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Editor's Notes

By James D. Hessman, Editor in Chief

There is no such thing as a perfect plan – and even if there were, it would mean nothing if those responsible for implementing it were either not totally familiar with all aspects of the plan or had never had the opportunity to practice their own supervisory or operational roles.

Which is why, in addition to continuing – in this monthly printable issue – the modernization and layout improvements initiated several weeks ago, *DPJ* is opening a new "Exercises" Channel devoted not only to the individual and team training needed by all responders, across a broad spectrum of professional disciplines, to develop a high level of proficiency but also to what is needed next: drills, exercises, and constant practice.

Adam McLaughlin leads off with an insider's on-the-scene report on how New Jersey and New York collaborated to develop, and then test, an ambitious training exercise based on the terrorist use of improvised explosive devices in one of the several train tunnels running under the Hudson River from New York City to various destinations in New Jersey. Dennis Schrader provides a preview of a national-level training exercise involving the president and a broad spectrum of other senior state and national officials throughout the country – the interesting scenario here involves both a nuclear explosion and an unexpected earthquake. Three CDC (Centers for Disease Control & Prevention) authors – Margaret Riggs, Anne Marie Brown, and Jeffrey Peterson – discuss the several ways in which that essential agency, and the state of North Carolina, helped Kentucky cope earlier this year with a real-life disaster: the ice storm that literally froze the western part of that state into a near paralysis. Stephen Grainer completes the drills-and-exercises section with a forward-looking analysis of why National Incident Management System planning is not enough – follow-on training also is needed, on a continuing basis, for many years to come.

Also in the issue are several stand-alone (but closely related) articles by: Raphael (Ray) Barishansky, on the growing threat posed by suicide bombings (for which very few U.S. communities are prepared); Kay Goss, on recent upgrades in communications interoperability (additional improvements are needed, though); and Theodore (Ted) Tully, on the vital lifesaving role played by trauma, burn, and other "specialty" hospital centers.

Appropriately, Joseph Cahill adds a timely and moving tribute to the Fallen Heroes of the first-responder community who have given their lives in protecting their country. Adam McLaughlin then makes a second appearance with "state" updates on recent headline events in Louisiana, Texas, South Carolina, and Washington.

About the Cover: Port Authority Police meet with FDNY, NYPD, and other Unified Command officials at the entrance to the PATH station to review the plans written for the 17 May SafePATH scenario -- the largest such exercise in that area since the 11 September 2001 terrorist attacks. See Adam McLaughlin's article, beginning on Page 5, for additional details. (Photo compliments of the NY/NJ Port Authority.)

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On-Scene Report

Safe Is the PATH of True Preparedness

By Adam McLaughlin, Exercises

It was only an exercise. Nonetheless, the sight of hundreds of emergency responders rushing to the site of the World Trade Center (WTC) last month evoked images of the aftermath of the 11 September 2001 terrorist attacks. Operation Safe PATH – a full-scale exercise developed by the Office of Emergency Management (OEM) of the Port Authority of New York and New Jersey (PANYNJ) and New York City's own OEM – was the largest such drill conducted in lower Manhattan since 9/11.

The 17 May exercise focused primarily on the PANYNJ and NYC preparations for and response to a simulated detonation of IEDs (improvised explosive devices) in the Port Authority Trans-Hudson (PATH) train tunnel running between the WTC Station in New York City and the Exchange Place Station in Jersey City, New Jersey. That tunnel is one of two PATH tunnels running between the two stations.

More than 800 responders from the New York Police Department (NYPD), the New York Fire Department (FDNY), the Port Authority Police Department (PAPD), and several other NYC agencies participated in the exercise, which was the culmination of a series of planning meetings and smaller exercises that began nearly a year ago. "We drilled at the WTC Station and in the tunnels several times, so even if today's exercise never happened, the agencies were more than prepared to respond to this type of incident," said James W. Munday, senior manager of Emergency Readiness for the PANYNJ OEM – who also served as exercise director for Operation Safe PATH.

Target Capabilities and Principal Objectives

The exercise provided an opportunity for emergency-response officials to make critical decisions – and to integrate the emergency assets of PANYNJ and New York City in a major exercise designed to save lives, protect public health and safety, and ultimately prevent and prepare for a disaster of similar complexity and extent. "The main thing we are trying to evaluate," said New York City OEM Commissioner Joseph Bruno, "is the ability of all these agencies to work together under the Citywide Incident Management System [CIMS]."

The "Target Capabilities" that were used during Operation Safe PATH 2009 focused on such major operational areas as: On-Site Incident Management; Search and Rescue; Mass-Casualty Medical Support; Intelligence and Investigation; and Tactical Interoperable Communications.

The principal objectives set for Operation Safe PATH during the planning meetings were to:

1. Evaluate the combined PANYNY/NYC ability to implement a Unified Command Structure at the WTC PATH Station in response to an explosion on a PATH train;

2. Evaluate the capability to establish and manage multi-agency tactical communications systems;

3. Evaluate the capability of the Rescue Branch (which consisted of members from PAPD, NYPD, and FDNY) to: (a) form an Assessment Task Force; (b) conduct a thorough scene assessment; and (c) form a Rescue Task Force that could successfully carry out victim-rescue and extrication operations;

4. Evaluate the capability of the Rescue and Medical Branches (the members were drawn from FDNY EMS) to carry out effective patient triage, treatment, and transport from the incident train site to the street level – the triage and treatment started immediately and were carried out on an "as needed" basis; the patients/victims were then carried to the street level and from there transported (usually by ambulance) to nearby hospitals or other healthcare facilities;

5. Evaluate the capability of the Site Management Branch (PAPD and NYPD personnel) to implement a multi-agency safety/security inner perimeter; and

6. Evaluate the capabilities of the Intelligence/Investigations staff and ensure that all investigative and intelligence operations and activities were properly managed, coordinated, and directed.

Volunteers, Mannequins And Educational Mistakes

The scenario developed for the exercise postulated two explosions on a PATH train when it was about 1200 feet from the WTC Station. Tunnel lights were disabled, smoke filled the train, and over 150 volunteers from New York City's Community Emergency Response Teams (CERTs), along with 30 mannequins, simulated victims suffering from various types and varying degrees of injuries.

Shortly after the two notional explosions, PAPD, FDNY, and NYPD supervisors established a Unified Command Post at a street-level area roped off just outside the station entrance. After an Operations Section, established by the Unified Command Post, was set up on the mezzanine of the station, the command post itself was moved one block away to a safer location inside the lobby of a building.

Tunnel lights were disabled, smoke filled the train, and over 150 volunteers simulated victims suffering from various types and varying degrees of injuries

The FDNY, NYPD, and PAPD staff assigned to Emergency Services Units of the Operations Section made their way to the PATH platform and established the Rescue Branch in the vicinity of the tunnel in which the incident occurred. The same agencies quickly assembled an Assessment Task Force that would be the first to enter the tunnel and monitor air quality, report detailed information about the extent of the damage, and check for additional explosive devices.

