



# Patients and Impatience Life-and-Death Decisions

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# EDITOR'S NOTES

By James D. Hessman, Editor in Chief



More and better equipment for firefighters, the floods in Susquehanna County, the mandated building of new interagency operations centers in U.S. ports, a few cogent suggestions on reform of the U.S. healthcare system, and the agonizing need to "sort" possible survivors from those who probably would not be able to survive under any circumstances – these topics, and many more, are included in this month's printable issue of DomPrep Journal.


As in every issue, all of the articles are written by domestic-preparedness professionals – or, as in the case of U.S. Senator Barbara Mikulski (D-Md.), by senior elected officials, at various levels of government, who not only have decision-making authority in the field of homeland security but also the duty, and obligation, to appropriate the funds needed for the nation's first responders to do their hands-on work effectively, efficiently, and as safely as possible.

Senator Mikulski has done just that, of course, in her unceasing efforts to provide additional funding for homeland-defense professionals across the board, and throughout the country. Her "Viewpoint" article in this issue focuses primarily on firefighters, and fire agencies, in her home state of Maryland. But the points she makes apply with equal force to firefighters, police and other law-enforcement personnel, emergency medical service workers, and other first responders on call and in action throughout the entire country.

County Commissioner MaryAnn Warren of Susquehanna County, Pa., provides a helpful complementary view of the numerous difficult decisions, personal as well as professional, that have to be made on the local level when disaster strikes – as it did with sudden fury last year when her county was devastated by torrential rains and had to call in outside help. The county weathered the storm, but learned some painful and very expensive lessons in the process.

The nation's homeland-defense industries have been doing their part as well, particularly in the invention, testing, and fielding of a broad spectrum of new systems and equipment that will keep all Americans safer not only from terrorist attacks but also from many of the random acts of nature that can be just as dangerous, just as unexpected, and just as costly – in lives as well as dollars – of most terrorist-instigated attacks. Managing Editor John Morton's special report on biological and chemical detection systems highlights a few of the more innovative products of this type that have been fielded in recent months or are now in the RDT&E (research, development, test, and evaluation) pipeline.

Chris Essid, Joseph Cahill (two articles), Craig DeAtley, Joseph DiRenzo III & Christopher Doane, and Michael Allswede – all of whom are nationally recognized authorities in their respective fields – round out the issue with illuminating reports on the adoption (by Virginia) of a statewide communications protocol, situations in which the triage of patients demands literally life-or-death decisions by the first responders on the scene, the new Hospital Incident Command System guidelines recently promulgated, the previously mentioned interagency operations centers being established in many major U.S. ports, and the use of community emergency response teams to aid, augment, and complement first-responder agencies in numerous jurisdictions throughout the country.

Is America safer now than it was prior to 9/11? Yes, in many ways. Perfect safety can never be assured, but incremental improvements in safety can be and are being achieved every day, by many dedicated individuals and agencies, in every part of the country. 

**About the Cover:** Staff Sgt. Matthew Rowland, 90th Space Wing Fire Department crew chief (left), assists local emergency responders in positioning a mock accident victim on a gurney during an off-base training exercise in Cheyenne, Wyoming. The department has received numerous awards for outstanding performance, including designation as Air Force Fire Department of the Year. (Photo courtesy of the 90th Space Wing Public Affairs Office, [www.warren.af.mil](http://www.warren.af.mil))

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*A Few Helpful Suggestions*

## *Healthcare Reform and the Building of Additional Medical Response Capacity*

*By Michael Allswede DO, Public Health*



Healthcare reform – an important but complex and frequently controversial subject – has been on the back burner of national politics in the last few years, but may well develop into an important domestic campaign issue in the 2008 presidential and congressional elections. Because changes in the healthcare system will undoubtedly affect the ability of healthcare facilities and personnel to respond to a disaster, *how*, and *how much*, healthcare is reformed will matter significantly.

Unlike many other issues, though, healthcare is a major concern, and responsibility, of not only officials and decision makers at all levels of government – local, state, and federal – but also of private-sector managers and decision makers. In addition to the hands-on work done by state, local, and federal healthcare agencies and medical responders, all levels of government play major roles both in setting and in enforcing healthcare policies. However, in the private sector healthcare is first and foremost a business. Partly because of this division both of interests and of responsibilities, the development of healthcare reforms that improve response capacity but do not at the same time impede the competitive nature of the *business* of healthcare will have to be exceptionally well crafted to be as effective as they should and must be.

Following are a few suggestions not about the specifics of any healthcare changes that might be advocated this year and next, but about the guidelines and principles that should be considered in the development and/ or implementation of those changes:

### ***#1: Improvements in Efficiency Will Be More Important Than Additional Funding***

Private-sector healthcare “systems” – hospitals and clinics, primarily, along with medical

practitioners – are businesses that depend on Medicare and other medical-reimbursement plans to meet their operating expenses. The U.S. private-sector healthcare system, considered as a whole, is not built specifically to cope with disaster-response situations, though – and, should it break, those operational expenses will not be paid. During and in the aftermath of a sustained disaster – such as an avian-flu outbreak or a weather-related disaster such as Hurricane Katrina – healthcare workers and the suppliers of equipment and medicines also may not be paid. In short, the *business* side of the private-sector healthcare system must be able to sustain itself financially – or be sustained, at least in part, by the government – in times of crisis if the medical facilities that – constitute the largest part of that system are to remain open.

At present, unfortunately, most if not all healthcare businesses are paid through a rather Byzantine system of “billing codes” that are submitted in various forms to healthcare insurers (which collectively constitute yet another major U.S. business). There are literally thousands of these codes – more formally called “International Statistical Classification of Disease and Related Health Problems” (abbreviated ICD-9) – as well as a broad spectrum of qualifying criteria and rules of usage. To understand and use this complex morass of billing, auditing, and regulating processes – which from the outside seems distressingly similar to the equally complicated U.S. tax code in a number of ways – requires a virtual army of accountants, auditors, and other personnel to translate the medical care provided into the various reimbursement codes.

The most common experience of the public with the business side of healthcare, probably, is contesting “allowed” vs. “disallowed” procedures and medications from a healthcare insurer. There are so many healthcare insurers, in fact – each with its

own rules for reimbursement, it seems – that dealing with Medicare and/or private-sector insurance plans is an onerous task for everyone involved. Moreover, the duplication of effort, combined with the complexities of billing, adds considerably to the “tooth to tail” nature of medical systems even under best-case normal operations. Providing more, and more affordable, healthcare insurance for all Americans may therefore be a laudable goal from a humanitarian perspective, but it does not address this fundamental structural weakness in the nation’s current medical system (again, considered as a whole).

## **#2: Free Medical Disaster-Response Planning from “Normal Day” Rules and Regulations.**

Emergency care in the United States is governed by a number of laws that not only require the evaluation of every patient who declares an emergency condition, but also prevent the transfer of care to other facilities without such an evaluation. These laws, as well as most if not all medical-malpractice liability plans, remain in effect no matter how overwhelmed a medical facility may be during a time of disaster.

However, to remain solvent, the acute medical care system in the United States must be about 97 percent full on a so-called “normal day.” Should any type of disaster occur, therefore, many if not all local (or regional) medical facilities would be forced to delay, degrade, and/or deny care either to current patients or to the disaster victims, or perhaps both. The end result is that medical-care decisions must be made very quickly in such situations, and sometimes on the basis of incomplete and/or perhaps even erroneous information.

Making such decisions even more precarious, of course – financially as well as from a medical point of view – is that a host of regulatory and liability professionals will review these crisis decisions retrospectively, with much more information available to them, and perhaps a political agenda as well. The recent prosecution of healthcare professionals in New Orleans for alleged mistakes made during the Hurricane-Katrina

crisis is an example of the type of inequities that might arise.

To optimally manage the medical consequences of a disaster, therefore, planners and decision-makers must be provided flexible authority in altering triage, transfer, and treatment rules and not be constricted by “normal day” regulations that do not work in a crisis.

*There are so many healthcare insurers that dealing with Medicare and/or private-sector insurance plans is an onerous task for everyone involved*

## **#3: Build Extra Medical Capacity into Healthcare Reform**

One of the more common complaints related to emergency care in the United States is about the long waiting times so often involved before receiving that care. But long waiting times are unavoidable whenever there are more patients in need of care than there are resources (i.e., medical personnel and facilities) available to meet the demand. Every day, though, emergency departments throughout the United States routinely operate above their scaled capacity to meet the need. However, should a disaster cause a much larger influx of patients, the diversion of staff from other areas of the hospital and/or the calling in of volunteers would expand medical capacity for at least a short period of time, but would not be a long-term solution. For one thing, all of those who volunteer eventually will have to abandon their volunteer duties to return to their regular duties. Fortunately, in this case, the building

of extra capacity into an emergency-care system would not only be the key to coping with unforeseen and unforeseeable disasters, but also would help to improve and perhaps even expand normal-day staffing capabilities.

