



One of the most significant aspects of the U.S. healthcare system is choice. “Customers” – i.e., patients – can select providers from within a specific medical specialty or across a broad range of specialties. Electronic Medical Records (EMR) systems now offer the quick and easy portability of patient information between various providers, thus reducing the redundancy of medical tests and record keeping – while lowering overall medical costs. This compatibility within the healthcare sector is commonly understood as interoperability. However, there is still no general consensus across the sector governing the integration of communications during disaster operations between and among hospitals within the same region – and how the public health definition of interoperability should be achieved.

Most U.S. hospitals are accustomed to working within their service area, but the Hospital Preparedness Program (HPP) guidance developed by the U.S. Department of Health and Human Services (HHS) directs a shift from facility-centered preparedness to a community-centric approach for medical emergency response and recovery operations.

Hospitals must accommodate both public and private ambulance services and serve as the intended destination of patients requiring any type of emergency medical care – whether transported by vehicle, aircraft, or on foot. As a result, communication needs within and between hospitals are now more complicated than ever before.

In addition to managing their own internal communications networks, hospitals must also integrate those networks with: (a) an external patchwork of local providers; and (b) a veritable maze of both state-of-the-art and outdated communication systems and devices. Incident commanders, hospital command groups, and other public health response partners therefore face the dual challenge of: (a) quickly alerting medical facilities of mass-casualty incidents (MCIs) in the area when such incidents occur; and (b) preparing treatment facilities for potential patient surges – without burdening triage officers with additional tasks and electronic devices.

The Healthcare Coalition Dilemma

This “communications dilemma” has been experienced by many healthcare coalitions during incidents, tabletop and full-scale exercises. More specifically, the same dilemma caused the following question to be raised by the coastal South Carolina Region’s healthcare coalition: “What is the solution needed to alert the entire network of hospitals *immediately* and *simultaneously* that would support medical surge, including partners such as public health?”

Experienced emergency medical personnel understand that it is not practical to require the Emergency Medical Services’ (EMS) triage officer not only to call each hospital in the area but also to provide situational updates – particularly during an already chaotic incident scene where there is urgency to triage, treat, and transport patients. The hospitals in the area also, in most cases, have limited notification time to surge the staff, supplies, and other resources needed to cope with an emerging MCI. Therefore, the collective goal and challenge is to have medical treatment facilities as ready as possible for the “golden hour” – i.e., a limited period of time when the victim’s survival probability is maximized. Ideally, a system and procedure already should be in place that both serves day-to-day operational needs and expands, if and when necessary, to accommodate a major medical crisis that necessitates a surge of medical resources.

The South Carolina coalition, recognizing the challenge involved in passing information from the incident scene to a hospital command group, focused on the capabilities provided by interoperable communications systems such as those spelled out in the HHS/HPP guidance. To better understand the numerous factors involved, the coalition also: (a) studied the various technologies available that could provide the interoperability needed; and (b) reviewed the *Capabilities Assessment Guide* included in the U.S. Department of Homeland Security’s (DHS) 2010 National Emergency Communication Plan (NECP). The 2010 NECP was designed to provide the guidance needed for assessing interoperable communications capabilities.

The coalition itself completed an informal assessment of current capabilities by using the elements in the NECP Guide to determine: (1) what DHS means by “interoperable” – defined in the Guide as the capability to “develop, refine, and sustain redundant interoperable communication



systems”; and (2) where the state’s coastal region ranks on the overall NECP continuum.

In Real Time & When Needed

Here it should be noted that much already has been written on the topic of interoperability and how it applies to public safety and the traditional first responder workgroups. Perhaps the best known resources currently available are: (a) the DHS’s SAFECOM interoperable emergency communications system and the DHS’s NECP; (b) the U.S. Department of Justice’s 2006 *Tech Guide for Communication Interoperability*; and (c) various state public safety plans that include other operational definitions. (The SAFECOM definition describes interoperability as: “The ability of public safety agencies to talk across disciplines and jurisdictions via radio communications systems, exchanging voice and/or data with one another on demand, in real time, when needed, and as authorized.”)