After the Assessment Task Force had cleared the incident train, a larger rescue force was assembled to extricate and remove the injured from the train. Joseph Pfeifer, the FDNY's chief of counterterrorism, said that this aspect of the exercise allowed FDNY to test equipment such as the aluminum rail carts used to extricate victims who cannot walk. He also noted that the agencies had several layers of redundancy in terms of communications.

"During the previous communications drills, and [during] the Rescue rehearsal conducted in April, we used a scenario that forced the responders to set up hasty communications because the explosion destroyed the cables inside the tunnel," Munday pointed out. "We tried to create the worst-case scenario in terms of communications in the smaller drills, but kept the cables intact during Operation Safe PATH."

"Today," Pfeifer added, "we were able to establish communication quickly." However, he also noted, "We have not achieved the perfect system, and need to continue to work together."

"If we were going to make mistakes, we want to make them here," summarized Edward Skyler, NYC's deputy mayor for operations. "We want to learn from them and build them into our plans so that, when there is a real situation … all of the kinks in the system are worked out."

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. He designs and facilitates emergency response drills/exercises for agency responders, state and federal partners, and senior Port Authority executives.

EMS and Suicide Bombings – Some Potentially Deadly Considerations

By Raphael Barishansky, EMS

During the past few decades there have been numerous terrorist attacks in countries throughout the world. Shrines, churches, tourist and resort areas and other targets that were once considered off-limits no longer enjoy that status. And major public venues such as transportation hubs, sports arenas, and banks as well as other financial buildings have been threatened with or actually experienced violence. Finally, police uniforms and other emergency-responder clothing, various types of equipment, and even ambulances and other vehicles not usually arousing suspicion have been used in devious ways to wreak devastation and cause public alarm.

From the viewpoint of a terrorist group, or a mentally deranged individual, a suicide bombing can be one of the most efficient and effective ways to successfully penetrate a target, cause numerous deaths and injuries, and generate publicity. It is now a relatively quiet week when the nation's 24/7 news channels do *not* broadcast scenes of chaos and destruction caused by terrorist bombings on buses and in theaters and restaurants – mostly overseas (so far).

Nonetheless, for U.S. responders the important unanswered question is this: How much havoc, economic and political, would a similar attack cause in the United States, particularly if the attack occurred in a movie theater or shopping mall?

There is no clear or easy answer to that question. In the last few years much greater emphasis has been placed on training pre-hospital providers to respond to incidents involving the use of weapons of mass destruction (WMDs). The same cannot be said, however, of other smaller-scale, yet just as devastating, acts of violence. In addition, and despite the escalation of terrorist acts – and the emigration of such attacks to cities and countries outside of the Middle East – some U.S. EMS (emergency medical services) agencies and other first-responder organizations still seem to believe that similar suicide attacks would be, if not impossible, very unlikely in the United States itself.

Nonetheless, prudence and common sense dictate that all EMS providers, emergency managers, and other first responders need at least a basic level of awareness about such distinctly devastating incidents.

Hard Facts and Visible Shortcomings

Any analysis of potential suicide-attack scenarios must necessarily start with the most likely targets. Suicide bombers customarily select targets the destruction of which would have a significant impact on the community – either psychologically, because of the type of target attacked, or in the actual number of victims killed or injured. These targets can be classified as either "hard" or "soft." One example of a hard target is an area – such as a military base, an airport, or a power station – in which access (to at least some areas) is fully or partially restricted and some level of constant security is not only in place but also fairly visible. The term soft target refers to an area or building where access is relatively easy and the target is not as well guarded or secure as a hard target.

Soft targets also are usually designed for and/or encourage public gatherings and large crowds: shopping malls, outdoor cafes and restaurants, and both schools and churches, to cite the most obvious examples. Special events such as movie premieres, football playoffs, graduation ceremonies, and political inaugurations also are particularly attractive to the would-be terrorist.

EMS providers must not mistakenly think that they are immune from harm because they are on the scene – *after* a mass-casualty incident has occurred – to help. Terrorists have learned how to use "secondary devices" to kill or injure those in the first wave of responders – firefighters, policemen, EMS technicians, and hazmat specialists included. The demoralizing impact on the public of seeing emergency-services responders rendered useless and helpless is, in fact, often a primary goal of terrorists and not merely an extra added attraction.

The use of lethal secondary devices is not unknown in the United States. The abortion clinic bombings in Atlanta, as well as the World Trade Center attacks in September 2001, saw this tactic employed. It cannot be stressed strongly enough that responders must be not only totally aware of their surroundings at all times but also particularly suspicious of objects (an errant briefcase, for example) and/or people who seem to be "out of place." The urge to rush in to assist those injured must therefore be tempered with judicious restraint based on the scenario encountered. Events such as these should be cleared by public-safety agencies before EMS technicians and other responders

are allowed to enter. If such clearance cannot be provided (for any of several acceptable reasons) then, just as in hazmat incidents, patients should be brought to an area known to be "clean."

Triage: When, Where, and How

The utilization of a standardized but simple triage system such as START (Simple Triage and Rapid Transport) should be mandated to sort and transport patients on a priority basis. The START process can be taught quickly to non-medical responders at the scene and would facilitate the concentration of EMS personnel in positions that require more training.

This is important because other traditional first responders – policemen and firefighters, for example – will probably not be available to assist in triage because they will have other operational responsibilities. These and other circumstances might therefore sometimes necessitate the use of bystanders to assist in the triage process.

It is important to remember that triage should always be conducted outside the hazard area. When necessary, patients should be evacuated to a triage point by law-enforcement or tactical personnel, and then managed by EMS staff. Only lifesaving procedures – e.g., airway management and hemorrhage control – should be performed on scene; all other supportive measures – starting the IV process, splinting, etc. – are carried out when and/or while the victims are en route to a hospital.

Lifesaving procedures should be performed on scene; all other supportive measures – starting the IV process, splinting, etc. – are carried out when and/or while the victims are en route to a hospital

When Operational Realities Intrude

To ensure a reasonable measure of success in responding to a suicide bombing, the EMS branch manager and the director of the communications center must both take into consideration several critical factors. The EMS branch manager should always have in his or her possession a Field Operations Guide (preferably in checklist form), a well-marked identification vest, interoperations-capable communications equipment, and, possibly, a megaphone. (Although the megaphone has traditionally been used in the United States only by police agencies, it has also proved to be effective when used by Israeli EMS in dealing with a concentrated incident in which there are a large number of patients and responders.) As the event progresses, the EMS branch manager must also remember to provide periodic status updates to the communications center. The communications center director should have his/her own checklist, of course, to quickly identify the resources available, where those resources will be coming from, and the contact information and notification prioritization required for administrators, agencies, hospitals, and numerous other organizations and individuals. The checklists should be in place well prior to the start of an incident – at all times, in other words.