Building extra capacity into a healthcare system cannot be achieved, though, in a normal competitive marketplace, if only because unused healthcare capacity – particularly in the private sector – translates directly into a loss of revenue. In fact, even disaster drills – which are extremely important in themselves – take medical staff away from their duties on a normal day. If a facility’s profits are used to pay for disaster-preparedness classes, hazmat suits, and so forth, that same facility cannot add more nurses or space to its existing care areas. Perhaps the only way to create and sustain an excess capacity, therefore, would be for some component of the healthcare facility and personnel to be funded and regulated through the investment of public funds.

This would be a viable alternative, politically as well as from a financial point of view. Investing public funds to build extra capacity into the healthcare system may save many lives in future times of disaster, and in that context should be recognized as being somewhat analogous to investments in fire departments, police departments, and other “just in case” agencies of government.

To summarize: As the candidates for next year’s elections discuss their various healthcare proposals, plans, and options, the nation’s disaster-response community should be asking its own questions about the effects that those plans and options might have on the ability of healthcare facilities to improve and expand their current capacity to the extent needed to cope successfully with future crises.

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*Dr. Michael Allswede is director of the Strategic Medical Intelligence Project on Forensic Epidemiology and the creator of both the RaPID-T Program and the Pittsburgh Matrix Program for hospital training and preparedness. He also has served on a number of expert national and international groups in the preparedness field.*

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# The Sorting – Life-or-Death Decisions on the Scene

By Joseph Cahill, EMS



Triage is a French word meaning to *sort* or *the sorting*. In the context of medical care it describes the process of sorting patients into groups in accordance with the severity

of their injuries or illnesses in order to allow a judicious prioritization of care – and thereby maximize the survival of as many patients as possible by not making those wait who will not survive without intervention. In pre-hospital care there are two principal points where triage comes into play – system entry, and at the bed side.

When requests for aid overwhelm the resources available, whether the medical situation occurs in a small town or a big city, life-or-death decisions must be made – immediately, in many cases – about which patient receives immediate help and who waits. During day-to-day operations triage is largely a function assigned to the 9-1-1 call center. The alternative to prioritization is to answer calls sequentially. Unfortunately, although a first-come-first-served model works well when ordering eggs or waiting in a ticket line, adherence to this same democratic model in medical situations would mean that a seriously injured patient could bleed to death waiting while others with the sniffles are taken to the hospital.

Under the “call triage” model, often termed emergency medical dispatch (EMD), the caller answers brief questions that allow the most seriously injured or ill patients to be given priority over those with relatively minor non-life-threatening conditions.

On scene, triage is performed by the emergency medical technicians (EMTs) and/or paramedics present, who have both the experience and the training needed to prioritize patients at the site of a mass-casualty incident (MCI) so that those with the most life-threatening conditions receive care and transportation first; those who have lesser injuries are delayed. It sometimes happens, regrettably, that those who have little or no chance of survival may receive no care.

## Special Provisions For Special Circumstances

The definition of MCI assumes that the on-scene EMS resources available are *not* sufficient to care for the patients on scene. This generic definition allows the car accident with four patients involved to be classified as an MCI in a jurisdiction with only two ambulances available, but requires a higher threshold to be used for a better-resourced system.

While triage at an MCI is a concept well understood within the EMS community itself, the image of EMS staff walking away

***Those with the most  
life-threatening  
conditions receive  
care and  
transportation first;  
those who have  
lesser injuries  
are delayed***

from some patients and treating others is distressing enough to the general public that it is incumbent on the EMS agency or policy-writing body with jurisdictional oversight to make special provisions for such situations, not only to provide legal protections for the EMTs involved but also to educate everyday citizens about the extraordinarily complex decisions involved in a true triage situation.

Similarly, the documentation standards followed while operating under triage conditions should be worded to reflect the goal of stretching the EMS resources on scene to deal with the overwhelming medical needs facing the limited staff present. Many systems use documentation

standards during MCIs, in fact, that require forwarding only the minimum essential information needed by downstream medical providers and, if necessary, leaving out much of the information usually provided on a standard EMS report.

Larger disasters – i.e., events that rise above the MCI level and might overwhelm a larger region (and/or involve multiple locations) – may well require the use of specially prescribed disaster procedures even at the 9-1-1 call-taking level.

An important factor to be considered in this context is that many states already have enacted legislation requiring that EMS agencies respond to *all* calls for medical assistance. However, complying with that mandate under disaster conditions may sometimes be impossible. Revised policies must therefore be written and in place, ahead of time, that permit the system to decline calls for minor ailments and injuries and, in certain well-defined circumstances, respond to life-threatening problems only.

Those who must develop and enact these policies should be provided with clear guidance and legal protection, if only because experience has shown that – if the policies required are not clearly enunciated and well publicized – unacceptable problems *will* develop, and criticism, recriminations, and perhaps even lawsuits will follow in short order.

Links for additional information:

<http://www.cert-la.com/triage/start.htm>

<http://www.start-triage.com/>

Military Style Triage (focus on putting troops back on the line) [http://www.armystudyguide.com/content/powerpoint/First\\_Aid\\_Presentations/triage-2.shtml](http://www.armystudyguide.com/content/powerpoint/First_Aid_Presentations/triage-2.shtml)

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## The Commonwealth's Approach

# Implementing a Common-Language Protocol

By Chris Essid, Law Enforcement



Coded language systems have existed for decades and have been extremely useful, particularly for public-safety agencies, because they incorporate a degree of brevity and security in radio communications. However, in current times, coded language is no longer providing the security it once did, nor is

it allowing first responders to communicate effectively when involved in mutual-aid situations. In fact, partly because of the major increase over the past six years in mutual-aid agreements between political jurisdictions – with each agency in each jurisdiction retaining its own set of coded language (typically ten codes for law-enforcement agencies) – the result has been considerable confusion when

the various agencies seek to communicate with one another.

Because of this problem, federal officials responsible for the National Incident Management System (NIMS) released guidance instructing all states to change the way responders communicate over radios during mutual-aid situations, abandoning their disparate coded language systems in favor of plain English. Responding to this federal guidance, the Commonwealth of Virginia embarked on what became a year-long effort to establish a common-language protocol for its own agencies.

At the beginning, this effort uncovered a clear lack of agreement between the Commonwealth's first-responder agencies on the use of plain English vs. coded language. To cope with this situation, an Initiative Action Team (IAT – which included key practitioners from across the state) was formed to discuss the issues involved, conduct research related to public-safety needs, and recommend the final protocol required by the NIMS mandate. The IAT conducted two surveys to collect information on existing coded-language systems, and met several times over nine months to determine what the common-language protocol should be.

### ***An Unpopular But Necessary Buy-In Required***

The result of the IAT's work was the creation of both a statewide common-language protocol and a political/economic "buy-in" that was considered necessary for the protocol to be successful. By establishing a partnership among political jurisdictions and state agencies, the common-language protocol was in fact adopted, within its first year of existence, by major state agencies, specifically including the Virginia State Police, and by numerous localities and regions. The buy-in, which entails funding for outreach and training efforts and requires adoption of the protocol in order to receive state grant funding, proved to be important for the adoption of the protocol. In addition, an internal promotion effort was developed




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to encourage adoption of the protocol by all public-safety agencies,

One of the lessons learned by the IAT members was that a common-language can be successful only if it is used in routine day-to-day operations and not *just* mutual-aid situations. When under stress, first responders tend to go back to their training – if they were trained on a 10-code system, for example, they are most likely to use that same system in a time of serious need.

The IAT recognized that a requirement to use a common language in day-to-day operations would not be popular with all agencies, but was committed to supporting the common-language initiative. The team members did, however, determine four scenarios that may require coded language to ensure responder safety. These four scenarios include situations: (a) involving immediate danger; (b) requiring backup and/or other assistance; (c) taking a subject into custody; and/or (d) entailing sensitive information.

The most important end results of this effort by the Commonwealth of Virginia are that the protocol: (a) enables public-safety agencies to respond more effectively to difficult situations; and (b) helps ensure responder safety by avoiding or at least reducing the chaos created by the use of differing codes. The IAT effort also opened previously closed doors between agencies by encouraging them to work together, and thus created an overall atmosphere of greater interoperability within the Commonwealth.

For more information, please visit [www.interoperability.virginia.gov](http://www.interoperability.virginia.gov)

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## The Hospital Incident Command Systems – No Longer HEICS

By Craig DeAtley PA-C, Health Systems

The Gulf Coast hurricanes, the shootings at Virginia Tech, and the bridge collapse in Minneapolis are among the numerous recent disasters that created major incident-management challenges not only for first responders but for hospitals as well. The effective use of an incident command system (ICS) – as spelled out in considerable detail in the most authoritative publications on the subject – has been the key to upgrading the ability of many hospitals to successfully meet the challenges associated with responding to natural and manmade emergencies.

