

Ensuring Food Safety Strengthen the Supply Chain



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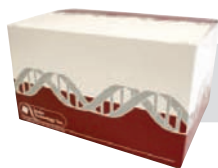


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Business Office
517 Benfield Road, Suite 303
Severna Park, MD 21146 USA
www.DomesticPreparedness.com
(410) 518-6900

Staff

Martin Masiuk
Publisher
mmasiuk@domprep.com

James D. Hessman
Editor in Chief
JamesD@domprep.com

John Morton
Strategic Advisor
jmorton@domprep.com

Dan Brethauer
Account Executive
dbrethauer@domprep.com

Susan Collins
Creative Director
scollins@domprep.com

Carole Parker
Database Manager
cparker@domprep.com

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Publisher's Message

By Martin (Marty) Masiuk



Over the past several years, DomPrep's highly knowledgeable readers (most of them first responders, public health/healthcare providers, and emergency-management professionals) have learned and relearned the first rule of survival in today's increasingly dangerous world – namely, that true preparedness necessarily walks hand in hand with eternal vigilance.

Today, 29 April 2009, as this message is being written, that basic principle is still true. The outbreak of the H1N1 Swine Flu – believed by some epidemiologists to be a combination of swine flu, bird flu, and certain human strains of influenza – has captured the attention of the entire world. Individual citizens are taking such precautions as wearing breathing masks and/or avoiding mass gatherings. In addition, schools are being closed in some areas already hit by the disease, and business as well as vacation trips, particularly overseas trips, are being postponed or cancelled outright. Meanwhile, scientists in a score of countries are working day and night to learn more about this new (but not totally unexpected) killer disease, isolate and contain it – if possible – and eventually defeat it.

Nonetheless, the future is uncertain. Will the current outbreak be mitigated by treatments already available, which so far seem to be reasonably effective, or will H1N1 evolve and mutate into a true pandemic causing hundreds of thousands, if not millions, of deaths throughout the world? Today, no one knows. What we do know, though, is that preparedness professionals in almost every country in the world are more ready than ever before in human history to meet the daunting new challenges that they are facing.

We are proud of having played a small educational role in advancing and enhancing today's improved state of preparedness. And we appreciate much more than can be expressed in mere words the willingness of our writers – almost all of them career professionals and senior decision making officials – to share their accumulated wisdom, their vast stores of knowledge, and their judicious recommendations with us and with our readers.

This April printable issue of *DPJ*, like its predecessors, combines a balanced menu of professional views and insider information with policy analysis, first-person reports, “how to” recommendations, and several state and regional updates. It starts with articles, by Steven A. Harrison and Diana Hopkins, on the “security” – or lack thereof – of the U.S. food chain. Dennis R. Schrader and Timothy Beres then weigh in with cogent analyses of the Department of Homeland Security's grant programs, along with a few recommendations on how the same funds might be spent more effectively.

In other articles: Craig DeAtley discusses several ways in which hospitals can (and should) enhance their own security while saving the lives of others; Ann Marie Brown reports on a double-threat training scenario in North Carolina that required the Tar Heel State to deal with a bird-flu epidemic in the middle of a hurricane; and John J. Burke provides a first-person report on how military and civilian officials in the Town of Sandwich, Massachusetts, joined forces to cope with a scenario-based public-health emergency.

Rounding out the issue are three additional articles, by: (a) Corey Ranslem, who reports that the once stuttering TWIC (Transportation Workers Identification Card) program is back on track and ready for full implementation; (b) Joseph Cahill, who offers a few “Green” recommendations related to the building of new homes and entire communities; and (c) Adam McLaughlin, who discusses recent preparedness efforts in California, Minnesota, New Mexico, and Texas. ▼

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About the Cover: Muscle Science technician prepares to analyze a sample of meat before larger segments can be approved for shipment to restaurants, markets, and other U.S. food outlets. Muscle Science is a food engineering and research program focused on the chemical or biochemical aspects of the processing of livestock, poultry, and aquatic muscle; its work is one of several federally mandated requirements intended to ensure the safety of foods purchased by American consumers. (Photo from istockphoto.com)



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A Consuming Need: Improved Security in the Food Chain

By Steven A. Harrison, Health Systems



The Weekly Homeland Security Newsletter of 16 January 2009 discussed a Department of Homeland Security (DHS) grant awarded to Arizona State University researchers for determining new ways to help ensure the safety of food consumed in the United States. The overarching goal of the initiative, according to the article (*DHS Funds Food Security Research*), is to strengthen the security of the U.S. food-supply chain, not just against naturally occurring diseases and food tainting, but also from acts of terrorism. Improving food safety and security is important because gaps in the farm-to-fork supply chain render it extremely vulnerable to attack.

In early 2001, Ali Khan, David Swerdlow, and Dennis Juranek of the National Center for Infectious Diseases warned – in a Public Health Report (*Precautions Against Biological and Chemical Terrorism Directed at Food and Water Supplies*) – that the deliberate contamination of food and water is among the easiest of ways to distribute biological or chemical agents. Improving food and water safety technologies, combined with better disease surveillance and response techniques, may prevent or minimize the consequences of a food-borne terrorism event.

That conclusion, as applicable today as it was in 2001 (and probably more so), was underscored last month (on March 14) when President Obama declared the nation's food-safety system a "hazard to public health." For that reason, Obama said, he plans to create an advisory group to review and update the nation's archaic food-safety laws, improve information-

sharing among the many government agencies responsible for food safety, and bolster the food-safety role of the Food and Drug Administration (FDA) through an infusion of funding and staff resources.

An Urgent Need to Prevent "Catastrophic" Consequences

Such funding is urgently needed. The nation's food-supply chain includes numerous vulnerable and unprotected points where security can be compromised by the intentional introduction of tainted material such as a biologic agent. Botulism is one example. Former Secretary of the Navy Richard Danzig suggested several years ago, in fact – in a paper (*Catastrophic Bioterrorism – What Is to Be Done*) issued by the Center for Technology and National Security Policy – that three bioterrorism scenarios pose the greatest threat to humans: a smallpox attack, an airborne anthrax attack, and a release of botulinum toxin.

Businesses and industries engaged in food import, manufacturing, farming, processing, packaging, transport, receipt, and storage, wholesalers, retail grocery sales, farmer's markets, and food preparation are all vulnerable, as is the end consumer. Recent breakdowns in food safety include the contaminated spinach event of 2006, last year's salmonella outbreak in imported peppers, and the recent peanut contamination event that has caused illness in more than 600 people and may have contributed to the deaths of several consumers. In his 14 March radio address, President Obama described these and other events as a "painful reminder of how tragic the consequences can be when food producers act

irresponsibly and the government is unable to do its job.”

It seems likely that such incidents will continue for the foreseeable future. Just last week (30 March) the Setton Pistachio company announced a voluntary recall of specific lots of bulk-roasted shelled pistachios, roasted-in-shell pistachios, and the Setton Farms brand of roasted/salted/shelled pistachios (shipped in 9 oz. film bags). One of its customers had claimed that the company’s *Back to Nature* Trail Mix was contaminated with salmonella. Yesterday (7 April) the company expanded the voluntary recall to include all of its roasted shell pistachios and in-shell pistachios because of possible salmonella contamination.

A food-borne attack may be more preventable than an airborne or mail-borne attack, if only because there are so many nodes in the supply chain where hazards can be detected. Vulnerability points can be identified and mitigation measures put into place to reduce risk. Technology can also be leveraged to improve food security. For example, the ultrahigh-temperature (UHT) pasteurization of milk, which can inactivate the botulinum toxin, is now an option available to provide extended shelf life. However, according to a 2005 article (*Analyzing a Bioterror Attack on the Food Supply: The Case of Botulinum Toxin in Milk*, written by Stanford University researchers Lawrence Wein and Yifan Liu for the Proceedings of the National Academy of Sciences), UHT milk has not been embraced by consumers because the process has a noticeable effect on taste.

Molecular Typing and New Testing Technologies

However, rapid in-process testing technology is available to detect

the presence of dangerous biologic agents in food products. In addition, Arizona State University intends to use DHS funding to determine the most efficient ways: (1) to ensure that produce entering the United States from Mexico is safe; and (2) to strengthen the security of the supply chain from naturally occurring diseases, food tainting, and acts of terrorism. One probable fallout benefit of this effort will be the development of technology that will help trace the origin of a threat. Placing temperature sensors in shipment containers and monitoring temperature fluctuations is another strategy available to help determine the need for an en-route inspection.