An initial *over*-dispatch of resources – i.e., providing more resources than are expected to be needed – has been proven to be effective. It is always better, and easier, to cancel responding units than to have to order more. Implementing dedicated MC communication channels – either by having responders switch to a specific radio frequency or by connecting specified groups through a trunk system – not only will allow regular EMS system traffic to continue without interfering with incident operations but also will facilitate the coordination of patient distribution and notifications to hospitals and other healthcare facilities. Of course, there should always be a supervisor/manager on duty in the communications center.

Unique Challenges, A Diversity of Circumstances

In light of some of the unique challenges involved in responding to a suicide bombing, there are – in addition to clinical considerations – several strategies that progressive EMS systems should be aware of when developing the policies needed for a full and flexible response to a bombing incident, if and when it happens. Following are a few considerations, relevant to the subject areas indicated, that should be kept in mind when developing those strategies:

Flexibility – For various reasons, suicide bombings may not always lend themselves to standard triage techniques. Adaptation to the situation might sometimes require, therefore, moving everyone who is capable of relocating to an alternate site and then assessing the degrees of injury suffered. The flexibility factor also encompasses recognizing the need to tailor standard response methods to the events unique to a bombing incident and not trying to make the incident fit a predetermined mold.

A Controlled Response – It is well established that some suicide bombing scenes cannot be deemed safe simply because of the presence of law-enforcement officials. Responders have been targeted in the past with secondary devices, both in the United States and overseas, and it is critically important that pre-hospital providers think about that potentially huge problem well in advance. EMS providers should not rush into a scene just because there are people injured, or perhaps even dying. Those in charge at an incident scene must therefore quickly designate perimeter staging areas for EMS personnel and their equipment at various distances from the epicenter of the disaster scene.

Understanding and Utilizing the Incident Command System – In addition to those in medical-operation positions, EMS staff must not only thoroughly understand the Incident Command System but also should be involved in a Unified Command Structure – along with the law-enforcement and firefighting personnel at the scene. For that reason, the designation of an EMS Safety Officer is of paramount importance; as a corollary, he or she must have the authority needed to immediately cease EMS operations, if need be, and order personnel and other resources to retreat to the previously mentioned perimeter staging areas.

Tactical EMTs/Medics – If the responding EMS agency or organization has a special-operations division or group, the members of that group also should be involved in the pre-planning process. Tactical training prepares providers for the need to rapidly extricate patients – even prior to stabilization, if and when necessary.

The Use of Regional, State, or Federal Resources – On-scene decision makers must consider the need for additional assets as early in the process as possible, if only because it may well take more time than anticipated to get those assets to the incident scene. More specifically, the decision makers should: (a) Identify the request pathways needed and build them into response plans; and (b) Try to determine in advance what additional resources might be available and how they can be used – both immediately and to meet longer-term needs. (The additional *personnel* assets needed might well include Urban Search and Rescue teams, Disaster Medical Assistance teams, and/or Disaster Mortuary teams.)

To briefly recap: The basic realities have changed. The U.S. emergency-response community was jolted into a sudden awareness of its numerous vulnerabilities by the terrorist attacks of 11 September 2001. But that much-needed "wake-up call" should have occurred well before the 9/11 attacks. Numerous acts of terrorism and tactical ultra-violence had been carried out on U.S. soil in the years prior to 9/11; there were even more attacks on U.S. allies overseas, though. EMS agencies must change, in lock-step with the nation's public-safety agencies, and embrace a new attitude of constant and continuing preparedness. Developing the protocols needed to respond to a suicide bombing is but one facet, albeit a vitally important one, of this new mindset.

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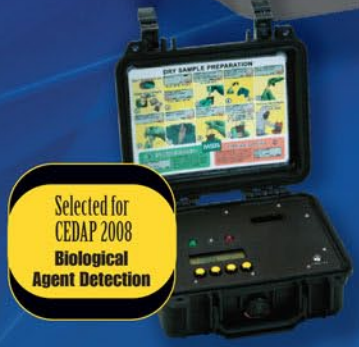

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AKA TOPOFF V

NLE-09: A Major Test for the Obama Administration

By Dennis Schrader, Exercises

The Obama Administration will lead its first National Level Exercise (NLE) in late July, 2009, culminating twenty months of effort to innovate and improve this important series of exercises.

Throughout 2008, the Bush Administration planned a transition Principal Level Exercise (PLE-09), scheduled for sometime in January 2009, that would orient the incoming administration to its immediate responsibilities in the field of homeland security and give it a head start on NLE-09.

The National Exercise Program (NEP) was formalized in 2007 and adopted the Homeland Security Exercise and Evaluation Program (HSEEP), which covers catastrophic incidents of all types – natural disasters as well as those caused by terrorist attacks. Tier I NLE exercises, successor to the former TOPOFF (Top Officials) exercise series, will be carried out annually as opposed to the biennial schedule that began in 2000.

The NEP has received significant attention since 2006. The Congressional Research Service (CRS) published a baseline analysis of the NEP in November 2008. The October 2007 TOPOFF IV exercise provided several key design lessons for the Federal Emergency Management Agency's (FEMA) National Exercise Division. The Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA) created extensive requirements for the National Exercise Program and defined the national-preparedness role of the FEMA regions.

This is the first TOPOFF-scale exercise that will primarily address terrorism prevention and protection, as opposed to incident response and recovery

Testing New Ideas

NLE-09 (TOPOFF V) was originally designed to test some new concepts that came from the improvements mandated by and/or stemming from PKREMA and the lessons learned. Following is a quick summary of some of the most important of those changes and improvements:

1. This is the first TOPOFF-scale exercise that will primarily address terrorism prevention and protection, as opposed to incident response and recovery.

2. The NLE-09 design is the first regionally organized effort in the series. FEMA Region 6, for example, plays the lead role and has been assigned coordination responsibility for its five states: Arkansas, Louisiana, Oklahoma, New Mexico, and Texas

3. NLE-09 is expected to cost only about half as much as its immediate predecessor, TOPOFF IV. The principal NLE-09 focus will be on funneling the decision-making and intelligence processes through the nation's fusion centers. The exercise's design reduces cost by using functional-exercise play to drive decision making without expensive props and set construction. Additional savings are expected from use of the National Exercise Simulation Center (NESC, activated in late 2008) to serve as the Master Control Cell and the node at FEMA to broadcast the simulated Virtual News Network (VNN) newscast.

4. The linking of operational plans and exercises, another first, is a major step forward that the military has used for a long time to test readiness. In January 2009, the new National Planning System developed the first interagency Concept of Operations Plan (CONOP) for Terrorist Use of Explosives (TUE). The FEMA regions have been assigned the responsibility of developing regional plans for each CONOP.

Congressional Oversight & Issues to Watch

Congressional oversight: (a) is expected to be similar to that carried out before, during, and after TOPOFF IV; (b) might follow up on the new ideas; and (c) probably will look for answers to a number of relevant questions, including the following:

1. Did the individual states involved, and FEMA Region VI itself, have appropriate influence in the final exercise design, and were the state fusion centers outside that region also fully engaged?