Since its creation in the late 1980s the Hospital Emergency Incident Command System, or HEICS, has served as a basis of emergency preparedness for many of the 6,000 hospitals in the United States as well as many hospitals abroad. However, in large part because of the many improvements and upgrades spelled out in the fourth edition of guidelines released in the fall of 2006 by the California Emergency Medical Services Authority, there is now a greater emphasis on ICS being used by hospitals not only for emergencies per se but also for non-emergency situations as well. For that reason, the shorthand HEICS name has been changed to Hospital Incident Command System, or HICS.

The new and more useful HICS guidelines were developed by a multi-disciplinary group of twenty hospital-based professionals from throughout the United States. They represented hospitals ranging in size from 28 to 1,000 or more beds. Their expertise was complemented by input provided by representatives from the Joint Commission, the American Hospital Association, the American Society of Healthcare Engineers, the U.S. Department of Health and Human Services, the NIMS Integration Center, the Emergency Management Institute, and the U.S. Navy. More than 80 subject-matter experts serving as secondary review group members provided feedback on the HICS draft materials.

### Improvements and Upgrades Across the Board

Although many of the fundamental concepts in the original HEICS guidelines were preserved, the new HICS includes a number of important modifications, and an abundance of helpful new material as well. Among the key components of the current HICS package of materials are the following:

- **An *HICS Guidebook***, which has been rewritten and provides a more comprehensive discussion of emergency planning for hospitals as well as a discussion of the overall HICS framework and philosophy and how it is configured and used during both emergent and non-emergency incidents.
- **An *Incident Management Team*** chart, which has been reorganized, and compressed into one page, and puts greater emphasis on flexibility and scalability. Several new positions have been added (e.g., medical technical specialists) and several original positions have either been shifted to another section of the guidebook (e.g., “Staging” has moved to “Operations”) or put into an entirely new section (“Security,” for example).
- **The *Job Action Sheets*** have been expanded and reformatted to include both a Demobilization/System Restoration time frame and a Tools/Documents Section.
- **The *HICS Forms Section*** now includes 13 pertinent FEMA (Federal Emergency Management Agency) forms and seven other forms that hospitals may need to effectively manage and document their decision-making.
- **Several *Appendices*** have been added that address topics such as Incident Planning Considerations, Recommended Resources, HEICS-to-HICS Implementation Steps, and NIMS Implementation Activities for Hospitals; also included is a helpful Glossary of Terms and Acronyms.

- **Numerous Incident Planning and Response Guides** are now included to accompany 14 of the federal training scenarios and 13 internal hospital emergencies (e.g., infant abduction, fire, flood, hostage barricade, etc.) listed in the Guidebook.
- **Power Point-based educational modules** have been developed for each chapter of the Guidebook.

In January 2007, the Center for HICS Education and Training was created by the ER One Institute at the Washington Hospital Center in Washington, D.C., and the National Emergency Preparedness Office for Kaiser Permanente, the two organizations that served as the HEICS IV project management team. The mission of the HICS Center is to promote the availability and continued improvement of HICS and, at the same time, provide training on the materials listed above. The Center is composed of the original organizational members of the national work group and six of the original ex-officio agencies that developed the HICS concept and intellectual framework.

Note: The NIMS Integration Center (NIC) has determined that HICS does in fact meet the NIMS ICS requirements. In addition, the educational programs offered by the Center have been determined by the NIC to be the equivalent of the Emergency Management Institute's IS 100/200 and 700 courses.

Additional information about HICS can be found at [www.hicscenter.org](http://www.hicscenter.org) and [www.hics@emsa.ca.gov](mailto:www.hics@emsa.ca.gov).

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*Craig DeAtley is the director of the Institute for Public Health Emergency Readiness at the Washington Hospital Center, the District of Columbia's largest hospital, and co-executive director of the Center for HICS Education and Training. Prior to assuming his current position, he was an Associate Professor of Emergency Medicine at George Washington University, for 28 years, before leaving to start the Institute. He also works as a Physician Assistant at Fairfax Hospital, a Level Trauma Center in Northern Virginia. He has been a volunteer paramedic with the Fairfax County Fire and Rescue Department since 1972, and a member of the county's Urban Search and Rescue Team since 1991. He currently serves as the team's Medical Team Coordinator and also serves as the Assistant Medical Director for the Fairfax County Police Department.*

## Protecting Our Protectors: Defending America's First Responders

By U.S. Senator Barbara A. Mikulski, Viewpoint



Soon, the Seventh District Volunteer Fire Department in Avenue, Md., will be better able to thwart raging blazes in Southern Maryland communities, thanks to their new fire hoses. Families of first responders from the Wheaton Volunteer Rescue Squad in Montgomery County will be able to worry less while their loved ones are risking their lives responding to accidents on the beltway, and on the heavily traveled Colesville Road, thanks to their new reflective turnout coats. And parents whose kids live on-campus at the University of Maryland Eastern Shore will be able to sleep better knowing their children will be better protected from dorm fires, thanks to new electrical equipment provided to help in the suppression of fires and to fund various related fire-prevention and safety activities.

These are just a few of the many ways in which Maryland communities and our first responders will be safer, thanks to the U.S. Department of Homeland Security's Assistance to Firefighters Grant Program (AFGP), which I created and fight to increase funding for every year.

Firefighters and first responders risk their lives to protect others. They are true American heroes – protecting our homes, our businesses, and our communities. We are so grateful for the sacrifices they make every day. That is why the federal government has a responsibility to protect these protectors, providing them with the equipment, training, and tools they need to do their jobs more safely and smarter. The AFGP is critical to fulfilling this responsibility.

However, President Bush's budget cut federal support for the AFGP nearly in half, requesting only \$287 million, and – for the second year in a row – eliminated funding for Staffing for Adequate Fire and Emergency Response (SAFER) grants, which fall under the AFGP. I know these are tight times, but we must do better for our first responders. That is why, as a member of the Senate's Homeland Security Appropriations Subcommittee, which funds the AFGP, I was proud to announce that the 2008 spending bill includes \$560 million, an increase of \$20 million, in federal funding for

our nation's firefighters through the AFGP. It also includes \$140 million, an increase of \$25 million from last year, for SAFER grants.

Every year, I fight to increase federal funding for the AFGP. So far this year, Maryland departments have received nearly \$12.5 million of that funding, making it among the top five states nationwide. And, since 2001, Maryland fire departments and fire service organizations have received approximately \$50 million through the AFGP, which offers funding through three separate grant programs:

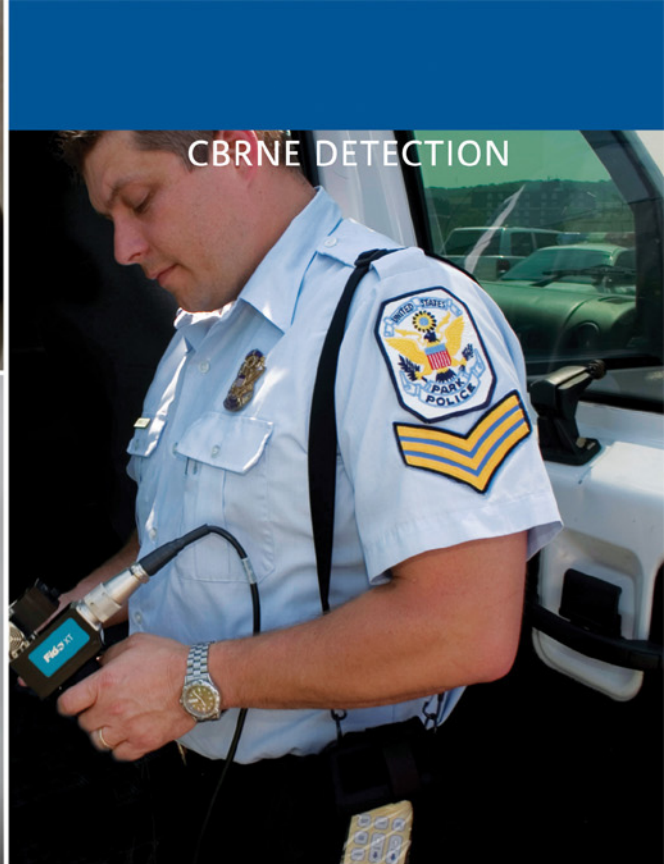
- Assistance to Firefighter grants, which fund equipment and other resources for the departments;
- Fire Prevention and Safety grants for education initiatives; and
- SAFER grants for the recruitment and retention of both volunteer and career first responders.

Helping our firefighters is not a political issue, it is a safety issue. If you are willing to put your life on the line every day, you should never feel short-changed by your government. I am so proud to announce the increase in a federal investment in the safety of our first responders in the 2008 Homeland Security spending bill, and I will continue to fight to keep our protectors a priority in the federal checkbook – for them, for their families, and for the safety of our communities.