Numerous combinations of toxic agents and dissemination scenarios make detection and prevention difficult. Khan and his colleagues suggested in their 2001 article that new technology such as molecular typing can be used to improve quality-control at locations where products are processed. The rapid detection, condemnation, and destruction of contaminated food before its transport and eventual consumption will help significantly in the prevention and spread of such contamination and the adverse health consequences that follow. Similarly, surveillance through the real-time monitoring of illnesses, as reported by properly trained health providers, can alert the nation’s healthcare and emergency-management communities to unfolding events. The networking of surveillance system outputs to detect outbreaks and initiate a response is increasingly important because failures in quality control and/or the intentional contamination of food “downstream” of the point of origin have occurred in the past and are likely to continue.

More Imports But “Scant Monitoring”

Improved monitoring, alerting, and notification capabilities, according to a January 2009 Global Security Newswire article (*Drug Safety Watchdog Sees Al-Qaeda Risk to U.S. Food, Drug Imports*), by Elaine Grossman is increasingly necessary because, in her words, the “scant monitoring of expanding U.S. food and medicine imports could heighten the risk of biological attack by al-Qaeda or other terrorist groups.”

Recent incidents of contaminated foreign foods and medicines generally reflect a business decision to reduce production costs in poorly regulated nations rather than an intention to harm consumers. However, according to Steven Nissen – a Cleveland Clinic cardiologist mentioned as a candidate for a senior post in the Obama administration – that problem has been compounded because the U.S. Food and Drug Administration apparently has exerted insufficient control over the quality and content of imported food and drugs.

A terrorist group could exploit this vulnerable gap in control processes because the United States has become so dependent on foreign nations for its foodstuffs. Today, as Grossman also points out, “eighty percent of seafood and nearly half of the fresh fruits consumed in this country come from abroad. Much of it clears customs based on electronic data provided by the importer without any U.S. sampling or testing.” Making improvements in technology that can help secure the safety and security of the food supply chain is critical to the nation’s public health and economy.

For Additional Information:

On Secretary Danzig's paper discussing bioterrorism preparedness, click on <http://biotech.law.lsu.edu/blaw/general/danzig01.pdf>

On Elaine Grossman's article about risks to U.S. food and drug imports, click on http://www.globalsecuritynewswire.org/gsn/nw_20090129_3617.php

On Ali Khan, David Swerdlow & Dennis Juranek's article titled Precautions Against Biological and Chemical Terrorism Directed at Food and Water Supplies, click on <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1497290>

On Lawrence Wein and Yifan Liu's article titled Analyzing a Bioterror Attack on the Food Supply: The Case of Botulinum Toxin in Milk, click on <http://www.pnas.org/content/102/28/9984.full.pdf+html>

On the "Pistachio Recall," reported in a 7 April Reuters report (Setton Pistachio Expands Pistachio Recall) by Grant McCool, click on http://news.yahoo.com/s/nm/20090407/hl_nm/us_pistachios_recall_2

Steven A. Harrison is the assistant director – emergency operations, logistics, and planning – for the Commonwealth of Virginia's Department of Health. His principal duties involve: (a) various tasks related to and/or requiring a working knowledge of both Chempack and the Strategic National Stockpile; and (b) execution of Virginia's own Hurricane Preparedness and Exercise Program. He also collaborates with other policy makers and decision making officials on the Cities Readiness Initiative and State Managed Shelter planning. Harrison, a graduate of the College of William and Mary, also holds a Master Exercise Practitioner certification and is pursuing a Master's Degree in Homeland Security.

Food Safety:

A Few Questions for the U.S. Government

By Diana Hopkins, Standards



The American public is still extremely concerned about the deaths and illness caused by the Peanut Corporation's food poisoning debacle earlier this year. So, apparently, is President Barack Obama – who in his 14 March radio address described the U.S. food-safety system as “a hazard to public health.”

From the U.S. taxpayer's point of view, the president's statement, combined with the food poisoning caused by *peanuts* – one of the most popular foods consumed by the nation's children – brings up three important and closely related questions: (1) How did the U.S. government itself reach such a low point in safeguarding Americans' food? (2) When can the public once again have confidence that its meals will not include a generous helping of healthcare concerns? (3) What specific factors led to what are obviously major deficiencies in safeguarding the nation's food supply?

Probably the most important factor – which partially answers the first and third questions posed above – is that food safety and security were not placed under the aegis of the Department of Homeland Security, an omission that left this critical area without the funding and attention that are obviously needed to safeguard the huge quantities and seemingly limitless varieties of food that are consumed by the American people each and every day. Another contributing factor, it seems, is that food-industry lobbyists were also quite successful in recent years in limiting the

legal responsibilities of the food industries themselves.

What matters now, and what President Obama also discussed in his 14 March weekly address, is that the U.S. government is today faced with what can only be described as a monumental task of revising and re-assembling virtually all components of its now fragmented food safety and security “system,” such as it is, into a well coordinated, adequately funded, and well staffed cooperative and interdisciplinary multi-agency whole that is partnered with academia and with the domestic and international food industries. Moreover, because so many executive-branch departments and agencies – the U.S. Department of Health and Human Services (HHS), for example, the Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA), and the Centers for Disease Control and Prevention (CDC), to name just a prominent few – are assigned different aspects of the U.S. government's food safety responsibilities, it is only natural to ask another relevant question: namely, how long will it take to unravel this – i.e., how long will it take before the American people will see significant progress in food safety?

Some Forward Progress – But More Needed

There are, of course, several ongoing processes and programs already in place in the U.S. government that focus on securing the nation's food supply, and several important steps that have been taken since the

terrorist attacks of 11 September 2001 to improve the safety and security of that supply. Among the most important of those processes and/or post-9/11 improvements are: the FDA's Protecting America's Food Supply Initiative and the same agency's Food Protection Plan; the Import Safety Action Plan; an 11 December 2007 agreement with China on food protection; the establishment of a \$450 million federal food-safety laboratory at Kansas State University; and the formation of the FoodShield communications network.

These initiatives, and others that could be mentioned, are important in themselves – but relatively lightweight when one considers that contaminated food outbreaks within the United States have nearly tripled since the 1990s. Probably the best publicized of those outbreaks and incidents, in addition to the peanut poisonings earlier this year, were the unprecedented 2008 beef recall caused by a California slaughterhouse situation involving “downer cows,” the 2008 and 2009 warnings about the widespread and deadly *Salmonella* contamination of foods, and the 2006 *E. coli* outbreak linked to spinach.

These and other less-publicized alarms and alerts have amply demonstrated that, despite the helpful but relative modest forward steps, noted above, that have been taken to improve the safety and security of the foods that Americans eat, the United States is still falling short in its efforts to protect those foods and ensure they are not only available, reasonably abundant, and healthful, but also not intentionally or accidentally harmful.

Intentional threats to Americans' food supply, such as the use of insects and genetically

modified organisms (GMOs) as ecological weapons, are a separate consideration, and of course require special attention. Nonetheless, unless and until the Obama administration is able to fully grasp and act on the multi-faceted issue of food security it seems very likely that: (a) significant new outbreaks

The United States is still falling short in its efforts to protect foods and ensure they are not only available, reasonably abundant, and healthful, but also not intentionally or accidentally harmful

will continue to occur; (b) such outbreaks will have some extremely adverse health consequences – and, quite possibly, cause additional deaths; (c) imported foods will remain a significant (and probably growing) safety and security threat; (d) the clear “tracking” of adulterated foods from source to table may well be impossible; (e) it is not only human beings who will suffer (because animal feeds also will be at risk); and (f) the average American consumer, who now spends approximately 20 percent of his income on food, will have very little confidence in the safety and security of the food he purchases.

Fortunately, President Obama himself seems to understand the dimensions of what is a clear and present – but not well recognized –

danger, and is on record as saying that underfunding and understaffing in recent years were significant factors limiting the FDA's inability to keep up with food-safety dangers and difficulties. Even so, it is important to remember that, even *with* adequate staffing and resources, food safety and security is a very complex, multi-faceted area to manage. Moreover, it is even more difficult to define and prioritize, on a continuing basis, *all* of the numerous threats that must be considered – and protected against. Fluid factors such as consumer demand, for example, frequent changes in production-to-consumption processes (including those related to distribution), and the ever-increasing centralization/globalization of food production, in almost every country in the world, will continue to add to the complexity of any nation establishing firm and continuing control over the safety and security of the food consumed by its citizens.