A more limited Statewide Communications Interoperability Plan (SCIP) charts a state’s structure and provides the user guidelines for the public safety 800 MHz radio infrastructure. However, although the 800 MHz infrastructure offers access, its ability to integrate a local jurisdiction’s medical response beyond EMS is sometimes rather limited. The greater flexibility provided by the HPP permits building on the public safety infrastructure by defining the project capabilities that are the most likely to develop and sustain region-wide capabilities. After the specific details have been defined, approved, and authorized, the HPP will support healthcare sector projects that can not only build on the existing communications architecture but also achieve or improve region-wide capabilities.

Determining the Project Scope & Objectives

As a result of the study process spelled out above – which was complemented by a number of discussions with coalition partners – the overall project scope and objectives were identified more clearly and used to guide system selection. The goal throughout, of course, was to identify an interoperable communications solution that addresses the communication limitations previously identified in mass-casualty after-action reports and improvement plans.

The project scope was defined, geographically, to be the tri-county jurisdiction that borders the northeast coast of South Carolina. That area includes, among other infrastructure components: three county-operated EMS service agencies; five hospital systems (that collectively manage eight emergency departments); and a public health region the jurisdiction of which encompasses all three of the counties. The specific objectives finally recommended included requirements that the system:

- Must possess a routine daily operations capability, but also have the capacity to scale upward to meet MCI response needs;
- Must network with a broad spectrum of medical response partners (hospitals, EMS, and public health agencies), enabling simultaneous communications during emergency medical operations;
- Should *not* assign additional field operational burdens to EMS triage supervisors;
- Must be able to provide region-wide alert notifications simultaneously and in real time; and
- Should improve overall situational awareness by immediately notifying the network of any incident that has region-wide implications and might soon require mutual aid support.

A general consensus also was reached that the solution must: (a) contribute to daily operations by improving the efficiency of communications of EMS units and hospital emergency departments; (b) be able to network those who have a role in community-wide responses – but without burdening EMS triage operations; (c) have the capability to not only provide *immediate* and *simultaneous* alert notifications but also to sustain such communications

indefinitely – and provide situational updates from the incident scene; (d) alert response partners to other surge events; and (e) know when to reduce surge requirements to begin the post-operational demobilization of resources.

Five Critical Steps to Success

Agreeing on a technological solution for improving interoperability is only one of the five critical “success factors” spelled out in the NECP continuum. Other factors include such umbrella topics as: governance; standard operating procedures; training and exercises; and usage. (Another objective of the interoperability project described above, of course, is day-to-day application to ensure that the usage factor will be met.)

In short, governance can be achieved by integrating the current governing structure within a healthcare coalition – i.e., by developing an operations plan and including the governing guidelines. The use of standard operating procedures that support the operational plan will be critical to the success of the system – with multiple agencies and multiple disciplines networked across the three-county jurisdiction. Finally, the project comes full circle with perhaps the most critical success factor – training and exercises. The MCI exercises mentioned earlier first underscored the communications difficulties that persisted then demonstrated that the current structure was not delivering “operational value” to either responders or the public.

That situation has now changed considerably with the coalition completing the first phase of its three-phase implementation plan. It has already initiated discussions about a functional exercise – intended to be conducted within the next year – and has incorporated in its plans a regularly scheduled “call-down drill” to ensure that each communications link is fully operational.

Thomas (Tom) P. Russo, CEM, has nearly 30 years of experience in strategic planning, project management, and professional development, including 17 years in public health. Trained in emergency management, public health, homeland security, and association management, he is the emergency preparedness planner for Region 6 of the South Carolina Department of Health & Environmental Control. Russo holds a Master's degree in Homeland Security Studies from the Naval Postgraduate School's Center for Homeland Defense and Security and has authored a number of articles on topics ranging from pandemic policy and preparedness to the continuity of operations planning readiness for medical facilities.

The ABCs of Transportation Planning for Special Events

By Laurel J. Radow, *Special Events*



The winter and summer Olympics, the annual National Football League (NFL) Super Bowl championship, and similar sports events are just a few of the numerous “special events” that continue to grab a nation’s – and at times, the world’s – attention. These same events – and others, such as the upcoming 2013 U.S. Presidential Inauguration – also draw huge numbers of participants and spectators to venues around the globe.

A prime example is the recent surge to first place in their division by the Washington Nationals baseball team – a drive that has significantly increased attendance at games. According to a 2012 summary posted at the Major League Baseball (MLB) website, only 10 games held at the Nationals Park during the previous four years (2008 through 2011) drew crowds of 40,000 or more. This year, that number has already been surpassed – and average attendance, during the first half of the season alone, was close to 30,000. One previously unforeseeable result of the team’s on-the-field successes this year is that the Nationals’ stadium is now being considered as a potential site for the 2015 All Star game.