2. Was there timely and universal after-action reporting and feedback? (Previous TOPOFF exercises were

not specifically designed to educate and improve the preparedness capabilities of *all* state and local governments around the country.)

3. How effectively did the NESC perform at this early stage of its development?

4. How effective was the coordination between FEMA and NORTHCOM (the Department of Defense's U.S. Northern Command)?

5. Were operational plans tested fully and completely?

6. Was the private sector also fully involved?

Just Over the Horizon

The new five-year NEP cycle, it is worth noting, will test the ability of the federal government to have more than one exercise design in process at any one time. NLE-2010 is tentatively planned, for example, to focus on the simulated explosion of a 10-kiloton nuclear device somewhere in FEMA Region 9; meanwhile, NLE-2011 will focus on the possibility of a New Madrid earthquake occurring somewhere in the middle of the country. (The reference here is to the series of earthquakes that devastated New Madrid, a small town in the Louisiana Territory – now Missouri – in late 1811 and early 1812. The shocks were felt over an area of about 50,000 square miles; by comparison, the shocks from the much more famous San Francisco earthquake of 1906 were felt over an area of approximately 6,000 square miles.)

The design of the operational plans for both of these exercises should already be underway, and it will be extraordinarily challenging for the exercise designers and planners to manage these efforts simultaneously.

For further information: An official summary of the National Level Exercise (NLE-09) program can be found at: http://www.fema.gov/media/fact_sheets/nle09.shtm.

Captain Dennis R. Schrader, USNR (Ret.), is president of DRS International, LLC, and former deputy administrator of the Federal Emergency Management Administration'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.

The Now Possible Dream: Communications Interoperability

By Kay C. Goss, Emergency Management

The U.S. Department of Homeland Security (DHS) released scorecard assessments, a little more than two years ago, of interoperable communications capabilities in 75 major urban and metropolitan areas nationwide. Those benchmark assessments focused on a broad spectrum of the policies, technology, and training programs needed to enable emergency-services personnel – firefighters and policemen, EMS (emergency medical services) technicians, and emergency managers – from a number of jurisdictions within the same general geographic area to effectively communicate about an incident in real time.

Several years ago the 9/11 Commission also had identified the lack of interoperable communications as a major impediment to domestic-preparedness capabilities and operations. Numerous reports and recommendations issued following the slow responses after Hurricane Katrina confirmed that finding. Certainly, as senior government officials knew then – and have confirmed many times since – the lack of interoperability is not a technology problem per se. The technology already available is, in fact, reasonably effective.

As emergency managers are fond of pointing out, interoperability "is 10 percent technology and 90 percent governance and trust." That axiom is still true today

However, the Commonwealth of Virginia, using guidelines derived from the federal government's SAFECOM Program, has started an effort, chaired by Fire Chief Charles Werner of Charlottesville, Virginia, to take interoperability to the next level throughout the country. Werner is highly regarded as an emergency-services leader who not only "talks the talk" but also "walks the walk." For that reason alone, other EM officials looking for a model of interoperability are checking for themselves to see what Charlottesville, Albemarle County, and the University of Virginia already have in place.

Several billion dollars in federal grant funds have been allocated in recent years to enhance state and local interoperable communications efforts. Money, like technology, is therefore not the problem. Public funds *are* available, in fact – even if the nation's current economic difficulties make the availability of those funds somewhat less likely now than at the time the benchmark assessments mentioned earlier were issued. The funding reviews focus on three principal areas: Governance (leadership and strategic planning); Standard Operating Procedures (plans and procedures); and Usage (use of equipment).

Those evaluation criteria, it is worth noting, were derived directly from the SAFECOM's Interoperability Continuum and Interoperability Maturity Assessment Model, which analyses the key components of interoperability: governance, standard operating procedures, usage, technology, and training and exercises. As emergency managers are fond of pointing out, interoperability "is 10 percent technology and 90 percent governance and trust." That axiom is still true today – perhaps more now than ever before.

Goals and Gaps, Findings and Capabilities

The key findings of a couple of years ago also identified a number of capabilities "gaps" along with several "areas for improvement." Those findings, which still ring true today, can be summarized as follows:

First, although the *policies* governing interoperable communications are now in place in all 75 urban and metropolitan areas, the routine periodic tests and exercises needed – to bring disparate systems together and facilitate communications between multi-jurisdictional responders, including those on the state and federal levels – on a regional basis are not being carried out.

Second, although there is increased and greatly improved cooperation among first responders in the field, the formalized governance (leadership and strategic planning) agreements within and across regions have not been refined to the extent needed to ensure viable communications interoperability on a continuing basis.

The three major *national* interoperability goals are that:

1. ***By 2010***, 90 percent of all high-risk urban areas designated within the Urban Area Security Initiative (UASI) should be able to demonstrate response-level emergency communications interoperability, *within one hour*, for routine events involving multiple jurisdictions and agencies;

2. ***By 2011***, 75 percent of all non-UASI jurisdictions are able to demonstrate response-level emergency communications interoperability, also *within one hour*, for routine events involving multiple jurisdictions and agencies; and

3. ***By 2013***, 75 percent of all jurisdictions are able to demonstrate response-level emergency communications interoperability, *within three hours*, of a significant event.

The SAFECOM website (www.safecomprogram.gov) is a useful self-assessment tool that builds on the original benchmark assessments and will give any jurisdiction a very useful checklist for meeting the interoperability goals.

The website also provides a wealth of information on five additional projects designed and implemented (or in the process of being implemented) to further enhance communications interoperability:

- The Multi-Band Radio project demonstrates a new radio technology that allows emergency responders to communicate with partner agencies regardless of the radio band on which they operate, and to test the equipment they are using through prototype laboratory testing and evaluation as well as short-term demonstrations and long-term pilot testing.

- Project 25 is a standards development process introduced to standardize the design, manufacture, and evaluation of interoperable digital two-way wireless communications products created by and for public-safety professionals.

- Project 25 CAP is a Compliance Assessment Program, established in accordance with the strong encouragement of the U.S. Congress, to ensure that requirements are met. (For operational purposes, the CAP program also serves as a voluntary system by which P25 equipment suppliers can formally demonstrate their products' compliance.)

- Video Quality in Public Safety is a collaborative effort between and among the Office for Interoperability and Compatibility, the Institute for Telecommunication Sciences, and the National Institute for Standards and Technology, partnering with various public and private-sector stakeholders in the nation's public-safety community.

- The Voice over Internet Protocol (VoIP) Working Group is a collaboration of public-safety practitioners, industry representatives, and federal partners formed to define and clarify the expectations for VoIP in emergency-response communications.

SAFECOM is, in short, one of those quiet, below-the-horizon, but effective government programs that build not only confidence and competence but also increasingly stronger communications capabilities between and among all emergency-services partners working in the nation's disaster and emergency-management fields.