Turning Toward A New and Safer Course

Establishing security measures in the management of domestically traded foods in the United States is difficult enough in itself, but that difficulty is compounded exponentially by trying to establish similar security measures over the huge volume of foods *imported* into the United States.

Imported foods will always require more focus and management for a number of reasons – mostly, though, because import processes have a natural tendency to be less transparent, and transparency is needed not only to safeguard foods but also to speed up official reactions to events, enable the backtracking of food-borne diseases, and achieve accountability. The U.S. import volume has doubled

since 2003 and includes not only luxury items but also everyday staples as well as huge tonnages of meat, grain, processed foods and beverages of all types, dairy products, fish, poultry, fruit, and vegetables. A related concern is that importing an ever-increasing share of the nation's food supply is slowly but steadily increasing the nation's vulnerability in many ways.

Another factor to consider with regard to food safety is that the United States has gradually been changing the source of much of its food. One interesting aspect of food security relates to America's move from an agrarian society to one that relies on a centralized/globalized food supply. To put it into another context: From colonial days to and after World War II, most U.S. foods were home-grown, and moved from local farms to the consumer's fork in a few easily accountable steps. Cattle were raised in smaller numbers, usually on local farms that also grew corn, wheat, vegetables and other crops. Today, though – with meats, dairy products, grains, and other consumables being shipped to U.S. customers from centralized locations across the globe – it has become almost impossible to track the sources of many foods, to ascertain the quality of health measures taken before, during, and after the food is ready for export, and/or to confirm the security of the various production and distribution processes involved.

The centralization of a nation's food supply makes that supply – and, therefore, the nation itself – increasingly vulnerable to intentional threats. In addition, the sometimes unhealthy context of centralized food supplies – e.g., overcrowded feedlots – can and does result in massive pathogenic contamination. Two related concerns are: (a) how

the massive use of antibiotics on animals in centralized food supply areas may be (and actually is) propagating antibiotic-resistant bacteria; and (b) the probability that many of these antibiotics remain in the foods consumed by the public.

One of the few bright spots in an otherwise grim picture is that almost \$700 million is included in the federal government's budget for fiscal year 2009 (which started on 1 October 2008) for the Departments of Agriculture, Health & Human Services, and Homeland Security; most of that funding is intended to continue the individual and collective efforts of those departments to improve the nation's food and agriculture "defense system."

One final point: Not only during last year's presidential campaign but also since taking office, President

Obama has frequently compared the U.S. government to a huge ocean liner in explaining how long it takes to change the course of government programs – in other words, to turn the ship around. It seems clear, in that context, that several additional changes and improvements may be just over the horizon. With regard to the time factor, however, the American public must continue to be patient and cautious.

Diana Hopkins is the creator of the consulting firm "Solutions for Standards" (www.solutionsforstandards.com). She is a 12-year veteran of AOAC INTERNATIONAL and former senior director of AOAC Standards Development. Most of her work since the 2001 terrorist attacks has focused on standards development in the fields of homeland security and national defense. In addition to being an advocate of ethics and quality in standards development, Hopkins is also a certified first responder and a recognized expert in technical administration, governance, and process development. ▼



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Needed: More Effective Resources for Homeland Security

By Dennis R. Schrader, *Funding Strategies*



It can be argued that the foundations of homeland security and emergency management are built on state and local resources and capabilities that the federal government uses for *national* security purposes. Which is another way of saying that the U.S. government is, in effect, leasing public-safety and public-health/hospital infrastructure from state, local, and private interests.

Prior to the 9/11 terrorist attacks, the federal government initiated a few relatively small grant programs to engage state and local governments and begin to influence their behavior. After and in reaction to the 9/11 attacks, that approach was expanded and the funding available was increased significantly. The results have been mixed, though, and have raised concerns about such related issues as unfunded mandates, value received vs. funding provided, and intrusion into states rights.

Today, the federal government's homeland-security and public-health grant programs are somewhat fragmented, with too many independent requirements, and are hard to manage. Governors are forced to serve as *de facto* integrators of federal programs – if they choose to accept that role. States and local governments have frequently expressed concern about having to hire effectively trained personnel, but the grants make it difficult to cover personnel costs or to plan for a sustained effort.

This does not have to be the case. A recent analysis of 2006 census data reveals that states, cities, and other local jurisdictions, and healthcare

organizations themselves spent about \$300 billion on public-safety and public-health/hospitals that year. During that same time frame, the Office of Management and Budget (OMB) identified \$52 billion in federal resources, including \$3 billion for grants, spent for the same purposes. That contrast in funding totals raises two questions: (1) If federal grants are only about 1 percent of total state and local

A persuasive case could be made that the federal government should consider a system of Direct Federal Assistance, funded through carefully negotiated cooperative agreements

expenditures in this area, is the federal government providing appropriate compensation for the state and local resources provided? (2) Is this the best and/or only way to develop the nation's highest-priority national-security capabilities?

Would Direct Federal Assistance Be a Better Option?

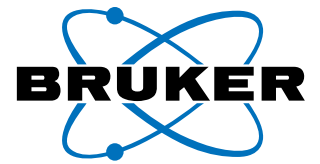
A persuasive case could be made that the federal government should consider another possible approach – namely, a system of Direct Federal Assistance, funded through carefully negotiated cooperative agreements, to meet high-priority

federal requirements at the state and local levels, and less reliance on grants in the future. Here it should be emphasized that certain grants that have resulted in positive systemic contributions – e.g., the Emergency Management Performance Grants (EMPGs) and the Assistance to Firefighters Grants (AFGs) – still make sense to continue.

There are several positive examples of federal direct assistance that already have been tried and proven effective. The Joint Terrorism Task Force (JTTF) model provides federal resources and support while integrating state and local resources into the JTTFs. In Maryland, for example: from 2004-2006, 60 percent of the JTTF was staffed by state and local officers.

DHS also has provided a number of highly trained analysts to serve at fusion centers throughout the United States, and has assigned critical-infrastructure PSAs (protective security advisors) to most of the states. An even more relevant and longer-term example, perhaps, is the National Guard, which has a long history of serving as a state asset while being supported by the federal government in a dual role. The development of the Guard's Civil Support Teams is a good example of recent forward-looking innovations that have made the Guard even more valuable in its dual federal/state role.

An important factor to consider in rethinking the distribution of DHS funds to the states is that the federal government has catastrophic-incident responsibilities that are often different from state and local priorities. Preparedness for



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catastrophic incidents requires detailed and rigorous operational planning. However, state and local governments do not usually maintain operational planning resources for scenario-based plans. To avoid the duplication of some rather expensive capabilities, state and local governments rely on the dual use of resources – as demonstrated by the all-hazards/capability-based concept of planning that has become increasingly popular in recent years. The FEMA (Federal Emergency Management Agency) regions throughout the country could provide trained planners directly to the states to bridge this gap.

The federal government also could provide program management resources directly to the states, through the FEMA regions that

have experience in developing requirements, both to assist the states in that task and to coordinate the development and testing of new and improved capabilities. In addition, the same FEMA regions – working in close coordination with other federal agencies, of course – could be a reliable conduit for providing access to Federally Funded Research and Development Centers (FFRDCs) to provide development services.

To summarize: The U.S. public rightly expects, and deserves, seamless government collaboration. This requirement in itself puts a premium on individual, state, and local preparedness capabilities. The challenge is to reconcile the various resource issues related to the frequently different roles, responsibilities, personnel, and

capabilities of the several levels of government involved. It may well be that precisely targeted Direct Federal Assistance funds could ease this challenge significantly.

Captain Dennis R. Schrader, USNR (Ret.), is president of DRS International, LLC, and former deputy administrator of the Federal Emergency Management Agency's National Preparedness Directorate. Prior to assuming his NPD post he served as the State of Maryland's first director of homeland security, and before that served for 16 years in various leadership posts at the University of Maryland Medical System Corporation. A licensed professional engineer in the State of Minnesota, he holds a bachelor of arts degree, with a focus in engineering, from Kettering University, and a master's degree from the State University of New York at Buffalo. While on active duty as a Navy Civil Engineer Corps officer he served overseas tours in Guam, Diego Garcia, and Sicily. He also has served on numerous homeland-security committees, including the Anti-Terrorism Advisory Council of Maryland and the Homeland Security Senior Policy Group.