However, increased attendance also leads to additional requirements, including a greater need: (a) to manage and facilitate the transportation of fans to and from the games; and (b) to protect the players as well as the fans – which in Washington, D.C., often include some high-ranking government officials – from terrorist attacks and/or other dangers.

Although three years away, the 2015 All-Star Game is not as far into the future as it may seem. In fact, if D.C. is selected to host the game, there must be enough time to ensure that the right team of planners and “doers” – e.g., professionals in public safety, emergency management, health, transportation, and other fields – attend one or both of the 2013 and 2014 All-Star games to experience firsthand the plans and preparations that work and those that do not work.

One of the more important areas of concern will be the transportation available for what would undoubtedly be a sellout crowd. Among the critical considerations for everyone involved – from event planners and security personnel to the players to those attending the game – are the following:

- How best to ensure that the official baseball “family” – players, team officials and owners, media, and sponsors – as well as the fans will be able to travel to and from the stadium both swiftly and safely;
- When these groups should leave for the stadium;
- Whether they should use public transportation or drive; and
- What other Washingtonians – non-participants who live or work in or around the area close to the stadium – and visitors to the nation’s capital should do on the game-day itself to avoid excess delays in their plans. (Many in this category might telework, of course, but others would simply leave earlier for work – or just decide to take the day off.)

In addition, if the Nationals end up in the 2012 World Series, the same planners, safety personnel, and other officials must be able to provide security during this multi-day event. The experience of the Federal Highway Administration (FHWA) of the U.S. Department of Transportation strongly suggests that the most important safety and security factors needed to help ensure the operational success of a major event are to: (a) be able to manage transportation to and from the event; (b) determine the effects of the event on congestion; and (c) define the role the event plays in the local economy.

Statistical Evidence for Transportation’s Criticality

The FHWA has also produced a number of publications designed to summarize the best practices recommended for several of the more complicated aspects of planned special events. For example, the information included in the agency’s August 2008 report, titled “Planned Special Events – Economic Role and Congestion Effects,” shows clearly why the experience and expertise provided by transportation professionals in both the planning and operation of activities are critical to the overall success of the event. That particular report included statistics from five major types of crowds: (a) professional team sports; (b) college and high school sports; (c) individual professional sports; (d) concerts, expositions, and other “entertainment” shows; and (e) various “street and park” events.

Using a large volume of data (covering the years 1993 through 2008) – collected from secondary sources, event organizers and venue managers, various responder agencies, and officials at all levels of government – the FHWA calculated the U.S. annual

estimates of planned special events with more than 10,000 attendees. Their results include the following statistics:

- More than 24,000 Planned Special Events (most of them sports events of some type) are scheduled annually throughout the nation;
- Those events attract an estimated 600 million attendees;
- The collective “in-event” revenue of those same events is estimated to be about \$40 billion – and what is termed the “total economic impact” is four times higher at about \$160 billion;
- The local, state, and federal government revenues generated by these events is an estimated \$4 billion, but the collective “congestion costs” range from \$1.7 billion to \$3.5 billion (based on Average Delay Per Traveler + Wasted Fuel Per Traveler + Travel Delay + Excessive Fuel Consumed);
- The “Travel Delay” factor (i.e., the total travel time above that needed when compared to a trip at free-flow speed), which ranges from 93 million to 187 million hours, affects both attendees and non-attendees; and
- The excess fuel consumption (i.e., the amount consumed for trips when compared to free-flow conditions) also doubles – from 64 million gallons to 128 million gallons.

That report and other FHWA publications on planned special events are available electronically at their website and a host of other documents, produced prior to 2011, are available on CD, including:

- Intelligent Transportation Systems for Planned Special Events: A Cross-Cutting Study
- Managing Travel for Planned Special Events Handbook
- Managing Travel for Planned Special Events Handbook: Executive Summary
- National Special Security Events: Transportation Planning for Planned Special Events
- Planned Special Events – Economic Role and Congestion Effects
- Planned Special Events: Cost Management and Cost Recovery

- Simplified Guide to the Incident Command System for Transportation Professionals
- Tabletop Exercise Instructions for Planned Events and Unplanned Incidents/Emergencies

The FHWA also has developed a Planned Special Events peer-to-peer program designed specifically to help those responsible for event planning. Within the past 12 months, two peer-to-peer sessions were held. In the first, two officials (who had managed the September 2009 G-20 meeting in Pittsburgh, Pennsylvania) went to Honolulu in July 2011 to help planners prepare for the November 2011 Asia-Pacific Economic Cooperation (APEC) meeting in Hawaii. In the second, the director of the Minnesota Transportation Management Center and a St. Paul police officer went to Tampa, Florida, in April 2012 to help planners in that city prepare for the 2012 Republican National Convention (RNC) – which St. Paul had hosted in 2008.