Kay C. Goss, CEM, possesses more than 30 years of experience – as a federal and state administrator and in the private sector – in the fields of emergency management, homeland security, and both public finance and intergovernmental operations. A former associate FEMA director in charge of national preparedness training and exercises, she is a noted lecturer as well as the author of several books and numerous articles and reports in the fields of homeland defense and emergency management.

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Trauma & Burn Centers – Coping with MCI Disasters

By Theodore Tully, Health Systems

Several bombs went off in London not quite four years ago – more specifically, on 7 July 2005, when Muslim terrorists brought the city's Underground (subway) system to a virtual halt by detonating explosives that killed 52 innocent people and sent an estimated 700 or more other victims to hospitals throughout the city. The London hospital system differs from most systems in the United States in that it does not have a number of specialized hospitals serving as trauma centers. On the day of the bombings, therefore, numerous victims of the bombings were triaged very quickly and then taken to various hospitals throughout the city, rather than to centers specializing in the treatment of trauma or burns.

In a follow-up review of the incident, British officials said that the lack of a coordinated trauma system may possibly have been better for the patients. Had there been a trauma system in place, it was suggested, patient care might actually have suffered because of pre-designated trauma or burn centers being overloaded with so many severely injured patients arriving at or close to the same time. Instead, the injured were distributed to non-specialty hospitals throughout the city and received better and more immediate care.

In the United States there is, in contrast to the British system, a well planned trauma system with centers in each state providing different levels of care. Pre-hospital trauma protocols direct that patients suffering from trauma or burns be taken (directly, if possible) to a trauma or burn center – but if the distance is too far away patients may first be stabilized at a lower-level community emergency department and transferred later to a specialized center.

The U.S. Approach: Focus on Even Greater Disasters

There is considerable evidence, however, to support the belief that the U.S. system of taking triaged trauma or burn patients directly to specialty centers gives patients their best chance of survival. Since the 1980s, studies that have been carried out – at such institutions as the R. Adam's Crowley Shock Trauma Center in Baltimore, Md. – show that stockpiling the expertise needed at a specialty hospital is much better for patient outcomes.

Moreover, a rapid-response system that ensures the availability – 24 hours a day, and at one location – of the specialists needed for trauma care allows patients not only to survive but also, possibly, resume a more normal life. The same theory holds, of course, for the teamwork of caregivers working with a complicated burn victim.

During disasters such as the 2005 London bombings, the 2001 terrorist attacks on the World Trade Center towers in New York City (which took the lives of 3,000 people), or the February 2003 fire at the Rhode Island Station nightclub (which killed 96 people and required the hospitalization of almost 200 more), one specialty hospital obviously could not provide care for the very large number of trauma and/or burn victims needing immediate and highly specialized medical attention. Surge planning at even the very best healthcare facilities can do only so much.

No matter how large or how well prepared for certain disasters a specialty hospital may be, therefore – as the U.S. healthcare system already has seen, and will undoubtedly continue to see – it is still possible that some disasters (earthquakes or major terrorist attacks are probably the best examples) might be of such overwhelming magnitude that even the best and most highly specialized facilities would not be able to provide adequate care for all of the severely injured victims.

Stretching the Limit – Plus Cost Complications

Emergency planners at the state and federal levels have recognized this problem for a long time and have recommended that a different approach be used to deal with truly major mass-casualty events. The theory here is that, by trying to cope with such events at trauma, burn, and pediatric specialty hospitals – when the resources of those hospitals are already stretched beyond their possible limits – the patient load will surge to levels that might well compromise the survival of a large number of the patients taken to the specialty hospitals.

That problem is now compounded, of course, by the fact that, in difficult economic times such as the present, the financial pressures on the specialty centers (and other healthcare facilities) have become so great that many of them either have closed or have significantly reduced their previous surge capacities.

The same planners believe, though, that an alternate "halfway" type of system is perhaps needed to cope with major disasters – a system, for example, in which patients are field-triaged by EMS (emergency medical services) technicians differently for larger disasters (perhaps 100 or more victims) than they would be for "smaller" disasters involving "only 20 or 30 victims" or thereabouts. The new protocols needed for such an alternate system would have patients taken first to non-specialty centers; those centers would be prepared to activate hospital-disaster plans that require them to hold onto certain groups of patients (trauma, burn, pediatric, etc.) whom they would normally, and quickly, transfer out until a specialized trauma center, possibly even in another state, could accept them. In addition, a planned system such as that proposed would be responsible for coordinating the secondary level of patient transport, during the next 72 hours, to the specialty hospitals.

Truly major disasters are very rare occurrences in the U.S. healthcare system. Systems that coordinate day-to-day trauma events or even large multiple-casualty incidents (MCIs) need to be kept operational, though, because the trauma protocols mentioned above have proven their worth in the U.S. healthcare system. The major disaster is the truly special event that must be recognized early, and responded to differently – if those conditions are not met, the nation's specialty hospitals will be unable to cope fully and effectively with the heavy load of incoming patients, and the level of medical care provided will therefore be much lower.

Better Planning Plus The Final Piece of the Puzzle

Burn-disaster planning is perhaps the best example, at the state and federal levels, of specialty planning for large disasters. Both New York State and New York City have developed plans, to cite a particularly prominent example, to distribute burn victims to non-burn centers and treat them in those alternate facilities for up to 72 hours. Those two jurisdictions also have recognized the need to train, at non-specialty hospitals, clinical staff members who may have possibly not treated a burn victim in several years. And they: (1) are stockpiling the burn-care equipment that would be needed if a surge of such patients arrive within a very short time; and (2) have adopted a different EMS approach to use alternate protocols for a major

burn-disaster incident. The remaining piece of the puzzle is to develop a better system for the secondary transport of patients to burn centers possibly hundreds of miles away during the 72-hour period specified.

Florida and New Jersey are two other examples of states where improved burn-disaster planning has been vindicated by the results. The ABA (American Burn Association), the New Jersey Department of Health, and the state's burn center – Saint Barnabas Hospital in Livingston, N.J. -- have developed a progressive affiliation of burn centers within what is called the Eastern Regional Burn Center Consortium, which is headquartered at Saint Barnabas. The consortium's mission is to link all of the burn centers from North Carolina to Massachusetts for disaster preparedness, coordination, and communication during a disaster.

The current gaps in burn planning are continuing to be worked through and the larger challenges may be the complicated inter-state issues involved as well as the somewhat different protocols used in dealing with disasters that are not "federally declared." The larger disaster planning paradigm is therefore not quite complete yet for all aspects of specialty hospitals. It is only just now being reviewed for burn care, in fact, thanks to a required focus attached to federal funds provided by the U.S. Department of Health and Human Services (HHS) in the form of hospital preparedness grants.