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Hospital Security Planning: Operational & Technological Considerations

By Craig DeAtley, Public Health



Workplace violence, angered patients, and/or families frustrated by long waits to be seen – these and other psychiatric aspects of illness and injury are all too common to hospitals, and to their Emergency Departments in particular. These issues, along with the threat of terrorist attacks similar to those seen in Mumbai in November 2008, have significantly increased the importance of hospital security practices.

To improve individual and collective hospital security in District of Columbia hospitals, funding received from an HHS (U.S. Department of Health and Human Services) Coalition Partnership grant has been used to perform individual security-risk assessments of all hospitals in the D.C. area.

During those assessments, facility architecture, security operations, and technological security measures all were reviewed at each facility by a consultant with expertise in hospital security. The results were then shared with each facility in individual reports. Prior to final submission the results and accompanying recommendations were reviewed with key facility officials in a separate meeting. Following the completion of all of the security-risk assessments a comprehensive report – *Summary Recommendations on Hospital Security Best Practices* – was written and discussed at a day-long Hospital Security Best Practices Seminar during which hospital security personnel and law-enforcement officials discussed the common findings and strategies to combat the issues.

Best Practices Times Three

A previous issue of the *DomPrep Journal* (December 2008) discussed the best-practices architectural recommendations. However, the architectural design of a security system, important though it may be, is of little practical value unless it is complemented by comprehensive and effective operational and technological security practices.

Among the most important of the *Operational* best-practice recommendations presented at the seminar are the following:

- (a) Train and certify security officers as Special Police Officers – armed with the authority needed to make arrests;
- (b) Ensure that the security staff is able to participate in emergency response plans and operations;
- (c) Maintain comprehensive security policies and procedures, updating and revising them when and as necessary;
- (d) Institute an annual review-and-certification process for all written security policies and procedures;
- (e) Minimize security staff turnover by providing acceptable working conditions and requiring the direct hiring of employees;
- (f) Promote professional development and education in every way possible, including the provision of financial assistance to offset the costs involved in achieving higher levels of education; and
- (g) Ensure staff familiarization with the particulars of both the National Incident Management

System (NIMS) and the individual hospital's own incident-management team design, including specific details about the hospital's own security policies structure.

Among the *Technological* security recommendations presented were the following:

- (a) Use closed-circuit television (CCTV) surveillance systems to extend security-force effectiveness – and complement that capability whenever possible with digital-recording technology;
- (b) Install and use electronic access-control as well as alarm-monitoring systems;
- (c) Integrate the CCTV surveillance and access-control systems to ensure that security personnel monitoring the system are optimally effective and efficient;
- (d) Install and use an electronic-security guard-tour system to monitor security officers' performance of their checks and rounds;
- (e) Use two-way hand-held radios to ensure that continuous communication is available between and among security personnel, facilities personnel, and senior hospital management staff;
- (f) Buy and install infant-abduction prevention systems when care is provided to birthing and pediatric patients; and
- (g) Ensure that a mass-notification capability is available in all hospital facilities to provide zoned and "all-call" capabilities.

To briefly summarize: Hospital security has never been more critical than it is now. To upgrade security to the highest degree possible, architectural design must be complemented by operational policies that address such needs as staff selection, training, and certification maintenance, along with their integration within the hospital incident command system. Suitable technology – including but not limited to CCTV surveillance, digital recording, radio communications, and visible as well as audible alarm systems – must also be available for use in strategically important areas. Only through effectively addressing its fundamental architectural, operational, and technological needs can a hospital meet today’s growing security challenges.

For additional information:

On the 2001 DOJ report, see *Violence in the Workplace, 1993-99*, by D.T. Duhart;

On the 2008 survey discussed in the *Journal of Emergency Academic Medicine*, see “A Survey of Workplace Violence Across 65 U.S. Emergency Departments” (by S.M. Kansarga, S.R. Rao, A.F. Sullivan, and J.A. Gordon, et al).

On *Hospital Security: An Age-Old Problem Becomes Increasingly Important* – <http://www.domesticpreparedness.com/pub/docs/DPJournalDec08.pdf>

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. Prior to assuming his current position, he was an Associate Professor of Emergency Medicine at George Washington University for 28 years. He also works as a Physician Assistant at Fairfax Hospital, a Level III Trauma Center in Northern Virginia. He also has served as a volunteer paramedic with the Fairfax County Fire and Rescue Department since 1972.

Double the Trouble: H5N1 + Cat 3 Complications

By Ann Marie Brown & Jeffrey Peterson, Viewpoint



The state of North Carolina found itself facing a monumental – but, fortunately, imaginary – challenge on 12 June 2008. The scenario for the “Medical Evacuation Triage and Treatment Assessment” (METTA II) exercise was designed to evaluate the state’s ability to respond to a deadly pandemic influenza outbreak – complicated immensely by a hurricane-forced evacuation.

The exercise objectives incorporated a major test of the state’s Functional and Medical Support Shelter (FMSS) concept, which covers the evacuation of a long-term healthcare facility and, because of that requirement, thoroughly tested the ability of State Medical Assistance Teams (SMATs) to mobilize, transport, set up, and operate a portable medical station.

Within the METTA II scenario, a new strain of the H5N1 “bird flu” capable of rapid human-to-human transmission had emerged in New Guinea, and the World Health Organization (WHO) declared a Pandemic Alert Level 5 for what quickly became known as the “New Guinea flu.” A small cluster of cases was identified in the Charlotte, N.C., area, and North Carolina’s Division of Public Health undertook a massive effort to limit the spread.

Despite the fact that there had been only 10 confirmed cases, including two fatalities, the public’s well justified fear of the New Guinea flu resulted in a flood surge into area hospitals of “worried well” citizens that overwhelmed virtually all

local medical facilities. In response to North Carolina’s requests for federal assistance, the U.S. Centers for Disease Control and Prevention (CDC) sent some of its own personnel to help, along with some material assets from the Strategic National Stockpile.

Unthinkable Trouble and Additional Complications

Then the unthinkable happened. The National Weather Service notified North Carolina officials that a major tropical storm was on track to make landfall somewhere on the state’s southern coast, most likely as a Category 3 hurricane. Local governments recommended that coastal residents take themselves and their families to safer areas of the state farther inland.

At a simulated command post, the North Carolina Office of EMS (NCOEMS), working in close cooperation with the state’s Division of Emergency Management, decided to activate and deploy a State Medical Assist Team II (SMAT II) unit. The hospital-based SMAT II units are staffed with the physical resources and the full complement of personnel required to establish and operate a 50-bed field hospital. The other seven of the state’s eight SMAT IIs provided additional personnel. The NCOEMS also deployed two of the new FMSS trailers, which carry the equipment needed to establish an 80-bed alternate-care facility.

In the past, activating that many teams of personnel might well have been an extremely difficult challenge. Prior to April of 2007, there was no central volunteer

registry in North Carolina – several volunteer organizations maintained their own internal lists of volunteers, though, and each organization or team was in charge not only of recruiting its own personnel, but also of verifying their credentials and communicating with them during emergencies.

The Answer: A Multipurpose Web-Based Registry

But those tasks are not quite so difficult anymore. A new “ServNC” system was established in April 2007, under the leadership of Drexdal Pratt, chief of NCOEMS. The system was designed by a Pittsburgh (Pa.) firm specializing in web-based responder and incident-management solutions.

ServNC provides a single, web-based registry designed to manage both medical and non-medical volunteers. In North Carolina it serves as the state’s Emergency System for the Advance Registration of Volunteer Health Professionals (ESAR-VHP), which is administered and managed by NCOEMS and funded by HPP (Hospital Preparedness Program) grant funding administered by the U.S. Department of Health and Human Services’ assistant secretary for preparedness and response. The system has been enhanced to accommodate North Carolina’s own State Agriculture Emergency Programs and facilitate their use of the ServNC capabilities.

SMAT II teams and NCOEMS maintain a permanent marketing campaign to recruit volunteers to ServNC. Information about the program is distributed at local disaster-preparedness meetings and at regional and statewide conferences such as the annual Disaster Medical Preparedness

and Emergency Medicine Today. ServNC is also working with the Association for Home & Hospice Care of N.C. Inc.