In short: (a) When traffic to and from an event goes well, public safety and security concerns are significantly reduced and the overall experience of participants is greatly improved; (b) The FHWA publications provide an abundance of “best practices” information to help special event planners and emergency planners handle crowd surges more safely and effectively; and (c) The transportation problems that might develop at such gatherings are often remembered long after the event has passed.

For additional information on:

Links to the FHWA publications on planned special events, visit <http://ops.fhwa.dot.gov/publications/publications.htm#pse>

The 25 June 2012 MLB.com article “Attendance surges during Interleague Play: Major League Baseball has chance at setting new overall record,” visit http://mlb.mlb.com/news/article.jsp?ymd=20120625&content_id=33900088&vkey=news_mlb&c_id=mlb

The 2010 FHWA report “National Special Security Events: Transportation Planning for Planned Special Events,” visit <http://ops.fhwa.dot.gov/publications/fhwahop11012/index.htm>

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Mass Transit Security Force Multipliers

By Douglas K. McDaniel, Transportation



Passenger rail systems continually face threats posed by natural disasters and accidents, as well as terrorist attacks. According to a 2010 Transportation Security Administration (TSA) report, there have been more than 250 terrorist attacks against rail targets worldwide since 1995, collectively causing nearly 900 deaths and more than 6,000 injuries. Moreover, intelligence recovered in May 2011 from the Pakistani compound – where Osama bin Laden was killed by a U.S. Navy SEAL team – revealed additional plans for attacks against U.S. transit systems.

However, that type of threat is not new. In the past decade alone, there have been actual terrorist attacks against transit systems in Madrid (2004), London (2005), Mumbai (2006), and Moscow (2010), as well as threats of similar attacks against other major cities around the world. To combat such threats, the security plans of rail-based transit systems must constantly be reviewed, assessed, and significantly improved to enhance the response capabilities of the agencies, organizations, and personnel assigned the responsibility of guarding and protecting such systems.

More specifically, mass transit agencies must plan and prepare to cope with such attacks – from al Qaeda or its affiliates, radicalized home-grown terrorists, or even individual “lone-wolf” operators. Those same agencies must focus greater attention on such ancillary factors as the passenger capacity of transit systems, the known intentions of various terrorist groups, and the potential lethality of suspected attacks. Any threat-assessment strategies developed, however, would be incomplete without an ongoing training program designed especially for transit employees.

Such training requires building more than just frontline employee capacity. All transit system employees must be trained to recognize, identify, and report any suspicious activity that may indicate the likelihood of a terrorist attack in the near future. In short, the first line of defense for

transit systems is having well-trained employees who can and will work together to identify and report any potential threats that their agencies might face.

Safety & Security – Raising the Bar

A comprehensive and effective security training program for employees is a crucial organizational vehicle for disseminating a corporate message to all employees. By preparing their employees with the additional skill sets needed, the transit agencies can address all of their security missions more effectively. Many agencies have already

implemented security-oriented training requirements with targeted groups of employees – focusing particular attention on such skills and intelligence factors as situational awareness, behavior recognition, and immediate emergency response capabilities.

From a national point of view, the goal of improving the security posture of all U.S. rail security employees begins with the core security training developed and recommended by the Transportation Security Administration (TSA) and the Federal Transit Administration (FTA). Among the principal “umbrella” topics covered in that training are: Terrorist Activity Recognition and Reaction; National Incident Management Systems (NIMS) for Transit Agencies; Chemical,

Biological, Explosive, Radiological, and Nuclear Training and Incident Awareness; and a Response and Reaction Curriculum for Transit Systems.