From Very Good to a New Level of Excellence

Probably the greatest progress accomplished to date in planning for specialty hospitals has occurred in burn-disaster preparedness. It would be a major step forward if the nation's healthcare system builds on that progress to move ahead on planning for other equally valuable centers (trauma and pediatric). Better regional planning also is needed – both in the area of specialty hospital surge, and on the delayed inter-facility transportation needs that must inevitably follow. In addition, regional partnership planning must be expanded to include EMS and other emergency first-responder agencies so that the dynamics involved in field triage are adjusted to cope with major disaster events.

Much if not all of that planning can be accomplished by aligning some of the HHS hospital preparedness grant deliverables and emergency preparedness standards that hospitals must demonstrate to meet their Joint Commission requirements. (The Joint Commission, founded in 1910, is an independent non-profit organization responsible for the certification and accreditation of more than 16,000 hospitals and other healthcare facilities throughout the United States.)

In short, the nation's current healthcare system, although the best in the world in many respects, still has a long way to go to meet the extraordinary day-to-day specialty patient challenge of coping with disasters as large and as complicated as the 2005 London bombings.

There is considerable evidence to support the belief that the U.S. system of taking triaged trauma or burn patients directly to specialty centers gives patients their best chance of survival

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Theodore (Ted) Tully, vice president, since 2004, of the Center for Emergency Services at the Westchester Medical Center (WMC) in Westchester, N.Y., previously served as a police paramedic/detective, as Westchester County's emergency medical services coordinator, and as a director of trauma and emergency services. He helped create and administer WMC's Regional Resource Center, which is responsible for emergency planning coordination for 32 New York hospitals.

When Disaster Strikes

Duty First – Then Remembrance and Reflection

By Joseph Cahill, EMS

There are catastrophic events in the history of almost every nation that transcend the normal routine of everyday life and leave a lasting mark on the agencies and individuals responding. The terrorist attacks of 11 September 2001 are an obvious example because they transformed both the cities attacked and the response communities involved. They also changed American society as a whole – there is now a bright dividing line in most people's memories of their country before 9/11 and after 9/11.

Fortunately, one-time events in which numerous responders lose their lives are rare, but responder agencies should have a plan in place, ahead of time, for dealing with such events when they do happen.

The first priority in these situations should be to take care of the immediate incident at the time, focusing primarily if not exclusively on the saving of lives – until that is no longer possible. Staff members will not mentally stand down while there is unfinished business still to be dealt with. In fact, the Fire Department of New York (FDNY) maintained a rescue and EMS (emergency medical services) presence at the site of the World Trade Center site for many, many months after the terrorist attacks.

Every time, day or night, that a responder's remains were discovered at the World Trade Center site, those remains were escorted by a team of other responders to an always waiting transport vehicle and then away from the site

A Time to Mourn, and a Time for Closure

Maintaining that presence allowed members of the agency – even those who were not in position to respond to the initial incident – to participate in concluding the city's response successfully, making it a true triumph over disaster. One cannot mourn indefinitely and continue to function as a healthy human being; however, deciding what is or should be the "appropriate" time frame is not something that an agency per se can do, because closure is such a personal matter that it can be set only by the individuals directly involved.

However, the agency still must continue to function, even during the mourning period. On 9/11 itself, the FDNY EMS Command responded to thousands of other calls for assistance that were not related to the attacks on the World Trade Center. The same was true on 9/12 and 9/13 and every day thereafter – continuing up to the present. The agency cannot stop doing its job following the loss of a member – or even a large number of members.

The agency involved in such a situation probably will not be functioning normally, though. It usually will have at least two additional tasks, of exceptional importance, to carry out: responding to the specific incident in which a member died; and coping at the same time with the department's own response to the death. In addition, it should be remembered, staffing will be decreased by a number equal to those who are no longer able to respond.

Twilight Rites For Fallen Heroes

It also is important, for practical as well as personal reasons, to provide and maintain – always – the dignity and respect owed a hero. This is what was done during the long gray twilight period after the 9/11 attacks. Every time, day or night, that a responder's remains were discovered at the World Trade Center site, those remains were escorted, by a team of other responders – first to an always waiting transport vehicle, and then away from the WTC site. Following that dignified process provided the surviving responders the opportunity needed to give their former colleagues a comforting last measure of respect.

The public funeral of a responder who dies in the line of duty is no small undertaking, and the agency's response should be organized and scheduled with that in mind – to the maximum degree possible. However, it also is important to recognize that the decedent's family, not the department, is and should be the primary focus of the funeral. The family has lost a son, a daughter, a wife or husband, a mother or a father – and it is therefore the family's wishes that must take precedence.

Framing the department's response to a funeral as something that the department can offer to the decedent's family – rather than something that alleviates the grief of the department

itself and its individual members – will help keep this priority in focus.

So the operational rule is to memorialize the loss and the person or persons who have been lost. Many agencies dedicate buildings, special rooms, or even vehicles to their fallen heroes. In some larger agencies, or agencies of any size that have suffered a large number of losses, this cannot always be done. Which is why some larger or older agencies that have suffered many losses over the decades often have in place, at a central point in headquarters or close by, a memorial plaque with the names and information about the loss inscribed. In FDNY this memorial – which had to be expanded to accommodate the losses from 9/11 – is enshrined in the lobby of fire headquarters; in Philadelphia a similar memorial plaque is in that city's Fire Museum.

Such memorials to the fallen not only provide an additional final measure of respect, but also give survivors, successors, and future visitors a place of reverence to visit. And to reflect.

A Personal Note from the Author to the Readers: *If you have never experienced a line-of-duty death, it is the author's sincere hope that you never will. If you have, it is the author's equally sincere hope that you have reached some degree of solace.*

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.

First-Person Report

Ice Storm 2009: Kentucky's Epidemiological Response

By Margaret Riggs, Public Health

The disastrous ice storm that struck Kentucky in January 2009, affecting two-thirds of the state, caused 36 deaths, left an estimated 770,000 Kentucky residents without power for several weeks, and led to the largest-ever call-out of the Kentucky National Guard. Because of the widespread power outages and disruption of major transportation and communications sources a state and federal disaster was declared and more than 200 shelters housing almost 8,000 people were quickly opened throughout the state.

The Kentucky Department for Public Health (KDPH) focused on four major disaster surveillance objectives: the assessment of immediate shelter needs; injuries and illnesses within the shelters; the standardized "Community Assessment for Public Health Emergency Response (CASPER)"; and possibly statewide carbon-monoxide exposures.

To assist these efforts, I was assigned, as one of Kentucky's Career Epidemiology Field Officers (CEFOs), to lead the local health departments' environmental health specialists, epidemiologists, and nurses in conducting a daily surveillance of the shelters and report the information received to KDPH through daily situation reports. Problems with shelters not being able to receive any communication via radio, satellite phone, fax, telephone, and/or the Internet were of particular concern. To address those problems, 12 state-led strike teams assessed 37 shelters in three areas in western Kentucky.