The way the system works is fairly straightforward: Individual participants log onto the website and register themselves, providing their contact information, their skills, and their availability to respond; more than 3,700 registrants had already done so as of late March of this year. The current roster includes doctors, nurses, and other allied health professionals as well as non-medical volunteers such as dispatchers, administrative assistants, firefighters, and law-enforcement personnel.

To facilitate the registration process, the system automatically verifies any professional licenses registrants claim to possess through electronic interfaces with: the state’s Nursing, Respiratory Care, and Pharmacy Boards; the North Carolina Medical Board; the North Carolina Office of EMS; and a number of national databases, including DEA Licensing. Finally, the system evaluates the individual volunteer’s experience and assigns that person an Emergency Credential Level rating – i.e., a numeric value which helps ensure that deployed volunteers possess the education, the license, the skills, and the current practical experience needed to support a response.

The personal data of every member of North Carolina’s SMATs is electronically stored within the ServNC database. During the METTA II exercise, Ann Marie Brown, an NCOEMS disaster medical specialist [and co-author of this article], used the system to quickly identify all of the SMAT II members, alert them about the impending call-up, and give them

the specifics of their own potential deployments – including, for example, information about how long they might be needed, where they would be expected to report, and what personal gear and/or equipment to bring with them. Each team member was easily able to use the system’s internal two-way communications capability to report his or her availability back to Brown at the command post.

To date, the system has been used primarily for notifying volunteers of training opportunities, conferences, and “exercise deployments” such as METTA II. Among the members of the state’s eight SMAT team deployed for the METTA II exercise were more than 275 well-trained and qualified responders.

Following the exercise, Brown commented that the ServNC system “worked very well.” She also noted that, “Administrators at all levels” must be trained and tested on a regular basis. “ServNC is a great tool,” she said, “but if the core personnel are not familiar with the system it cannot be used to its fullest potential – exercises like this help to do that.”

Ann Marie Brown (pictured), a public health educator and emergency medical technician-paramedic, has been the NCOEMS central region disaster preparedness coordinator for more than six years, and the ESAR-VHP coordinator since December 2006. Jeffrey B. Peterson is the emergency-response liaison with NCOEMS and in that post is responsible for coordination with the State Medical Assistance Teams and local EMS agencies in the areas of disaster medicine and emergency response.

Timothy Harvey, pandemic influenza coordinator for NCOEMS (and exercise director for METTA II), and John Gaffney of L-3 Communications, Global Security, and Engineering Solutions, who led the Exercise Support Team, provided significant assistance in the preparation of the preceding article.

First-Person Report

Operation “CAMCO” and How It Grew

By John J. Burke, Fire/HazMat



The United States Fire Service has seen many changes in the last century. The most recent positive changes are

the development and production of new thermal-imaging equipment and personal firefighting gear that many users say is the safest money can buy. The principal effect of these equipment upgrades has been less economic damage and a drastic reduction not only in the number of fires that have to be fought but also in the numbers of deaths and injuries caused by fire. Those reductions are affecting the potential staffing of many fire departments that are not dual-trained to provide EMS (emergency medical services) transport. It is time, therefore, to take a close look at what seems likely to be the next big change for the fire service – namely, the gradual but increasing shift to all-hazards response capabilities, including but not limited to public-health emergencies.

The Town of Sandwich, Massachusetts, the oldest on Cape Cod, is about 60 miles south of Boston, the state capital. The Town’s fire department and local Board of Health agents were discussing a recent public-health emergency event at a local high school and started a dialogue about the planning needed for joint responses to future all-hazard public-health emergencies. The Sandwich Fire Department is a 40-member full-time organization that not only fights fires but also provides advanced life support EMS transport services for the Town’s 24,000 year-round and 55,000 seasonal residents. The land area of the Town includes the approximately 20 square miles that

make up the Massachusetts Military Reservation, so military awareness is part of everyday life for the year-round residents.

The Town’s Board of Health Agent, David B. Mason, told Fire Department officials in June 2005 that a new federal mandate would

The units are sized and structured identically, so if any unit is deployed as a back-up in another area of the country there would be few if any interruptions in operations

soon be issued on the establishment of new Emergency Dispensing Sites (EDSs) that would be used to distribute various types of antidotes or vaccines during or in the aftermath of future public-health emergencies and/or WMD (weapons of mass destruction) terrorism attacks. Mason was aware of the National Incident Management System but did not know specifically how it would apply to EDS response operations. However, after Fire Department Chief George P. Russell was notified of this probable future need he detailed a fire prevention officer, John J. Burke [the author of this report], and a local EMS director, Jason Viveiros, to work with the Health Department in developing an All-Hazards Public Health Response plan that would

include Fire Department and Police Department involvement.

PODs, EDS, NIMS, And a Drive-Thru Format

An EDS working group was then formed and it was decided that the site used for the Town’s annual flu clinic would probably be the best venue to be used to test the pandemic-response plans. During that test, the Town’s citizens would come to the clinic to receive their annual flu vaccine (issued by the Board of Health); the EDS working group would be assigned full NIMS roles and operate as they would at a medical point of distribution (POD) site; and most of the shots would be administered in what is called the “Drive-Thru” format. The clinic site was selected and workable traffic and pedestrian plans developed. During this planning period the working group noticed a couple of areas of concern in the master plan. A unified-command post would be needed, for example, but the church that was being used for the dispensing of the flu vaccines did not have adequate command-post capabilities. The Town therefore had to find an alternate support facility to assist in the overall exercise.

A call was placed to the Massachusetts National Guard Bureau’s 267th Combat Communications Group to ask if assistance could be provided in the areas of command-post operations and communications interoperability. Colonel Anthony Schavi of the Massachusetts Military Reservation agreed to the request, and the exercise was given the name “Operation CAMCO” (Civilian and Military Cooperative Operation). Fortunately, the 267th CCG already possessed a JISCC (Joint Incident Site Communications Capability) system – which, it is worth noting, had been successfully deployed both

during Hurricane Katrina and in Operation Iraqi Freedom.

The 267th CCG, which also has been assigned a domestic homeland-security mission, agreed in addition to provide not only the communications-infrastructure support needed but also the command-post quarters – at no cost to the Town of Sandwich. The JISCC system was funded in the aftermath of Hurricane Katrina, when millions of dollars of DHS (Department of Homeland Security) funds were allocated to the establishment of JISCC units throughout the country (there are 92 JISCC units operational throughout the United States, including at least one in every state). The units are sized and structured identically, and operate under the same guidelines, so if any unit is deployed as a back-up in another area of the country already familiar with JISCC units there would be few if any interruptions in operations.

A full-scale exercise to test the CAMCO capabilities was scheduled for 14 November 2008. The command post was manned well ahead of time and at 12:00 noon the clinic opened. The clinic saw 1,000 residents come through in the following seven-hour period – about two thirds of them taking advantage of the “drive-thru” option. The ICS command structure was run by the Fire Department and Health Department, with their military counterparts “shadowing” the various ICS (Incident Command System) positions to learn the operational styles of the public-safety civilian components.

The local health agent served as the Unified Incident Commander, and received the full support of the public-safety chiefs. Because of my own affiliation with the Barnstable County Type III Incident

Management Team, I was assigned as the Operations Section Chief (OSC). Members of the Public Health nursing staff who ran the various dispensing sites – including the drive-thru and indoor vaccination stations – served as division/group supervisors. The advantage of having a qualified Type III OSC is that the division/group supervisors could feel confident in trying out and testing the ICS terminology and their newfound supervisory status with the full knowledge that a qualified person was monitoring and advising so that no major mistakes would be made. The benefit provided by this close supervision turned out to be a key factor in the successful training of the public health staff.

Military Contributions Key to a Major Success

The Military JISCC unit provided interoperable communication support and real-time video feedbacks both to the base and to George Mason University (GMU) in Virginia (just outside of Washington, D.C.), where a “Doc in the Box” scenario was established to have personnel at GMU evaluate the simulated flu-shot “victims.” This VTC (Video Transmission Capability) component was able to demonstrate the “reach back” capability of the JISCC unit and allowed the JISCC team to accurately test a real-world situation with real-time consequences. The JISCC unit set up the command post with 10 computer work stations, each of them with full internet capability, and provided fax and printing services as well. The incident commander thus was able to work in a secure and tech-savvy environment at the actual site of dispensation – remaining at all times, though, in full communication with the State of Massachusetts’s Emergency Management Agency and Department of Public Health.