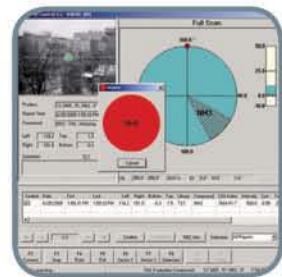
This federal guidance, combined with improved organizational training requirements and plans, will provide an effective way to not only meet the training needs of both federal and mass transit agencies but also to develop the most comprehensive and cost-effective schedules to enhance and upgrade the security skills and capabilities of all employees. However, in the current environment – in which new threats continually emerge – those same agencies must also continue to develop new training programs that build on

By combining the current high level of safety training with the same level of security training, mass transit agencies create an opportunity to “multiply” their effectiveness in preventing potential threats to a nation’s rail systems.

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the current programs to create a more robust curriculum. This type of planning will help an agency to: (a) preemptively respond to terrorist threats (and other dangers); and (b) use the new training programs themselves as the “building blocks” needed to move the agency and its employees to even higher levels of awareness and effectiveness.

Common Dangers & Senior-Level Solutions

The many common dangers that employees and agencies already face each and every day serve as continuing reminders of the occupational risks and hazards related to rail safety. For that reason, some rail agencies have not only strengthened their safety policies but also – to ensure compliance and avoid additional injuries and deaths – are vigorously training their employees on the particulars of those policies.

Similarly, the security training needed to guard against other potential threats should be a major corporate responsibility and explicitly elevated to the same level of importance to better protect both the agency and its employees. In some agencies, however, the issuance of an explicit corporate mandate may require the creation of a collaboratively based and designated training oversight group at the senior management level, thus bridging the gap between the agency’s goals and the willingness of employees to help attain those goals.

The training decisions made at the senior management level should be designed to help those managers themselves, and/or their second-level designees, engage in an integrated cross-departmental setting to ensure that the approaches and mandates are consistent with one another. If such training is intended for implementation across an entire organization and/or several departments, there also should be a guiding body available – and empowered to support the framework needed – to implement an organizational mandate and work with employees at all levels of the organization.

Included in the guiding body should be a diverse and well-qualified course-development team that would work together – across all departments – to plan, design, create, and deliver the training needed throughout the organization. To ensure a cohesive security training message that is not only consistent with organizational goals but also adds an additional degree of corporate confidence, that team probably should include a number

of the current departmental trainers. The ultimate goal is to bolster organizational engagement and to synchronize and strengthen the corporate approach through mandated security training and development for all employees.

Finally, although there are a number of strategies available to meet security training goals, the immediate priority for most agencies should be to continuously assess security training needs. Annual or more frequent formal reviews of existing training catalogues – specifically including information relevant to team training and course resources – will help ensure that employees receive the most appropriate types of training, at the levels both needed and specified. Use of this approach also will help ensure that current training sessions, and overall training programs, are consistent with the organization’s short- and long-range planning goals.

As the nation’s mass transit agencies review, revise, and implement their security training strategies – particularly those that enhance employees’ understanding of the compelling need to cope with and mitigate security threats – it is especially important to maintain a flexible and systematic approach. Those threats are in a constant state of change and are likely to be so for the foreseeable future. For that reason alone, the strategies for coping with such threats, and developing the capabilities needed to ensure a successful outcome, should be able to change just as quickly and effectively.

For additional information on:

The 2010 TSA Report on Preparedness for Mass Transit and Passenger Rail Emergencies, visit http://www.oig.dhs.gov/assets/mgmt/oig_10-68_mar10.pdf

The TSA/FTA “Mass Transit and Passenger Rail Security” initiatives, visit http://www.tsa.gov/what_we_do/tsnm/mass_transit/index.shtm

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Disaster Operations for Businesses: Options and Opportunities

By Amy Major, *Emergency Management*



Following many major disasters, state and local governments can become quickly overwhelmed with requests for additional resources during emergency response and recovery efforts. Although mutual aid compacts can help fill some of these resource needs, assistance is frequently required from non-governmental and private-sector organizations as well. After partnerships are developed, the Business Operations Center (BOC) provides a valuable tool that emergency managers can use to successfully: (a) maintain public-private partnerships; (b) collaborate on emergency response activities; (c) provide a framework to facilitate communication; and (d) locate critical resources.

In addition, by creating and maintaining mutually beneficial public-private relationships, communities are able not only to return to normal more quickly, and more effectively, but also to mitigate the overall impact of disasters on local businesses.