For more information on fire grants, please contact Bart Kennedy in Senator Mikulski's Baltimore office at 410-962-4510; or click on the link for her homepage at [www.mikulski.senate.gov](http://www.mikulski.senate.gov).

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*Senator Barbara A. Mikulski (D-Md.), now in her fourth term, was first elected to the Senate in 1986 after serving for 10 years in the U.S. House of Representatives and five years on the Baltimore City Council. Although she is best known for her leadership on programs related to education, health care, and the needs of senior citizens, she also has been a strong advocate for veterans' benefits, for quality-of-life programs for U.S. naval/military personnel and their families, and for a strong homeland-defense program.*



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Searching for the Invisible Enemy**Detection – From Niche Product to End-To-End Solutions**

By John F. Morton, Managing Editor



DPJ asked several of the nation's most innovative technology-solution companies in the detection arena to discuss what their companies are currently offering to homeland-preparedness professionals – with special focus on systems and devices designed to fill a particular niche or to provide end-to-end solutions. Many of those companies already have fielded systems to U.S. first-responder agencies, and to the nation's armed services. Significantly, companies active in the chemical-agent detection field are now focusing their research-and-development (R&D) efforts on toxic industrial chemicals and toxic industrial materials – TIC/TIM for short. Following is a brief but by no means all-inclusive report on the information provided by the companies contacted by DPJ Managing Editor John Morton.

**PROENGIN'S Versatile and Adaptable AP4C Family**

Among the companies prominent in the chemical-agent detection arena is PROENGIN [<http://www.proengin.com>], whose leaders and employees are very familiar with the TIC/TIM challenge. Emphasizing his company's commitment to customer service, Mark Reuther, PROENGIN's general manager, focused particular attention on the company's



PROENGIN's AP4C simultaneously detects for Chemical Warfare Agents and TIMs/TICs.

AP4C Chemical and TIMs/TICs Detector, best known for, among other qualities, its speed and simplicity. Said Reuther: "The AP4C simultaneously detects for all known and unknown chemical-warfare agents, as well as for a large group of TIMs/TICs, ultimately reducing the number of detectors necessary for the first responder to use. It's not an end-to-end solution but, rather, fills a particular niche."

PROENGIN's AP4C product family is unique in its ability to detect literally thousands of gases, including chemical-warfare agents, as well as the precursors of those products and even degraded versions such as those sometimes manufactured by terrorist groups. An AP4C can detect all of these gases simultaneously and without quantitative limitations, across a wide range of temperatures, no matter what the level of relative humidity.

"Only the AP4C can detect liquid agents or agents giving no vapor at normal temperature, such as VX," Reuther said. "Moreover, persistent agents can be detected in the field, without requiring sampling and further laboratory analysis."

A particularly valuable characteristic of the AP4C is that it can be stored for years without requiring any preventive maintenance or regular use. Its response time is less than two seconds, which translates into a very fast detection survey of any surface. "Surfaces that would take 15 minutes with point detectors using other technologies are thoroughly controlled within minutes," Reuther pointed out. Another attractive quality is that the unit requires no memory to feed with a limited number of gases to be searched. Nor does it necessitate a channel pre-selection to determine the type of gas that is to be detected.

The AP4C also allows for the connection of an alarm box that: (a) will transform the detector into a portable chemical-control and alarm device for chemical agents; and (b) also compute a dose that has been received during a given period.



Bruker RAID-M Handheld Chemical Agent Detector with Lifeline Wireless capability in Hazmat response role.

**Bruker Instruments' RAID M: Field-Tested and DHS-Certified**

With its RAID™ line, Bruker Instruments [<http://www.bdal.com>] offers chemical detectors for practically any application, along with compliant wireless technology, software for analytical verification, networking software, and additional instrumentation capability. "The most famous" of the company's products, said Bruker Vice President Frank Thibodeau, "is the handheld chemical detector called the RAID-M. It's the only chemical detector to receive DHS [Department of Homeland Security] SAFETY Act certification, as an anti-terrorist technology, that it is an 'Approved Product for Homeland and Designation.'"

The RAID-M features a complete library of chemical-warfare agents, most common TICs, riot-control agents, and specially adapted agent libraries for other applications. As with other RAID™ instruments, the RAID-M has a wireless capability, thanks to its Lifeline™ Wireless Monitoring System – which, Thibodeau pointed out, "... allows real-time live instrument data in the hot zone to be viewed from anywhere outside the zone in a control room or PC."

Arguably the most thoroughly tested instrument in the world, the RAID-M has



Dräger has developed a unique and important new detection system containing specialized sets that detect up to eight chemical substances, including nerve, blood and lung, nose and throat irritating agents in 5 minutes.

hazardous-area certification pending from FM Approvals and UL Safety certification from TUV. That combination, said Thibodeau, “is unprecedented in the instrument market.”

Other detectors in the RAID™ line include the RAID-XP NC, a portable detector that features both chemical- and gamma-detection capability in one instrument. Its filters are long-lasting, moreover, and its large, rechargeable battery allows for extended use. Another product in the same family is the RAID-AFM, a “24/7/365” continuously running chemical monitor specially designed for the protection of facilities and critical infrastructure.

A third variant is the RAID-S2, a shipboard and facilities chemical monitor that, like the RAID-AFM, also runs continuously. The company has a special, but well-earned, advantage in that all RAID™ instruments are exempt from radiation safety requirements under the NRC Exempt License awarded to Bruker because of the company’s superior design and safety record.

### **Dräger Safety’s CDS Kit: Five-by-Five Capabilities**

Dräger Safety <http://www.Draeger.com> is also addressing chemical agent applications. Its Detector Tubes and Civil Defense Simultest (CDS) Set provides immediate and accurate detection of toxic chemical agents in the ambient air. The Draeger CDS kit has the ability to detect up to five different chemical agents simultaneously in only five minutes. That ability alone makes it

an economical buy, said Rachele Cosmides, Marketing Communications Manager at Draeger Safety, as does the fact that it needs no power supply. “The kit provides on-the-spot results for the user,” Cosmides pointed out, “without any warm-up time, calibration, or replacement filters [required]. It’s simple to operate,” she adds, and users need only “minimal training.”

The colorimetric Draeger detector tubes used with the CDS kit employ the same chemistry used by NATO for many years in single detector tubes. Several years ago – when the Aberdeen Proving Ground’s Soldier and Biological Chemical Command in Edgewood, Md., tested various technologies for nerve and blister agents – the Draeger Tubes® performed well and achieved consistent results in all test situations. The gases used at the Proving Ground “for interference challenges,” Cosmides noted, “did not affect the Draeger Tubes performance.”



Police officers use the Seeker CDU™ 220 to look for trace explosives or narcotics in the contents of a suspect’s vehicle.

### **DetectaChem’s Seeker – Low Cost, High Value, And Self-Calibrating**

DetectaChem <http://www.detectachem.com/> is putting considerable emphasis on a field-use system. Its Seeker CDU™ 220 is a hand-held, portable, explosives and narcotics detection system with GPS mapping and Bluetooth connectivity to other units – or to any PC or phone. In the near future, the company will provide versions that include radiation, toxic gas, and bio-weapon detection.

Dr. Vaughan Clift, CEO of DetectaChem, described the Seeker as “the closest to an all-in-one device the industry has seen.” DetectaChem relied on user input in the Seeker CDU 220 design. “And we designed it specifically for field use,” Clift added.

DetectaChem has embraced the value proposition offered by purpose-built field detectors, as opposed to the use of laboratory instruments adapted for the field.

“Many systems out there are very sensitive lab machines that people are trying to use in the field with poor results,” said Clift. “The Seeker is based on medical devices that are simple, robust, and reliable. The liquid chemistry method contained in the cards has been around for decades. The lightweight – less than a pound – electronic reader performs all the operations and reads the results with controlled optics, taking away all hazards to the user and dramatically increasing the accuracy and ease of use.”

The Seeker provides the ability to move away from check points while rapidly detecting trace explosives or narcotics, overtly or covertly. The unit transfers the data to a PC to provide detailed testing reports and for mapping results on Google Earth. “Immune to temperature, weather, and environment, the Seeker has the highest accuracy and sensitivity of any system,” Clift commented. “The device is ‘plug and play,’ self-calibrating, requires little training, and is about a third of the cost of most existing products.”

### **Innovative Biosensors’ BioFlash: Fast, Compact, Highly Sensitive**

In the bio-detection field, Innovative Biosensors Inc. <http://www.innovativebiosensors.com/> is a technology solution provider oriented to an end-to-end solution that includes biological aerosol sampling, collection, detection, and identification of pathogens – including bacteria, viruses, and toxins. The company has developed its BioFlash™ biological aerosol sampler and identification system, which offers an integrated biological aerosol



Innovative Biosensors’ BioFlash™ biological detector is a highly-portable, high-performance, easy-to-use integrated aerosol sampler and identifier that was created specifically for biodefense applications.

sampler and detector in one compact device for rapid and sensitive identification of the presence of a biological threat.