The exercise proved to be a major success – on many levels. The exercise showed that military support components could fold into a civilian organizational response structure with relative ease and provide critical infrastructure support. The Public Health agents participating were able to practice their ICS roles in a real-time setting – with the full support of and backup from more knowledgeable ICS public-safety leaders. The Public Health responders said they were particularly appreciative of the opportunity to apply all of their own ICS training to a real-world situation. The Fire Service was able to almost literally reinvent itself by taking the lead on an All-Hazards Public-Health event and show the public that its time-honored role as a “hoses and band aids” department is rapidly and successfully evolving into a new role – as an agency fully qualified to meet the dangers of the 21st-century world of bioterrorism and weapons of mass destruction.

The members of the Sandwich Fire Department have a newfound knowledge and appreciation for the potentially disastrous events that could strike at any time. At the end of the day, it was encouraging to see a Unified Command truly live up to its name: unified not only in its title but also in the planning for and execution of an incident action plan. In short, the exercise proved to be a potentially historic turning point for the local fire service to evolve into much more of an All-Hazards-Response organization.

John J. Burke, a longtime employee of the Sandwich Fire-Rescue Department, received a bachelor's degree in Fire Science from Columbia Southern University. He is certified in all levels of the National Incident Management System and nationally certified as a firefighter I/II, a fire inspector I/II, and a hazardous materials operations and incident safety officer.

TWIC Program Close to Full Implementation

By Corey Ranslem, Coast Guard



The Department of Homeland Security has been working on a common port-access credential since 2003.

That credential – the Transportation Workers Identification Card (TWIC) – is a biometric ID card that allows authorized personnel access to the secure and restricted areas of a port, regulated facility, or regulated vessel.

Development of a common-access ID for port workers was required by the Maritime Transportation Security Act (MTSA) of 2002. The MTSA regulations establish responsibility for the overall program as well as enforcement and application requirements. The Transportation Security Administration (TSA) was given the authority, and responsibility, both for establishing the program and for the overall enrollment process – including the background checks required and distribution of the TWIC.

The U.S. Coast Guard has the responsibility for enforcement. The over-arching objective of the TWIC program is to improve security in U.S. ports through use of a common ID card and background checks valid for entry into any U.S. port. The TWIC does not automatically grant the user access to any specific port, facility, or vessel. The card holder must have access permission granted from the facility itself or from a vessel security officer.

Unforeseen Delays in Compliance, Implementation

The program was scheduled to be implemented in ports across

the United States last summer. However, unforeseen delays pushed the compliance dates into 2009. The first ports actually came online, though – as did enforcement of the program – in late 2008. The majority of ports along the east coast of the United States are now actively participating in the TWIC program – this means that anyone seeking

The TWIC does not automatically grant access to any specific port or vessel; the card holder must have permission granted from the facility itself or from a vessel security officer

unescorted access to secure areas of those ports must possess the TWIC credentials. If a person seeks access and he or she does *not* possess a TWIC, that person can be escorted by a TWIC holder.

The Coast Guard has reported that TWIC implementation has continued with very few problems encountered in ports and terminals around the country. Two terminals on the Miami River in Miami, Florida, were closed for a brief period of time, but the problems leading to the closure were quickly resolved.

The TWIC program has met resistance, though, from at least

some trucking companies and from the longshoremen's unions. The Co-Chair of the Longshore Workers Coalition, Leonard Riley, said he is concerned about transportation workers being denied access to the piers they are working. "We are concerned about the implementation of the TWIC program," he said. "The Longshore workers and truck drivers don't feel like they have been included as ... stake holders in this process. Several people have lost their opportunity to work in the ports because of the TWIC. The Longshore workers feel like they are being treated as terrorists rather than partners."

TSA officials reported that 34,240 disqualification letters had been issued as of 15 March, but also pointed out that, when the agency's adjudication process had been completed, there was a total of only 125 final disqualifications. TSA has issued close to one million cards to date and expects that number to double in the next couple of years.

A Broad Range Of Mandatory Participants

There are a number of people who will be required to possess a TWIC. Anyone who requires unescorted access to the secure areas of ports and port facilities is required to possess a TWIC. The TWIC program also is expected to have a substantial impact on the recreational boating, yachting, commercial fishing, and diving communities. All credentialed U.S. merchant mariners will be required to obtain a TWIC, whether or not they access a port. The TWIC implementation rules apply to

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anyone holding a Coast Guard-issued merchant mariners license, merchant mariner document, or certificate of registry. All ship security officers (SSOs) on MTSA-regulated vessels also will be required to obtain TWIC credentials.

There are a number of federal, state, and local agency personnel who are exempt from the TWIC program while they are acting in an official capacity. The largest exemption covers law-enforcement and public-safety agencies, including police departments and fire departments. However, a public-safety employee is not exempt if he or she holds a captain's license as part of his/her official duties. The full list of exempted personnel and agencies is posted on the TSA website.

More Than a Few Simple Bits of Complexity

Enforcement of the TWIC program is carried out primarily by biometric readers specifically designed to permit law-enforcement and security personnel to positively identify and match the card with the holder. The National Maritime Security Advisory Council (NMSAC), working with TSA,

invited key security-technology industry personnel to meet and work with government officials on the TWIC program and help them define the technological requirements for the biometric readers.

The requirements for the TWIC are in fact significantly different from those used for most other proximity-type cards, primarily because the government is dealing with personnel data. The TWIC "isn't a simple flash-pass," said Consuelo Bangs, Senior Program Manager at Sagem Morpho Inc. (one of several companies involved in development of the biometric-reader technology). "It has the ability to pass over 27,000 bits of data securely between the card and the reader, while normal proximity cards pass [only] 26 bits of data. Most of the [TWIC] data ... [consists of] the security encryption key and digital security that make it almost impossible to counterfeit and pirate information from the card."

The biometric-reader technology companies are operating in accordance with the federal information processing standard (FIPS) 201. The FIPS 201 standard defines not only how the card and

The TWIC implementation rules apply to anyone holding a Coast Guard-issued merchant mariners license, merchant mariner document, or certificate of registry

readers are designed but also how the information can be passed between them. There are several pilot study programs ongoing at various ports around the country focusing on, among other things, the effect the TWIC program has on throughput and commerce. There is still a lot of other work continuing with the biometric-reader program. The Coast Guard has not yet set a firm date when the biometric readers will be fully ready, but is continuing to work with the companies already involved in development of the biometric-reader technology.

Corey D. Ranslem, chief executive officer of Secure Waters LLC – a maritime-security and consulting firm heavily involved in maritime training, maritime security, and a broad spectrum of other programs in the maritime field – is the former regional manager of Federal Government Operations for Smiths Detection. He has received numerous awards and citations from the U.S. Coast Guard and other agencies and organizations active in the field of maritime security. He holds a Bachelor's Degree in Communication and Political Science from the University of Northern Iowa, an MBA in International Business from Georgetown University, and has almost 15 years of experience in maritime law enforcement and security.

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Green Building + Greater Safety = Survival

By Joseph Cahill, EMS



Developers, always on the lookout for ways to add value to their properties, have seized on “building green” as a way to serve the public’s desire to shrink its own carbon footprint. There is an entire town in Kansas that had been leveled by a tornado and is now “rebuilding” green, and another town in Florida being built green from the ground up.

Another relatively recent phenomenon: Security-minded homeowners are preparing to barricade themselves in “safe” rooms and/or behind the walls of gated communities. These and other new security systems and processes add substantially to the value of a home – and, not incidentally, to its original construction cost.

What is missing in most if not all of these new green features is a focus on *disaster-resistant* housing and communities – i.e., homes and entire neighborhoods designed with features that improve the chances for survival of their occupants.

Even though these concepts may not always seem to be mutually supporting, the basic ideas are so intertwined that they cannot be separated easily. One example of this is the green concept of living “off the grid” – i.e., by literally disconnecting one’s home from the power grid (and sometimes other critical infrastructures as well). A less extreme version would decrease the reliance on external sources – usually of energy.