Three Types of Business Operations Centers

Traditionally, three separate approaches have been used to create BOCs within the jurisdictions that use them: (a) the “Independent BOC” model; (b) the “Virtual BOC” model; and (c) a model in which BOC members work directly inside a jurisdiction’s Emergency Operations Center (EOC) during an emergency activation. Although each approach can be used independently, emergency managers may find it better in some situations to create a hybrid approach by using the differing aspects of each model that would be most effective in achieving the jurisdiction’s overall goals. Following are some specifics related to each of the three models.

First, an “Independent BOC” is typically established by a coalition of interested private-sector organizations within a jurisdiction – usually at the state level, but it also could be organized at the local or regional level. In this model:

- Each member business or organization is represented by a staff member;
- The BOC is frequently managed by a non-profit or non-governmental organization to facilitate communications with the jurisdiction’s EOC during an emergency; and
- BOC volunteers are sometimes present in the jurisdiction’s EOC to ensure that communications and information sharing are quickly and easily available.

One example of a non-profit corporation that closely follows the Independent BOC model is the Safeguard Iowa Partnership – a voluntary coalition of Iowa business and government leaders. After the Safeguard Iowa Partnership representative receives a request for assistance, that request and other relevant information received is distributed to the other members to more quickly locate and provide the resources needed.

Second, in contrast, the “Virtual BOC” model consists of a web-based portal or application that can enable private- and public-sector organizations to communicate with one another in real time. The benefits of using an online forum for coordination include the following:

- All relevant parties have the ability to view the information available and to provide updates from remote locations, thus eliminating the need for a BOC representative to be physically present in the jurisdiction’s EOC during an emergency activation;
- Virtual BOC applications may incorporate alert and notification systems to inform BOC members of an activation – using landlines, cell phones, text messages, or email; and
- The public sector is able to protect sensitive or classified information by limiting the private sector’s access to certain types of information – while still sharing other information that would be critical to the success of an emergency response.

One proven example of a Virtual BOC that has already been used in emergencies is the Private Asset and Logistics Management System (PALMS) of the New York City Office of Emergency Management – which, as a registry of private-sector resources, includes information about: (a) the goods and services available in an emergency; (b) the companies that can provide those goods and services; and (c) a point of contact who will maintain that information and both receive and respond to the emergency updates and requests received from the City.

In the third model, representatives from private-sector organizations, businesses, trade associations, and non-profit organizations all are represented within a jurisdiction's EOC. Typically, that representation is achieved by:

- Establishing agreements directly with these organizations, businesses, etc., to allow them to fully participate in the jurisdiction's EOC operations;
- Providing the space needed in the EOC to the major companies, non-profits, and trade or industry associations involved; and/or
- Encouraging interested private-sector companies to become members of an Independent BOC – which also would be represented in the EOC.

California's Emergency Management Agency uses this third type of BOC model and, therefore, has been provided a room in the State Operations Center (SOC). In addition, there is a BOC liaison in the SOC whose duties include: (a) coordinating requests for resources through the Logistics Section; (b) ensuring that the BOC's needs are addressed; and (c) helping to facilitate effective coordination and communication with the SOC.

Participant Expectations & Concerns

Regardless of the type of BOC a jurisdiction chooses to implement, private-sector members tend to have a number of common expectations and concerns regarding their participation. Most importantly, open and regular communications and information sharing are critical to a BOC's success – also for building trust between the public and private sectors. Primarily for that reason, jurisdictions should include private-sector BOC members and representatives in regularly scheduled training and exercise programs to ensure that the private-sector partners: (a) are familiar with what is expected of them during an emergency; (b) understand their own roles in the response efforts; and (c) also know what the public sector's specific responsibilities will be.

Scheduling and carrying out the training drills and exercises also allow the public- as well as private-sector partners to: (a) identify problems and issues that may occur before a disaster strikes; (b) share feedback about their involvement that might be helpful in future response efforts; (c) revise policies and procedures as needed; and (d) improve the overall response capabilities of both sectors.

Obviously, frequent communications and information sharing must be a two-way street. Private-sector partners must be willing to share information about available resources and other

non-proprietary information. In return, the public sector must provide frequent and complete situation updates as well as any other relevant information that may impact the private sector's ability to assist with the response – and/or to resume routine business operations in and/or adjacent to the emergency area.