“The BioFlash biological detector,” said Richard R. Thomas, Vice President of Business Development at Innovative Biosensors, “is a highly portable, high-performance, easy-to-use integrated aerosol sampler and identifier that was created specifically for bio-defense applications.”

By incorporating CANARY™ - Cellular Analysis and Notification of Antigen Risks and Yields – diagnostic technology developed by MIT Lincoln Laboratory scientists, BioFlash is able to provide sensitive and specific identification of up to 21 biological threat agents. Among the most lethal biological agents that CANARY-based identifiers can detect and identify are *Bacillus anthracis* spores, *Yersinia pestis*, *Francisella tularensis*, VEE, vaccinia, botulinum toxin, and ricin. “BioFlash offers breakthrough capabilities in sampling performance, speed, reliability, and operational costs,” Thomas said.

Utilizing a simple disposable plastic disk, the BioFlash enables both biological aerosol collection and simultaneous identification of up to 21 threat agents. According to Thomas, the system detects and identifies

bacteria, viruses, and toxins in the air in less than two minutes with sensitivities approaching the results of PCR (polymerase-chain-reaction) detectors, but at a fraction of the cost. The technology is now being deployed in various buildings to provide accurate and rapid biological-agent threat detection and identification.

### CANBERRA: Rugged Solutions and a Worldwide Presence

In the radiation-detection arena, CANBERRA is also offering portability. Traditionally focused on the transportation sector, it is now also targeting the first-responder community with a portable dosimeter for radiation monitoring.

Electronic dosimeters often evolve from laboratory equipment and, although technologically sophisticated, they are not intended for use in rugged or dangerous environments. However, CANBERRA’s UltraRadiac™ Personal Radiation Monitor [<http://www.CANBERRA.com/products/1131.asp>] is derived from a U.S. military design to meet specific needs of firefighters, hazmat personnel, paramedics, and other first responders.




CANBERRA UltraRadiac Personal Radiation Monitor in use.

The UltraRadiac measures and displays the radiation dose rate and total dose to its user in a user-friendly, rugged, wearable package. A large backlit LCD display enables personnel to read the unit in any light. An audiovisual alarm notifies the user of any change in radiation levels.

CANBERRA has long produced detection equipment and solutions for use in nuclear laboratories, nuclear fuel cycles, and the U.S. and allied armed services. The company also is active in efforts to prevent the proliferation of nuclear weapons. Leveraging this expertise, it has been providing the transportation sector with fixed, mobile, and/or portable detection devices that identify the presence of radioactive materials in packages, containers, and vehicles, or on people.

Enunciating the company’s overarching approach, Michael D. Beal, regional Development Manager for the Security Business Line at CANBERRA, said that the company’s radiation-detection solutions “are designed to assist first responders and homeland-security personnel in preventing the diversion of radioactive materials, intercepting nuclear smuggling, and mitigating the consequences of radiological events.”


Within the domestic-preparedness and homeland-security market, CANBERRA provides solutions to meet the needs of border-security, first-response, emergency-management, and transportation-and-facility



## Domestic Preparedness

NATION'S LEADERS ~ One on One

### Glenn Cannon, Assistant Administrator For Disaster Operations, Federal Emergency Management Agency (FEMA)



Mr. Cannon’s views on the post-Katrina reorganization mandated by Congress, his directorate’s working relationships with other FEMA branches, and the challenge of coping with both “notice” and “no-notice” disasters and emergencies.

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security agencies and personnel. CANBERRA also offers a full line of analytical and radiological detection and measurement equipment to meet specific requirements and applications. "We not only offer specific products," Beal said, "but can further tailor a system specifically to an application."

In addition, CANBERRA provides a full range of related services such as installation, maintenance, and training. "At CANBERRA," Beal commented, "we treat customers like partners, not sales targets." Because it is a division of a major international power-generation company (the AREVA group), CANBERRA has easy access to engineering and service staff already in position and on call throughout the world. "This worldwide presence," Beal noted, "allows us to respond quickly and personally to customer service needs ... [and] to tailor our solutions to each individual set of needs and constraints." A bonus factor, he added, is that company representatives and engineering facilities are headquartered near a number of research and technology centers, which means that CANBERRA also has access to and can leverage significant innovative ability to meet new and/or unforeseeable problems on short or no notice.

### **MSA: Safe-Site MTX And an International Reach**

MSA [<http://www.msanet.com>] offers a full line of CBRNE-compliant products, said company spokesman Norman ("Norm") Davis Jr., Marketing Manager. Included in that line are both respiratory and detection products. Among the better known of the respiratory products are the Millennium gas mask and the Fire Hawk SCBA. In the detection field, Davis said, "MSA offers the Safe-Site MTX, the HAZMATCAD Plus, the Sirius PID with Safe Connect Belt Bridge, and BioSensor R2200."

The Safe-Site MTX provides "a comprehensive solution for chemical threats associated with homeland defense," Davis said, and features a number of "second-generation improvements" – e.g., interchangeable smart pre-calibrated sensors that facilitate mission configurability. Safe-Site also has the capability, he said, to detect and classify chemical warfare agents by type.

Safe-Site uses a 900 MHz wireless network and detectors as communication repeaters to achieve a six-mile range. The system is designed to detect oxygen deficiency, combustible gases, volatile organic chemicals, toxic industrial chemicals, nerve agents, blister agents, and gamma radiation.

MSA is a company that has been "committed to safety since 1914," Davis said, "when it was incorporated to improve mine rescue and, with Thomas Edison, invented a flameless miner's lamp." The company "has a long history of developing products that protect people," he commented. "Today's needs for specialized protection/detection products are



The Safe-Site MTX is being carried into a hazardous exclusion zone to set up a perimeter monitoring.

met by our excellent state-of-the-art research and engineering capabilities."

Moreover, despite its many years of service, the company is youthful in its outlook. "MSA's focus," Davis said, "is continuous innovation enhancing the use and reliability of our products to assure our customers they have the safest systems available to meet their needs." Not surprisingly, the company's profile matches its ambitions. MSA's annual sales are over \$900 million, it works with and through a network of 30 international

affiliates, and has over 4,400 employees who, in Davis's words, "design, manufacture, and market the hundreds of safety products we sell."

Over the past few years the company has devoted significantly increased attention to the problem of chemical threat detection, particularly as it applies to homeland-security issues. In that context, the Safe-Site MTX represents a specific solution designed both for the protection of critical infrastructure and for improved security at public events. Safe-Site is designed to be quickly deployable, easily transportable, and flexible enough to meet the needs of a broad spectrum of customers.

The company also offers fixed-point solutions for chemical threat detection such as the CW Sentry and Safe-Site Sentry. These systems – which, Davis pointed out, operate on a 24/7 basis -- are, in his words, "ideal for use in protecting critical infrastructure such as federal buildings and subway systems."

MSA's HAZMATCAD and HAZMATCAD Plus instruments are designed specifically to detect both nerve and blister agents. The HAZMATCAD Plus is a hybrid instrument that also detects selected toxic industrial chemicals. The HAZMATCAD product line is well known for its ability to operate in complex chemical environments with a minimum of false positive detections.

The Safe-Site MTX was designed primarily to operate in complex urban environments. Because of the increased threat posed by the proliferation of weapons of mass destruction (WMDs) in recent years, specificity in detection has become increasingly important in the struggle against international terrorism.

The Safe-Site, which Davis said "was designed specifically to improve the industry performance standard in this area," has the ability to detect a wide range of chemical threats. In addition, Safe-Site features an optional sensor module to detect both nerve and blister agents. All of these features add significantly to the threat information profile. Thanks to Safe-Site's interchangeable detectors, the instrument provides data in a form more relevant to the operator. ▼



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# EMS Professionals and the CERTification of Volunteers

By Joseph Cahill, EMS



The CERT (Community Emergency Response Team) program is a federal initiative that encourages private citizens to volunteer to help out in times of disaster – and gives them a way to do so. Typically, these volunteers receive training in emergency operations well in advance of potential disasters and are deployed primarily to support existing emergency services. CERT was conceived, therefore, as an *adjunct* to emergency services during a disaster, not as a *substitute* or replacement for those services. The main reason to use CERT members to assist EMS staff, therefore, is to stretch existing resources in the face of overwhelming demand.

Within day-to-day EMS (emergency medical services) operations there is little or no role for CERT members to play. This is not surprising, because professional EMS personnel are in the business of emergency response and, as such, must be able to respond to most emergencies *without* assistance from volunteers and/or other agencies. However, events sometimes rise above the routine.