A house with solar panels on the roof has a smaller carbon footprint; it also has a higher level of self-sufficiency if and when the power to the region is interrupted. This

is one instance in which green technology also serves emergency-preparedness needs. Any technology that does not consume fuel (which produces carbon-rich exhaust) automatically lowers the carbon footprint (as long as the flow of that fuel is not interrupted).

Long-Range Planning vs. Overly Optimistic Assumptions

As with most other emergency-planning ideas and practices, the planning for disaster-resistant living should ideally start with individual homes and then expand to the community at large. Meanwhile, individual homeowners usually should start thinking about changing their way of living rather than focusing on contingencies for uncommon emergencies. As with most other aspects of emergency planning, setting up a day-to-day model that also can be applied to emergency situations is the key to success.

Space can be designed into houses for the storage of emergency food supplies. Every family having a year’s worth of supplies on hand would be better off, obviously, than having six-months’ worth, which is better than having a month’s worth of supplies, which is better than having a week’s worth. Unfortunately, because there are and probably always will be many citizens who wish, and then assume, that enough food supplies will be available each and every day, communities must also plan and work together to ensure the survival of the community.

The individual-family planning process must therefore be carried through to the community – whether that community is the local

neighborhood or the whole town. Developers building large numbers of homes can help the process by including, in their construction plans, windmills for electricity or community wells to supply water when the community’s power and water infrastructures are interrupted.

Beyond being prepared for a possible loss of infrastructure, each region of the country must face its own specific hazards (tornadoes in Kansas, for example, and blizzards in Colorado and the Dakotas); this daunting challenge can be made easier by remembering that every hazard has a mitigation strategy that can be designed into both the individual houses and the entire community.

Although increased cost is frequently pointed to as the primary reason for *not* building greener or more resilient houses, the focus on cost alone ignores other factors that should be considered. The real tradeoff is the higher cost for initial construction vs. higher energy costs later and an increased risk of total loss during a disaster. Green homes aim at being off the grid; disaster-resistant homes, however, must by definition be able to do without the grid. For both, though, the mutual goal – and the common factor that unites them – is to be totally independent of the critical infrastructure.

Joseph Cahill, a medicolegal investigator for the Massachusetts Office of the Chief Medical Examiner, previously served as exercise and training coordinator for the Massachusetts Department of Public Health, and prior to that was an 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, and prior to that was the department’s Division 6 ALS coordinator, covering the South Bronx and Harlem. ▼

Funding & Capabilities: A New Look at DHS Grants

By Timothy Beres, *Funding Strategies*



As the grant programs funded by the U.S. Department of Homeland Security (DHS) have matured over the last several years, and as federal, state, and local priorities have changed, so have the expenditures made by the recipients of those grants. The initial grants were focused primarily on equipment, but more recent ones have placed a greater emphasis on planning. However, as the life cycle of much of the equipment that was initially purchased comes to an end, state and local jurisdictions are grappling with the need to invest in replacement equipment to maintain the capabilities they have enhanced or developed over the past seven years.

In 2003, the level of grant funding available for homeland-security purposes increased dramatically, rising from approximately \$600 million provided annually to more than \$3.5 billion. Most of this funding was dedicated to capital expenditures, primarily equipment that could be used in response to a WMD (weapons of mass destruction) terrorist attack; this emphasis on equipment and other capital expenditures was also true of the smaller grants made to state and local communities prior to 2003. Initially, the funding was provided through two major grant programs: the State Homeland Security Grant Program (SHSGP) and the Urban Area Security Grant Initiative (UASI). Since 2003, other grant programs have been added, and the Emergency Management Performance Grant (EMPG), a traditional FEMA grant program, has been greatly expanded.

After the 9/11 terrorist attacks and during the early evolution of the grant programs there was severe pressure to allocate and use the

grant money as quickly as possible. However, although that sense of urgency did facilitate the purchase and rapid fielding of much-needed equipment at the state and local levels, it was often done at the expense of the long-term planning development that experience shows should be an equally important factor in an effective homeland-security risk-management program.

Numerous Commitments, Uncertainties & Limitations

Although the use of grant funds to support planning and program administration has been allowable for many years, many jurisdictions have been reluctant to commit to use those funds to hire personnel, partly because of various uncertainties related to grant funding and partly because of the long-term commitments associated with the hiring of additional staff. There was, in fact, a long-running debate – in both the executive and legislative branches of government – over the proper use of grant funds. On one side were those who questioned whether grant funds should be allowed to support activities – planning and administration, for example – that rely primarily on the hiring of new personnel; on the other side were those who believed the funds should be used primarily or perhaps exclusively for capital expenditures. Eventually, the Office of Management and Budget (OMB) resolved the matter by imposing severe limitations on the use of grant funds for administration and personnel.

During this same time frame, state and local governments were being hit with a series of requests and demands from the federal government – which understandably, for example, wanted as much information as possible about the operational responses to

heightened alert levels, which are set by the federal government but expected to be followed by the state and local governments. There also were numerous federal requests for lists of critical infrastructure, demands for implementation of and compliance with various particulars of the National Incident Management System, and mandates for the submission of information related to current capabilities and the capability gaps.

Responding to these and other requests was no small task, and was complicated by the fact that federal efforts were not always well coordinated and, in some instances, caused a needless duplication of effort. In addition: (1) the technology fielded by the federal government to capture the information provided by state and local jurisdictions was not always reliable; and (2) the administrative burden imposed on state and local jurisdictions to meet the requirements for information frequently exceeded the personnel resources available to compile that information. These and other pressures led to frenetic levels of activity, but all too often that activity produced disconnected and sometimes incomplete lists of critical infrastructure, added to the capability shortfalls, and increased the number of resource gaps identified. The end result was that deliberate planning as an essential component of a well coordinated homeland-security risk-management program was sacrificed and there was a much greater focus on *list* management – but very little *risk* management per se.

Additional Funding, New Programs & a Clear Focus

Following Hurricane Katrina, planning finally became a major

focus nationally and was strongly emphasized by and within the grant programs. Planning was highlighted as a specific priority in both the SHSGP and UASI grants in 2006 and 2007, and also was emphasized in Port Security and Transit grants. EMPG funding also was increased significantly, and a new grant program for catastrophic planning was created.

Nonetheless, and despite this much-needed greater focus on planning in the grant programs, equipment is still by far the largest area of actual expenditures, with interoperable communications equipment leading the way. Moreover, because much of the equipment purchased in earlier grant cycles is now coming to the end of its operational life – and replenishment is needed if current capabilities are to be maintained – the current spending trend is likely to continue.

As state and local budgets tighten and the funding available for federal grants becomes scarcer, it is essential that jurisdictions at all levels of government begin to think carefully about the *life-cycle* costs associated with the capabilities they are building for homeland security – both now and in the future. An effective homeland-security risk-management program will routinely analyze threats, vulnerabilities, and consequences, allowing a state or local jurisdiction both to understand its risks and to act deliberately to reduce those risks – without reducing capabilities.

However, without an understanding of the life-cycle costs associated with the various capabilities – particularly capabilities related to personnel, training, and/or equipment – required to reduce a

jurisdiction's risk, that jurisdiction is limited in its ability to make mid-to long-term decisions on where and how to allocate the funding needed to maintain or increase a specific capability. When conducting planning within a homeland-security risk-management program, therefore, the analysis of the cumulative costs related to specific capabilities should include not only initial expenditures but also the full life-cycle costs –

not only for manpower, training, and operations, but also for the maintenance and/or replacement of the various elements that make up a specific capability.

Timothy Beres, vice president, CNA Safety and Security, is responsible for that organization's safety and security research and analysis program in the fields of public safety, criminal justice, homeland security, emergency management, and emergency public health.

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New Mexico, California, Minnesota, and Texas

By Adam McLaughlin, State Homeland News



New Mexico To Receive Newly Assigned BEST Unit

DHS (Department of Homeland Security) Secretary Janet Napolitano has announced that a Border Enforcement Security Task Force (BEST) will be assigned to New Mexico as a major step in a new administration plan to help end the violence along the U.S./Mexican border and stop a brutal war by (and among) drug cartels against the Mexican government. “Every state along the border will now have BEST teams,” Napolitano said. “New Mexico had not previously had one.”

“Our goal is twofold,” Napolitano said in late March, “One is to provide assistance to the government of Mexico, to break up these huge cartels which are funneling tons of illegal drugs into our country on a regular basis, and are conducting this war of violence within Mexico. The second is to guard against an increase in violence in the United States as a result of the actions undertaken in Mexico.”