Translating and Expediting

I had the privilege, and duty, of accompanying two senior officials – Charles Kendell, executive officer of the Kentucky Department of Health's commissioner's office; and John Esham, deputy policy advisor in the office of Kentucky Governor Steve Beshear – on visits to the communities hit hardest by the storm. While on those visits I was able to "translate" many of the hardships we witnessed into the need for specific public-health actions.

I also was able to expedite state requests for federal public health surge-capacity staffing assistance, which led to the assignment of a team of 23 EISOs (Epidemic Intelligence Service Officers) to Kentucky within 48 hours after the request

had been received. EISO teams were deployed to Western Kentucky with standard data-collection equipment to interview household owners (and others) on such relevant topics as storm-related injuries and illnesses, the use of generators, the availability of basic necessities, and any barriers to shelter use that might have caused problems.

Almost two weeks after the storm, unfortunately, an estimated 25 percent or so of the state's households were still without electricity, and up to 56 percent had had to use generators. (A variety of communication methods – including radio announcements, cell phone text messages, and fliers – were used to reach residents still lacking electricity.)

Identifying & Preparing for Future Problem Areas

Two important special-needs populations were identified: (1) oxygen-dependent citizens – 14 percent of the shelters reported having residents who did not have enough oxygen, and about 4 percent of those who remained at home also were oxygen-dependent; and (2) pet owners – up to 20 percent of those surveyed said that the lack of accommodations for pets prevented them from seeking alternative shelter.

Carbon monoxide-related incidents were assessed by the EISO task group, using data obtained from coroners, hyperbaric oxygen treatment centers, and Kentucky Regional Poison Control Centers (KRPCC). Carbon monoxide (CO) exposures and poisoning were significant issues; 275 people called KRPCCs about possible CO exposures, and another 144 were affected by high CO levels in residential areas associated with the use of generators and CO-producing heating units, such as kerosene and propane heaters. Throughout the state, a total of ten CO-related deaths were reported, eight of which were clearly linked to the improper use of generators.

For future disaster preparation, the earlier release of public health information about the safe operation of generators, and of CO-producing heating units, would be beneficial. The KDPH is using the "lessons learned" from this year's response, and plans not only to establish additional pet-friendly shelters but also to be better prepared in general by: (a) ensuring that enough shelters are available in the future for oxygen-dependent people who need access to electricity: and (b) having enough oxygen canisters immediately available for those in need.

NOTE: CDC Career Epidemiology Field Officers (CEFOs) participate in consultation and capacity building for response activities to natural disasters as well as preparedness exercises at the local and state health departments to which they are assigned. States interested in having a CEFO assigned to them to support and enhance their epidemiologic and public health emergency preparedness capabilities may contact the CEFO program by email at cefo@cdc.gov (or by calling 770 488- 8881). CEFOs are assigned for an initial two-year period and are supported out of each state's CDC Public Health Emergency Preparedness (PHEP) grant funds through a direct-assistance mechanism. (For additional information about the program click on http://emergency.cdc.gov/cotper/science/cefo.asp)

Lieutenant Commander Margaret (Margo) Riggs, USPHS (U.S. Public Health Service), served in the U.S. Army for five years as a veterinary technician. She later joined the Commissioned Corps of the USPHS and is now serving as an epidemiologist with the Centers for Disease Control & Prevention (CDC) in Atlanta (and in that role has been assigned to the Kentucky Department for Public Health).

Problems with shelters not being able to receive any communication via radio, satellite phone, fax, telephone, and/ or the Internet were of concern; to address those problems,12 state-led strike teams assessed 37 shelters in three areas in western Kentucky

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NIMS: Not a Once and Done Proposition

By Stephen Grainer, Fire/HazMat

The U.S. emergency-responder community recently observed the fifth anniversary of the institution of the National Incident Management System (NIMS). By all estimates, the celebration was relatively subdued. However, during the past five years the NIMS policy guidelines have led to the development and implementation of a number of important programs and initiatives intended to improve the nation's capability to prevent, prepare for, mitigate, respond, manage, and recover from critical emergencies.

Following the birth of NIMS, for example, a National Response Plan (NRP) was created – basically, from the core components of the previous Federal Response Plan, but with the intent that the NRP would be better integrated with NIMS. The NRP later (in 2008) evolved into the National Response Framework (NRF). In addition, and as required by NIMS, a new Incident Command System (ICS) became the new national standard for managing emergencies. A corollary benefit of sorts was that words such as *interoperability* and *sustainability* have become staples of the always evolving bureaucratic vocabulary. In five short years, therefore, NIMS has had a major impact on the world of emergency and incident management.

Not coincidentally, while NIMS was gathering strength, the emergency-response community was being significantly expanded, thanks to the Homeland Security Act of 2002, beyond the traditional realm of EMS (emergency medical services), firefighting, and law-enforcement. In 2004, the then greatly enlarged emergency-responder community was immediately driven into a whirlwind of training to meet the new NIMS guidelines for a comprehensive system intended to standardize such major operational areas as: Command and Management; Preparedness; Communications; and Resource Management. Other major new policies and programs were developed incorporating NIMS policy concepts to address some of the concerns revealed by the terrorist attacks of 11 September 2001 and further enunciated by the 9/11 Commission. Finally, federal guidelines calling for ICS-type training for *all* emergency responders has resulted in literally millions of people receiving training in programs such as ICS-100 (Introduction to ICS); ICS-200 (Basic ICS); and IS-700 (NIMS: An Introduction).

Plausible Questions, Negative Answers

Following that initial mandate to train, additional training – in ICS-300 (Intermediate ICS for Expanding Incidents) became the new focus (in 2007), but earlier this year was further expanded to include ICS-400 (Advanced ICS for Complex Incidents and MACS – Multi-Agency Coordination Systems). Through all of these changes and improvements, however, very little attention seems to have been paid to ways by which all of the agencies and individuals receiving the training can maintain and/or upgrade the various levels of operating proficiency they have achieved.

In far too many cases, individuals who received their initial training (perhaps ICS-100, ICS-200, and IS-700) have had no further training or review – which brings up at least two important questions: (1) "How much of their [previous] training can actually be applied effectively?" (2) "If a major incident (or event) were to occur tomorrow, will there be an adequate number of appropriately trained personnel available to implement a functional incident command system – even for a short time (i.e., until more experienced and qualified resources can be deployed to assist)?"

Unfortunately, there is a wealth of evidence to indicate that these questions (and several others that might be asked) would be answered in the negative. One reason is that, notwithstanding the completion of a broad spectrum of training in recent years by a very large number of personnel, most of today's responders have not had the opportunity to *apply* any of the principles or actions for which they have been trained. And every day that passes means that their knowledge and any skills they have developed have atrophied.

Which recalls one of the NIMS "buzz words": sustainability. By common definition that term refers to an ability to ensure continuous performance at a pre-determined level. The same is largely true of interoperability – a term that is most typically used in the context of communications capabilities. Significant steps have, in fact, been taken since 2004 to improve the interoperability of communications systems and equipment. However, "interoperability" also refers to the basic capability for different resources to function effectively together, and in that sense can simply indicate that two or more people (or organizations) are able to coordinate and integrate their actions to achieve a common goal or mutually agreeable result.