Mass-casualty incidents (MCIs) are, by definition, events beyond the capability of the EMS resources usually available and therefore require that at least some patients must wait for care and/or that additional resources must be brought in from outside the system. Major disasters belong to a stage beyond that – involving, as most disasters do, a wide region of the country (frequently with overlapping political jurisdictions), multiple locations, and/or losses of infrastructure so that not only are the resources available insufficient but also that, in most if not all situations, the outside resources that *are* brought in cannot immediately bridge the gap.

Driving an ambulance with a patient in the rear of the vehicle is actually nothing more, or less, than controlling (or trying to control)

a moving treatment platform. For that reason alone, it is easy for those directly involved to get caught up in the urgency and let speed become their primary and sometimes only concern, transforming what is intended to be a treatment platform into the deck of a ship in high seas – and making medical treatment en route extremely difficult and sometimes absolutely impossible.

***The presence of the EMT does not ensure that a non-EMT providing medical care will be knowledgeable about – and/or compliant with – the authorizing legislation***

## ***Substantial Legal and Practical Differences Remain***

Many medical tasks provided in ambulances require significant training and therefore can be performed only by an emergency medical technician (EMT) or a paramedic. Here it should be emphasized that, although CERT members receive first-aid training, each ambulance needs at least one EMT to supervise any medical operations that might be required and to personally perform the higher-level treatments needed.

EMTs provide care under authority granted by legislation, but even the presence of the EMT does not ensure that a non-

EMT providing medical care inside the ambulance will be knowledgeable about – and/or compliant with – the authorizing legislation or regulations. Moreover, persons who are not employed by the EMS agency involved will often not be covered under the agency's vehicle and/or liability insurance.

Another factor to consider, from a total-system perspective, is that, during a disaster, ambulances may be called on to transport several patients at the same time, despite possessing resources that would normally allow the transport of only one or two patients. In that setting the CERT members would be invaluable in monitoring stable patients and alerting the EMT(s) present about patients who decompensate. Assigning these tasks to CERT members would allow EMTs to focus on those who are already unstable, while not neglecting the others.

It is axiomatic that, when carrying a patient across broken ground or ice and snow the more people with hands on the stretcher the more stable it becomes; providing the extra hands needed – volunteer hands included – is routinely accomplished by dispatching multiple ambulances to the scene of an incident or disaster where there are numerous casualties.

The minimum staffing for an ambulance remains two people – a driver and a medical provider. In a system in which more than two EMS members routinely respond to every call, CERT augmentation probably will have its greatest effect by freeing the third and fourth members to operate another ambulance and/or by allowing a single ambulance to treat and transport more patients than would usually be possible.

In short, the skills that CERT members bring to the table make them a good fit to augment professional EMS staff, but cannot be considered a true replacement for EMS staff, even in the face of a major disaster. ▼

***First-Person Report******Friends and Neighbors, Duties and Responsibilities***

By Mary Ann Warren, Viewpoint



Elected officials face all kinds of governance challenges – balancing budgets and trimming or expanding citizen services, to name two of the most obvious ones – but nothing compares to the ordeal of leading a community through a disaster. Despite all of the havoc and pain that disasters wreak, they also create tremendous opportunities for development and growth. Following is a brief report on the challenges and opportunities related to a disaster that occurred in Susquehanna County, Pennsylvania, in June 2006 when 8-10 inches of rain fell during a period of six days.

Every state has an Emergency Operations Plan (EOP) in place that not only identifies the probable circumstances involved in various emergency situations but also assigns the responsibilities for dealing with such situations. The U.S. Department of Homeland Security (DHS) and its Federal Emergency Management Agency (FEMA) also have a framework established for responding to such events. It is essential that, to effectively and efficiently access the disaster assistance needed, a community's elected officials understand not only the layers of responsibility involved but also the conditions these protocols create.

The first and one of the most important guidelines to understand is that state and federal disaster resources usually are deployed only when the magnitude of an event exceeds local capabilities – and then *only at the request of a local government*. If local elected officials and their emergency-management staff cannot quantify the damages suffered and/or articulate the community's needs – using the unique language spoken in the emergency-management arena – a community will suffer.

***A Very Hard Lesson to Learn***

Susquehanna County learned that lesson the hard way – because state emergency-management officials did not immediately realize the severity of the situation we were trying to report to higher levels of government, it was assumed that we were not as bad off as

the counties surrounding us in our part of the state. It cannot be stressed enough how important it is to communicate through proper channels, using correct terminology, to access help.

Personal factors also come into play, of course. Being an elected official requires that decisions be made in the best interests of a community, but not necessarily in the immediate best interests of one's own neighbors, and friendships may suffer as a result. If a home is damaged, for example, to the point where it must be repaired in compliance with codes and ordinances set forth in accordance with the National Flood Insurance Program – or it must be condemned – turning a blind eye to the situation does no one any favors.

Painful as it is to tell a neighbor that his or her home must either be condemned or elevated above the floodplain, ignoring the severity of damages could jeopardize future disaster assistance for the *entire* community. For that reason it is imperative to resist the temptation to simply return to pre-flood condition. Disasters create opportunities: (a) to rethink land-use ordinances, building codes, and future economic development plans; and (b) to rebuild in a way that improves and protects the social and economic quality of life of the entire community.

Obviously, the challenges of being a public servant during a disaster are compounded by personal losses that might be suffered. The June 2006 flood damaged my own home, for example – although not as badly as the homes of several neighbors. While I felt that my responsibility to the county outweighed my responsibility to my own home and family, and conducted myself accordingly, my husband and sons were cleaning our home and looking for property that floated away. It was emotionally exhausting juggling public responsibilities and the instinct to look after my own family.

One might think that decisions made and/or actions taken during a disaster are executed swiftly, but that would be wrong. Over and over, residents expressed a desire to jump

into creek beds with backhoes to clear debris or dredge channels, all in violation of the environmental laws and regulations of the Commonwealth of Pennsylvania. Although it boggles the minds of flood victims (and of elected officials as well), the fact that a disaster has occurred does not mean that permits or processes are waived or accelerated.

***Conditional Reimbursement, Unconditional Frustration***

In 2000, Congress passed a law requiring all of the nation's various governmental jurisdictions to develop hazard-mitigation plans as a condition of receiving certain disaster-recovery funds. Susquehanna County had no such plan in place at the time of the flood, and therefore had to act very fast to redress this oversight – or risk losing recovery funds for those residents left homeless by the flood. There was no getting around this requirement, and residents were justifiably angry.

Fortunately, as it turned out, FEMA's programs provide for an administrative allowance that may be used to hire experts to support recovery projects. FEMA also offers other grant programs that can be used to fund the development of mitigation plans. Recognizing the need for an expert fluent in FEMA's programs, Susquehanna County hired a disaster-recovery specialist, a former FEMA employee, to steer the county through what to most local officials was unfamiliar terrain. The disaster-recovery specialist, drawing fees mostly from administrative allowances, has cost the county very little out of pocket – and, in addition to preparing the county's all-hazards mitigation plan, has secured more than \$2 million in grants and appeals for the county.

The lesson is obvious: When in doubt, find an expert to navigate the disaster-recovery process.

As the county's homeowners and businesses continue to put themselves and their properties back together, it is impossible not to think about the next flood. Susquehanna County has endured four floods since 2004, and a total of 22 major floods over the past



## All Hazards Forum



## Mid-Atlantic

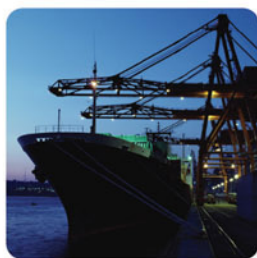
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**-Dennis Schrader**

Deputy Administrator for National Preparedness, Federal Emergency Management Agency (FEMA), Department of Homeland Security (DHS).

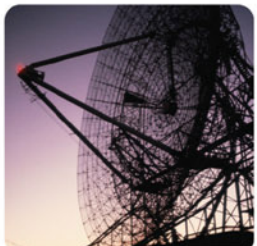
### 2006 Quick Facts:

- Participation by over 1,000 people from five countries
- 30 conference sessions and 90 panelists
- Focus was on the eight program pillars: Critical Infrastructure Protection, Border and Transportation Security, Health and Medical Readiness, Information Sharing and Intelligence, Grants and Procurement, Emergency Management
- Program featured roundtable discussion by eight Mid-Atlantic state homeland security directors
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forty years. The next flood, therefore, is not a matter of "if," but "when." Having learned our lessons from the June 2006 flood, and having a hazard-mitigation plan now in place, the county will be much better prepared for the next disaster, whenever it may strike.

MaryAnn Warren was elected Susquehanna County Commissioner in November 2003. Prior to that she was involved in numerous local and civic activities, serving as a Borough council person and as an active volunteer with the library, the parks association, and scouting activities, and as a tutor in the county's literacy program. A resident of the Borough of New Milford, Pennsylvania, she continues to volunteer for various organizations throughout the county while also carrying out her duties as county commissioner.