The BEST teams include agents from Immigration and Customs Enforcement (ICE), U.S. Customs and Border Protection, the Bureau of Alcohol, Tobacco, and Firearms (ATF), the Drug Enforcement Agency (DEA), and the FBI. The teams, working directly with state and local law-enforcement agencies, target illegal drugs and weapons as well as bulk cash traffickers.

Nine BEST teams, including four in Texas, already are positioned in three of the four U.S. Border States

(Arizona, California, and Texas), but none is currently stationed in New Mexico. Napolitano said she also plans to double the total number of teams, to 18, in the months ahead. “These multi-agency task forces have demonstrated their effectiveness,” she said, “and we strongly believe that establishing a BEST in New Mexico should be part of any comprehensive plan to address the security situation along the Southwest border.”

The new DHS Secretary said that her department also plans to: (a) triple the number of intelligence analysts working along the southwest border; (b) increase the number of ICE agents assigned to the U.S. embassy’s attaché staff in Mexico; (c) double the number of Violent Criminal Alien Teams now assigned to the department’s southwest border field offices; and (d) quadruple the number of U.S. border-liaison officers working with Mexican law-enforcement agencies.

Meanwhile, the U.S. Justice Department will add 16 new agents to its southwest border field divisions, and the ATF is reassigning 100 more agents to the border within the next 45 days – primarily to fortify its Project Gunrunner, an initiative designed to disrupt the trafficking in illegal arms between the United States and Mexico.

Commenting on the numerous augmentations announced by Napolitano and other senior officials, New Mexico Governor Bill Richardson said that he is “pleased and gratified” that the Obama administration “is turning its full attention to the problems of criminal law enforcement along the New Mexico-Mexico border.”

California Conducts Bioterrorism Exercise in Bay Area City

The East Side Club at the Oakland Coliseum was transformed in late March into a treatment center for victims of a mock anthrax attack, with nearly 1,000 volunteers and representatives of public-health and emergency-response agencies from 10 California counties and two of the state’s largest cities taking part in the exercise.

The Bay Area Mass Prophylaxis Exercise tested the ability of participants to respond to a scenario involving the intentional release of an aerosolized biological agent, anthrax. The exercise scenario required the mass distribution of drugs to treat the potentially thousands of citizens who might be exposed and could face death if not treated in a timely manner.

At a media briefing a few hours into the exercise, Dr. Muntu Davis, division director of the Alameda County Public Health Department, said that one of the main goals of the exercise was to make sure that victims received, as quickly and efficiently as possible, the medicines they needed to combat their exposure to anthrax – and to screen those same patients to make sure that they did not receive medications to which they might be allergic.

The exercise consisted of two main components, officials said. One was testing the capacity of the jurisdictions cooperating in the exercise to disseminate medications to literally hundreds of victims – in this exercise, 700 civilian volunteers. The second was to test the individual and collective abilities of the

numerous agencies participating to stock a warehouse of medications – and then to track, manage, and dispense the medications according to the varying needs of the several health jurisdictions involved.

Zerlyn Ladua, the Alameda County Public Health Department's emergency health preparedness coordinator, said that the exercise topped off months of planning and the continued efforts of Bay Area public health agencies "to test and develop protocols, procedures, and best practices that are shared" throughout the state and nation.

Davis commented that an anthrax attack, or *any* biohazard attack, is something that one hopes never happens, and pointed out that, by carrying out such exercises, officials can learn the best way to distribute medications in other types of medical emergencies – a flu epidemic, for example.

Lieutenant David Brue of the Oakland Fire Department said that the mass-prophylaxis exercise was developed and run in accordance with guidelines established by the Department of Homeland Security's Exercise and Evaluation Program, and was funded by the Bay Area Super Urban Area Security Initiative, a regional agency created in 2006.

The ten counties participating in the exercise were Alameda, Contra Costa, San Mateo, Solano, San Francisco, Santa Clara, Santa Cruz, San Benito, Napa, and Sonoma; Oakland and Berkeley were the principal cities participating.

Minnesota County's New 911 Call Center Open for Business

Washington County's new 911 communications center went into

action early last week (7 April), replacing 15-year-old equipment and a cramped "dungeon" room in the basement of the county's Law Enforcement Center.

The center was one of the first new spaces to open in Washington County's \$59.6 million expansion of the government center campus in Stillwater. Dispatchers handle the 911 calls from 230,000 residents and direct the traffic of 14 fire companies, 10 law-enforcement agencies, and seven ambulance services. Chief Deputy Michael Johnson said that the transition to the new center, led by Capt. Steven Pott, succeeded with no interruption in service.

"This is, like, amazing," said dispatcher Jennifer Peltier as various bulletins and other information items percolated onto an array of multi-colored screens

in front of her. The public should notice greater efficiency almost immediately, she said, because the new communications system is quicker and more seamless in transmitting information to police, medical personnel, and firefighters.

Washington County installed new 911 telephones to replace the old equipment and a new computer-aided dispatch system that will help improve records management. The new call center is equipped with a new metrowide 800-megahertz radio system that has eliminated previous communications "dead spots" in the areas around Hugo, Afton, and a few other Washington County communities.

The county operated both the old and the new call centers for several hours on 7 April to ensure that all of the new equipment was working properly, said Sheriff William Hutton.

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The new spaces, on the center's third floor, have tornado-resistant windows on the north and east sides. Hutton joked at the county board meeting that morning that a dispatcher on the overnight shift had remarked about the "wonder" of seeing the sun rise. Because the old 911 center had no windows, dispatchers were unable to personally see any changes in the weather that might lead to an increase in service calls.

The new spaces, six times bigger than the previous spaces, also help reduce the ergonomic injuries for dispatchers – who typically work 10-hour shifts. Peltier said that she could shift the computers on her digital workstation to make them more comfortable for distance and height, and can adjust the temperature around her with a flip of a switch. Because the dispatchers sit for such a long time, she commented, "being comfortable is important."

Texas Austin Hosts National Hurricane Conference

Graphics that show the risk of storm surges are only one way – but a very important one – that political leaders and emergency responders alike hope to better prepare themselves, and the communities they serve, for the 2009 hurricane season. The annual National Hurricane Conference, held this year at the Austin Convention Center from April 6 to April 10, pulled together more than 1,300 workers in federal, state, and local governments with emergency services providers to share their personal hurricane experiences, learn about new technology and training programs, and plan for the coming season.

Bill Read, director of the National Hurricane Center, told those who attended the conference that most

coastal residents do not always fully understand the risks posed by storm surges, and that the center did not communicate information about that threat very well before Hurricane Ike, which stormed ashore in Galveston last September. He told hurricane responders from around the country that he hopes the new graphics will help in the 2009 storm season, which officially begins on the 1st of June.

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Read said he thinks that an improved information and education program, combined with an official call to evacuate, would encourage more coastal residents to leave the area and seek shelter inland. He also pinpointed faster mobilization and public education as major issues ahead of the 2009 hurricane season.

"A lot of people in the decision-making mode that have to move big things do understand that you are making your calls when there is less than 20 percent certainty," he said. However, he added that "I do not know if our folks in the

media or the public have that same level of understanding."

Texas Governor Rick Perry and Nancy Ward, the interim head of the Federal Emergency Management Agency, also addressed the conference attendees. Perry praised local officials, search-and-rescue personnel, and area utility companies for their responses before, during, and in the aftermath of Hurricane Ike. He said that the state's performance illustrated the strength of an approach based on local responses to local challenges, particularly when combined with proactive evacuation efforts.

Perry also called for lawmakers to support four hurricane bills he has marked as emergency items for the state legislature this year. One would help reimburse electric companies for the costs they incurred from restoring services during and after major disasters.

Ward told the conference that FEMA is generally well prepared for the new hurricane season, but is also working on long-running problems such as the providing of temporary housing, the improvement of inter-agency communications, and public education.

"The only way to solve these problems," she said, "is to bring everyone at all levels of government, the private sector, non-profit [organizations], and voluntary agencies, to the same table and work out – hammer out if we need to – the answers to the challenges that we see during each and every disaster."

Adam McLaughlin is with the Port Authority of NY & NJ, and is the Preparedness Manager of Training and Exercises, Operations & Emergency Management, where he develops and implements agency-wide emergency response and recovery plans, business continuity plans, and training and exercise programs.



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