It should be recognized that many private-sector organizations may be willing to help in disaster response efforts. However, such assistance may be limited to some extent by organizations that do not fully understand how the public sector initiates and runs its emergency response activities. In order to have more meaningful contributions from the private sector within the BOC, it is important that public-sector representatives fully explain the emergency response processes

employed at both the jurisdictional and organizational levels. The information provided should include: the chain of command established for response at the local, state, and federal levels; the processes that must be followed when initiating response activities; the management process required not only for emergency procurement but also for the donation of resources; and the reasonable performance expectations – for both the public sector and private sector – that must be met before, during, and after a response.

It also may be helpful for a jurisdiction to schedule “crash courses” in the basic principles of emergency management from time to time so that less-experienced BOC members will not feel overwhelmed by their involvement in preparedness and response activities. During those courses, special attention should be given to the “alphabet soup” of

The Business Operations Center brings together the organizations necessary to facilitate disaster response by connecting the needs of the public sector with those of the private sector. These mutually beneficial relationships result in stronger and more resilient communities.

acronyms that emergency responders frequently use. A lack of familiarity with those terms might easily inhibit the private sector's confidence in assisting with response efforts. By providing basic training in "Emergency Management 101," the public sector can enhance the overall quality of the public-private partnerships that have been formed.

Mitigating Concerns & Building Relationships

Naturally, concerns about certain businesses or organizations being given "unfair" competitive advantages may arise any time the public and private sectors have an opportunity to coordinate directly with one another. In order to mitigate such concerns, many jurisdictions require organizations that are interested in either becoming a member of a BOC or in donating resources to first be recognized as an authorized vendor for that particular jurisdiction. Vendor pre-approval may also help to: (a) streamline the process required to procure the resources needed during an actual emergency; and (b) alleviate conflicts that may develop because of the intricacies of various state procurement laws governing the donation of resources.

Not surprisingly, liability is another primary concern for the private-sector members of a BOC – particularly related to accidents that might occur while BOC members are assisting with response efforts. The fear of liability may in itself be enough to prevent at least some private-sector organizations from participating in a BOC. However, the public sector may be able to help alleviate such fears simply by providing the basic information available – not only about potential areas of concern, but also about the various "Good Samaritan" state laws and other legislation that may provide immunity from, or at least limit, corporate and/or personal liability.

Nonetheless, all BOC participants should consult with appropriate legal counsel to determine the potential risks involved – as well as the liability and immunity laws governing those risks, which can vary greatly from state to state. The goal should be to carry out response efforts in a manner that exposes participants to the least amount of liability. In short, careful consideration of the applicable legal framework for response operations is and should be a primary factor in establishing and maintaining a BOC.

Obviously, establishing a BOC is not a simple, quick, or easy process that can be accomplished overnight. Nonetheless, emergency managers should give careful consideration to this

option as part of their long-term preparedness and response planning. By investing the time and effort required – *before* a disaster strikes – to create and manage public-private partnerships, emergency management officials can significantly enhance their jurisdictions' ability to respond to and recover from an incident, and may increase the overall resiliency of all of the communities directly affected.

For additional information on:
Safeguard Iowa Partnership, visit
<http://www.safeguardiowa.org/>

New York City Office of Emergency Management's "For Businesses: PALMS," visit http://www.nyc.gov/html/oem/html/businesses/business_palms.shtml

California Emergency Management Agency's Business and Utility Operations Center (BUOC), visit [http://www.calema.ca.gov/LandingPages/Pages/Business-and-Utility-Operations-Center-\(BUOC\).aspx](http://www.calema.ca.gov/LandingPages/Pages/Business-and-Utility-Operations-Center-(BUOC).aspx)

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JoAnne Knapp, MA, is a Senior Policy Analyst with CHHS and led the private-sector project team in establishing public-private partnerships throughout FEMA Region III for one of Maryland's Regional Catastrophic Preparedness Grant projects from 2009 to 2011. Prior to coming to CHHS, she was the director of Emergency Preparedness Policy for the Maryland Department of Disabilities, where she developed emergency preparedness and response policy and programs for individuals with disabilities and other functional needs in coordination with the Maryland Emergency Management Agency, the Governor's Office on Homeland Security, the Department of Health and Mental Hygiene, and other relevant state agencies.

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Madhu Beriwal—IEM President and CEO Madhu with more than 25 years of experience in disaster and emergency management, homeland security, national defense, and the use of information technology.

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