## The 2006 All-Hazards Report **Yesterday's Warnings** **To Meet Today's Disasters**

By John F. Morton, Viewpoint



The Mid-Atlantic AHF (All Hazards Forum) 2006 Post-Conference Report – released last month by the All Hazards Consortium (AHC) – probably could not have been more timely, considering the bridge collapse in Minnesota earlier this year, the fire storms now devastating numerous areas of California, and

the Congressionally-mandated upgrading this year of the new "forward-leaning" Federal Emergency Management Agency (FEMA).

The latest AHF Annual Report summarizes the activities and lessons learned during last year's three-day conference, 10-12 October 2006 in Baltimore, Maryland. The Mid-Atlantic AHF is a cross-disciplinary regional meeting designed primarily to build working relationships and improve communications between and among first-responder agencies and state and local as well as federal jurisdictions. The annual AHF is particularly noteworthy for bringing together the region's eight homeland security directors to emphasize the conference's focus on relationship building and communications.

The purpose of the AHC is to come together in meetings such as the annual AHF to share best practices, break down cultural and organizational barriers within the emergency-response community, and develop regional initiatives. In line with the objectives of the AHC, the 2006 post-conference report spells out, in considerable detail, the consortium's previous as well as current efforts: (a) to help clarify and prioritize state/local government preparedness and response requirements; and (b) to stimulate regionally coordinated planning, programs, and procurement policies.

### ***A Plenary Session, And Eight Pillars of Progress***

The report summarizes the opening plenary session, which featured an innovative "Homeland Security Directors' Roundtable" discussion. Each of the panelists emphasized his own state's development of information, integration, and data-fusion programs, despite the uncertain funding stream coming from the federal government. The rest of the conference, and the bulk of the report's content, focused primarily on the AHC's eight program pillars, which provide a framework for ongoing Consortium activities.

The report groups its summaries in line with the conference's eight major "session" categories: border and transportation security; critical infrastructure protection; emergency

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management; grants and procurement; health and medical readiness; information sharing and intelligence; law enforcement and public safety; and communications and interoperability. An additional “bonus” section of the report summarizes content from the Urban-Rural Task Force’s “evacuation” conference – held in Davis, West Virginia, 23-24 August 2006; the aim of that conference was to foster new regional evacuation strategies and solutions – another topic particularly germane today throughout almost the entire state of California.

Among the many operationally important preparedness and response topics and insights gleaned from and developed during the AHF conference and report were presentations and discussions on: the requirement for alternate energy sources; the need to strengthen relationships between private-sector and local government organizations, particularly with respect to supply chain support for disaster relief; regional SNS (Strategic National Stockpile) distribution readiness; fusion approaches and tools such as the WebEOC; tools for risk analysis and for the management of critical asset information; approaches to identity management; the professional certification of grant managers; and the recently upgraded priority to develop better community-based planning.

The AHC is a non-profit organization funded by National Capital Region (NCR) Urban Area Security Initiative (UASI) grants. The consortium is guided by representatives from the District of Columbia and the seven states in the Mid-Atlantic Region: Delaware, Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, and West Virginia. The AHC mission is to help create new resources and funding opportunities for the states to support regional multi-state collaboration efforts among all of the stakeholders involved, including local, state, and federal government representatives, the private sector, higher education, and non-profit/volunteer organizations.

The AHC hosted the first annual All Hazards Forum (AHF) in Baltimore in 2004.

The 2006 AHF report was developed and made available thanks in large part to sponsorship from IBM, one of the founding corporate sponsors of the AHC. The 2007 AHF will be held in Baltimore on November 7-8. ▼

## Interagency Operations Centers

# *The Next Wave of Synergy In Port/Maritime Security*

*By Joseph DiRenzo III & Christopher Doane, Coast Guard*



Synergy, fusion, jointness, unity of effort – all are important characteristics to the success of the multi-agency operations needed to ensure the security of ports in the United States – but those laudable characteristics also are difficult to achieve, particularly when a broad spectrum of agencies control their forces from separate locations. At present, only a few ports have established multi-agency operations centers to facilitate the joint coordination of port-security activities: Jacksonville, Fla.; Norfolk, Va.; San Diego, Calif.; and Charleston, S.C..

agencies together in the maritime environment gained not only national attention but also some much-needed political traction when President George Bush signed the SAFE Port (Security and Accountability For Every Port) Act into law on 13 October 2006. To begin with, Section 108 of the Act directs the Secretary of the Department of Homeland Security (DHS) “to establish interagency operational centers for port security at all high-priority ports not later than three years after the date of the enactment of the SAFE Port Act.”

## *Uniformity and Diversity – Plus Training and Exercises*

The same section mandates that the new centers should function more or less (“as appropriate” is the language carefully used) the same way the centers already operational (and mentioned above), plus a so-called “virtual” center in New York City, are now functioning.

Here it should be emphasized that, according to the Act, a one-size-fits-all design for the interagency operational centers is *not* intended. Instead, the Act calls for the centers to be organized “to fit the security needs, requirements, and resources of the individual port area.” There would be at least a few unifying characteristics, though. For example, the new centers in each port would house the Coast Guard along with other key federal, state, local, and industry stakeholders in port security, specifically including such departments and agencies as Customs and Border Protection, Immigration and Customs Enforcement, the Transportation Security Administration, the Justice Department, and the Department of Defense as well as a number of state and local law-enforcement and first-responder agencies and members of Area Maritime Security Committees.

*The Puget Sound  
center covers an  
area of over  
3,500 square miles;  
it will be staffed by  
the Coast Guard  
and  
Navy as well as  
a number of  
civilian agencies*

With the exception of Charleston, the operations centers established at those ports are joint Coast Guard-Navy centers. In Charleston, the joint operations center, called SeaHawk, is shared by federal, state, and local security agencies to coordinate port-security activities.

The number of multi-agency operations centers may increase significantly in the foreseeable future, though. The requirement to fuse capabilities, technologies, and



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U.S. Representative Dave Reichert (R-Wash.), a member of the House Homeland Security Committee, noted in a press release that the bill also “requires DHS to establish joint operations centers at seaports to bring together federal, state, local, and private-sector partners to coordinate security measures and unify response efforts. Two amendments I offered, and that were attached to the bill,” he continued, “pertain to the importance of coordinated training and exercise efforts as well.”

## A Working Model, And a Major “If”

On 15 August 2007, the U.S. Coast Guard joined with the U.S. Navy, and U.S. Customs and Border Protection, along with other state and local agencies, to open the Puget Sound Joint Harbor Operations Center (JHOC), the fourth such facility established in the United States. Leading the contingent who cut the ribbon ushering in a new era of maritime domain awareness for Puget Sound were Admiral Thad W. Allen, Commandant of the Coast Guard, and Deputy Commissioner Jayson P. Ahern, U.S. Customs and Border Protection.

According to a Coast Guard District Thirteen press release, “Pursuant to the Safe Port Act of 2006 the Secretary of Homeland Security was charged with establishing these centers with the goal of increasing interoperability amongst all key federal, state, and local maritime stakeholders.” Others present at the opening included Captain Stephen Metruck, USCG, the commanding officer of Sector Seattle, Deputy Commissioner Jay Ahern of the U.S. Customs and Border Protection agency, Rear Adm. Frank Drennan, USN, Commander of Submarine Group Trident, and John Batiste, chief of the Washington State Patrol.

The Puget Sound JHOC would seem to be a good model to emulate by the other centers that must be opened in accordance with the Act. Its official jurisdiction covers an area of over 3,500 square miles; it will be staffed by the Coast Guard and Navy as well as a number of civilian agencies; and, most important of all, its charter requires it to “leverage technology, including sensor, detection, communication, and decision-making systems, in order to swiftly and accurately detect, assess, warn, defend [against], and recover from threats while [also] enhancing Maritime Domain Awareness

and facilitating Homeland Security and Homeland Defense.”

However, there remains a major “if” in the development of additional centers. Although the SAFE Port Act *authorizes* the funds needed for construction of the centers, the actual funding is subject to the annual appropriations process of the federal government. Only time will tell if future administrations and the U.S. Congress will carry through and fully fund these very important facilities needed for the creation of and steady increase in interagency synergy within the U.S. ports and waterways system.

*The views expressed herein are those of the authors and are not to be construed as official or reflecting the views of the Commandant or of the U.S. Coast Guard.*

*Dr. Joseph DiRenzo III (pictured) and Christopher Doane are senior visiting fellows at the Joint Forces Staff College in Norfolk, Virginia, and adjunct faculty members for Northcentral University in Prescott, Arizona. They write and lecture frequently on maritime and port security issues, and are regular contributors to DOMPREP.com. Both are retired U.S. Coast Guard officers.*

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# Mississippi, Texas, Oklahoma, and Massachusetts

By Adam McLaughlin, State Homeland News



## ***Mississippi U.S. Government May Buy Katrina-Ravaged Homes on Gulf Coast***

The federal government is considering buying out as many as 17,000 homes along Mississippi's Gulf Coast and transforming the area into a vast hurricane-protection zone. The initial reports on the plan have raised anxieties that, if implemented, it could destroy the waterfront lives many residents are struggling to rebuild after Katrina.

The Mississippi Coastal Improvement Program could cost as much as \$40 billion – that cost would include buying the homes, building levees, and restoring barrier islands. The land could be converted into wetlands or other public uses, such as golf courses or bike trails, but could not be sold for private development.

The buyouts would be voluntary, and the Army Corps of Engineers plan envisions allowing casinos, hotels, and restaurants to continue operating on the coast from Bay St. Louis to Biloxi. Until the proposal becomes more focused, residents will remain concerned, according to local news reports, that it could spell the end of their communities, where a lifestyle of beaches and boiled shrimp has flourished for decades, and many houses are already built atop stilts.

The Corps of Engineers expects to release a draft of the buyout plan in December. In the meantime, project director Susan Rees will be fielding questions at meetings with local officials and residents. The Corps has purchased a number of flood-prone homes near rivers in the past, but this would be its first major buyout of coastal homes, Rees said. The proposal will give Congress a menu of choices, not impose mandates, she added.

Oliver Houck, a Tulane University law professor who has studied government efforts to control coastal flooding, said that voluntary buyouts are a “very reasonable way to approach managing floods.” Moving people away from areas at the greatest risk of flooding makes more sense than spending hundreds of millions of dollars to shield them with levees,

he added. “Any program that attempts to subsidize their [the residents] continuing to stay in place is simply subsidizing another wipeout,” Houck said.

William Walker, director of Mississippi's Department of Marine Resources, is helping Rees craft the plan and introduce it to communities. “If all we do is rebuild where we were prior to Katrina, we will have failed,” he said. “We need to rebuild better, stronger, and smarter.”

***Moving people away  
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of dollars  
to shield them  
with levees***

Government subsidies presumably could help offset the loss of tax revenue from residential buyouts, but some local officials fear the proposal would have a chilling effect on development plans and turn some sections of the coast into a disjointed checkerboard of homes and wetlands.

## ***Texas Senators Want DHS to Consult Local Officials on Border Fence***

The two U.S. senators from the state of Texas are sponsoring legislation making it mandatory that the U.S. Department of Homeland Security (DHS) consult with Rio Grande Valley officials about the locations of the “border fence” proposed for construction along the Texas side of the U.S. border with Mexico.

An amendment to the defense appropriations bill sponsored by Republican Senators Kay Bailey Hutchison and John Cornyn would make it mandatory for Homeland Security Secretary Michael Chertoff to consult with local government officials, and property owners, “to minimize the impact on the environment, culture, commerce, and quality of life for the communities and residents located near the sites at which such fencing is to be constructed.”

“Believe me,” Cornyn said in a conference call, “that the concerns that are being raised in the Valley and along the border are being heard loud and clear here [on Capitol Hill], and those of us who represent Texas in the congressional delegation in both the House and Senate are working hard to try to make sure that those concerns are addressed.”

U.S. Border Patrol agents also have received comments from private land owners who are *in favor* of the border fence, Cornyn said, and have no problems with the plans that the fence might be built on their land. Cornyn's comments follow a recent letter sent by Cameron County Judge Carlos H. Cascos to Chertoff, President Bush, and Valley lawmakers requesting a meeting about the fencing, almost half of which – an estimated 35.6 miles – will run along the southern border of Cameron County.

Cornyn also had words of caution to border mayors who have been threatening to file lawsuits to halt construction of the fence. “I think we ought to try to work our way through this issue without having to resort to litigation,” he said. “... It [litigation] is not particularly an efficient way of resolving disputes. Sometimes it is a last resort and you cannot avoid it, but it certainly should not be a first resort.”

Detailed maps of the proposed 70 miles of fencing were released in the first week of October. About 17 miles of the fence will run through the Brownsville area, with some of it cutting through local sanctuaries, the local college campus, and city-owned properties and parks. DHS officials said that the final

route for the proposed fence has yet to be decided and that the maps released earlier were “preliminary” estimates.

## ***Oklahoma Hosts Second Annual Prevention Health Conference***

On September 25 and 26 the Oklahoma State Department of Health sponsored the state’s second Annual Prevention Health Conference at the Marriott Southern Hills Hotel in Tulsa. One of the breakout sessions – “*Bird Flu: Is the Pandemic Still Chirping?*” – was facilitated by Dr. Kristy Bradley, deputy state epidemiologist for the Oklahoma State Department of Health. She concluded that a bird-flu pandemic might well reach U.S. shores within the next decade.

The term “bird flu” refers to an influenza that spreads from a virus found chiefly in birds, but infections can occur in humans as well. “Prior to the last decade or so, the thought was that influenza from birds would be mild or just cause conjunctivitis in humans,” Bradley commented, “but bells went off in 1997 when 18 people in Hong Kong contracted bird flu, and six died from it.”

U.S. epidemiologists and their counterparts in other countries have been tracking H5N1 (the name of the strain of bird flu connected with the Hong Kong and other deaths) since 1997, she continued, but have not been able to stop it. “It has continued to spread to parts of Africa and the Middle East and continues to cause a lot of problems in Asia.”

The questions of particular concern to U.S. decision makers are whether a bird-flu pandemic does pose a major threat to the United States and whether the nation is prepared to respond to a massive outbreak of the virus. “We do get a little more concerned about the H5N1 virus because it is not behaving like any other bird flu we have seen,” Bradley said. It has shown resistance to antiviral medications, she said, and the possibility of human-to-human transmission of the virus already has been confirmed.

Depending on its severity, a U.S. bird-flu pandemic could mean that anywhere from 40 million to 100 million Americans could be infected, and an estimated 90,000 to 200,000 of those infected would die, according to the U.S. Centers for Disease Control and

Prevention (CDC). Moreover, between 300,000 and 750,000 Americans would be hospitalized – again, depending on the severity of the outbreak, Bradley said.

The economic impact of a U.S. bird-flu pandemic would be an estimated \$70 billion at least, and could climb to more than \$150 billion, she said. The federal government and State of Oklahoma both have plans in place to respond to a bird-flu crisis, Bradley said. Vaccines typically are the first line of defense for a flu outbreak – but authorities are limited to speculation about what particular strain of virus would prompt an epidemic.

***The questions of particular concern are whether a bird-flu pandemic does pose a major threat to the United States and whether the nation is prepared to respond***

The United States has started stockpiling 40 million doses – at two doses per person – of pre-pandemic H5N1 bird flu vaccine. Oklahoma is projected to receive 20,000 doses of the vaccine, Bradley said, but that number could be much higher, depending on the number of victims infected. The state’s response plans include developing a priority list, based on risk factors and other criteria, on who will receive the vaccine and in what order.

## ***Massachusetts Develops Unified Emergency-Response Strategy***

A state emergency-response plan released in late September by Massachusetts Governor Deval Patrick and the state’s Executive Office of Public Safety stresses the need to improve communications among emergency responders and to identify and organize the resources that would be required by cities and

towns throughout the state to help streamline their responses to emergencies.

“Nearly six years after the tragic events of September 11, 2001, and with a nation still recovering from Hurricane Katrina, this document represents an updated and refreshed strategic vision of homeland security for the Commonwealth,” Public Safety Secretary Kevin Burke said in a letter introducing the plan – which calls for, among other things, the creation of a secure database that spells out in specific detail the resources needed, and available, that could help municipalities respond more rapidly as well as more effectively to a major emergency.

The database would provide an inventory of the physical assets – dump trucks and/or ambulances, for example – already owned and operated by Massachusetts cities and towns. A number of separate databases are now used by Massachusetts police departments and fire departments for their own purposes, but there is no integrated database for the entire state that collects in one place all of the information likely to be needed in a major crisis.

Significantly, the plan also proposes the development of what would be a statewide mutual-aid agreement, Burke said, that would allow cities and towns to “seamlessly share resources during times of emergency without superseding previous agreements and arrangements that exist in regions or disciplines.” The plan also sets, as an achievable goal, a requirement that any of the state’s six hazardous-materials response teams should be “on scene and operational” within 30 minutes to assist densely populated areas, instead of the one-hour goal established before the 11 September 2001 terrorist attacks.

In recognition of the increased threat posed by CBRNE (chemical, biological, radiological, nuclear, and explosive) weapons and devices, officials said, the state intends to create two rapid-response teams, one for Cape Ann and one for Cape Cod, later this year.

*Adam McLaughlin is Preparedness Manager of Training and Exercises, Operations, and Emergency Management for the Port Authority of N.Y. & N.J. He develops and implements agency-wide emergency response and recovery plans, business continuity plans, and training and exercise programs.*