But that does not necessarily require sophisticated communications equipment or other high-tech systems. It does, though, require a common understanding of organizational and individual strengths – and limitations – as well as the ability to exchange information using a common terminology. These are, of course, among the most basic tenets spelled out in the NIMS and ICS guidelines. Individuals who completed IS-700, ICS-100, and perhaps ICS-200 several years ago but have had no additional training since then are probably going to be challenged, therefore, to establish basic interoperability. In short, a much greater effort is needed to ensure sustainability of the capabilities developed as a result of the initial training. NIMS was not and is not intended to be a "Once and Done" announcement.

The Second Half Of the First Decade

As the emergency-responder community now enters the second half of what might justifiably be called the NIMS decade, two primary changes are needed. The first change should be to revise current training programs to reflect the reality that personnel turnovers have occurred and will continue to occur for the foreseeable future. Whether through promotion, retirement, or other forms of attrition, many personnel who were trained several years ago already have moved on, and their replacements must be trained to the desired/needed level. Annual local training plans and budgets therefore must include provisions for training new and replacement personnel to ensure that adequate numbers of personnel are available, on a continuing basis, who have the training needed – and at the proficiency levels required. It probably will not be necessary for every agency to plan or schedule offerings of each training course annually. In fact, many agencies and organizations would not be justified in scheduling annual offerings of all training courses. In such cases, it may be a more effective use of funds (and time) to set aside a reasonable share of the training budget for newly hired and/or replacement personnel training elsewhere and/or in a multi-disciplinary setting.

The Virginia Department of Fire Programs (VDFP) – to cite a leading example of how one state has dealt with this situation – annually budgets a portion of its HSGP (Homeland Security Grant Programs) funds for offering several of the core classes in the NIMS training plan. That training is centrally located, within various regions of the state, so that students' costs for travel and subsistence are minimized. The operational premise here is that most local areas can better plan and budget their limited funds for broader needs if the state covers the costs for at least some of the NIMS training.

Many state training agencies have adopted this strategy. However, it must be admitted that some local jurisdictions continue to resist state and national efforts to implement regional and/or multi-agency training. Here it is important to note that a stated intent of the NIMS policy is to foster a truly *national* system for incident management. But such a system can be developed only through a broad-based, multi-disciplinary, multilateral effort.

"Check the box" training - does not automatically ensure competence; more important is the self-evident truth that operational competence can seldom if ever be maintained without periodic review, practice, and/or application

The second major change mentioned above should be to develop and implement a long-term plan for maintenance of the minimum levels of proficiency achieved by personnel who have completed NIMS training. Training for compliance – sometimes called "check the box" training – does not automatically ensure competence. More important is the self-evident truth that operational competence can seldom if ever be maintained without periodic review, practice, and/or application. Any person who completed a class (of any type) several years ago cannot reasonably be expected to retain the same level of comfort and proficiency he or she hopefully had possessed immediately after finishing the class if there is no opportunity to practice and review what they have learned. But review and refresher training can help, significantly, if conducted on a regular basis. It should not be necessary for *all* students to fully repeat all of the training they had previously gone through, but a concise review of critical learning points certainly could and should be provided on a recurring basis.

Review training can be provided through various in-service or continuing-education procedures. It usually would not be necessary to create new training programs. The simple extraction of a lesson unit from ICS-100 and/or ICS-200 could provide enough refresher information to maintain a reasonably sharp operational edge for previously trained personnel because those classes are relatively general in nature. A more difficult challenge would be maintaining personnel abilities at even an intermediate level in the more

complicated aspects of ICS in situations involving expanding incidents, because the learning processes for those situations are both longer and more complex.

A Scenario, a Process, and an Opportunity

Again, though, it is not absolutely necessary to create new training programs or to require personnel to repeat previous courses. The previously mentioned VDFP has developed a training strategy/program (not yet widely deployed) to provide maintenance training in the key skills presented in the ICS-300 course. Those skills focus primarily on such important topics as "resource management" and "the planning process." To re-learn and practice the core elements from Units 5 and 6 in the ICS-300 class, students are formed into a mock incident management team (IMT) – but a local IMT (Type 4 or 3) or several teams can be designated and "deployed" for the program. The students are then presented with a scenario that includes a real-time simulation in which they must develop an incident action plan (IAP) while also addressing the numerous factors that might affect the activities of the IMT. One of those factors involves making provisions for subsistence of the team. During the activities that follow, the team is provided periodic situational updates that require adjustments to the planning process. Using methods spelled out in what is called the NIMS "Planning P," the students are given a pre-determined period of time to produce an effective IAP – which must be presented to another team, and/or to the cadre of instructors, in a simulated "Operational Period Briefing."

In situations similar to those used in both intrastate and interstate deployments, the student participants are provided predeployment information about the materials, personal supplies, toiletries, and other items that they might need and are expected to come prepared for self-subsistence for the duration of the activities assigned. Upon arrival at the designated location, they face two primary challenges – again, much like those they would face on arrival at a real-time incident: (a) identify priorities and operational objectives appropriate for the scenario; and (b) determine how they will take care of their personal as well as operational needs for the period of time postulated in the scenario. Both sets of tasks must be undertaken concurrently. In addition to the initial steps set forth in the Planning P, the students also must plan for their daily meals, accommodations, and other mundane matters that would be the responsibilities of the logistics section of an IMT.

These and similar programs provide an opportunity, in what is much more than a classroom context, to apply the skills they would need in a real-life situation. Here it should be noted that such programs do not use instructors per se. Instead, the program administrators consist mostly of exercise simulators and monitors – the latter group, who proctor the students to maintain the pace and direction of the activities involved, are usually peers whose principal role is more to support the players rather than to evaluate or train them. At the conclusion of each program or operational period, the proctors provide a forum in which to discuss not only strengths and weaknesses but also opportunities for improvement. A particularly noteworthy aspect of such programs is that they can be conducted for as many days or operational periods as funds will support and for which personnel are available.

Whenever possible, such programs are best conducted at facilities that are somewhat off the beaten path – i.e., far enough removed from daily conveniences such as stores and recreational areas that the participants are not tempted to stray from their primary mission: training. Most states have a number of areas such as 4-H camps, forestry training centers, or other relatively spartan facilities that can be adapted for use in NIMS refresher training programs. It is not necessary to require field-camping per se, but a facility with minimal amenities could closely approximate the type of conditions that might be expected in an actual field deployment to a major emergency or disaster area. Creativity and ingenuity, on the part of the program managers as well as the participants, cannot be easily mandated, but usually would be the key virtues needed in programs designed to maintain the minimum training competencies set by the NIMS policy guidelines.

To briefly summarize: Now that NIMS has begun to approach what might be called a state of equilibrium and the initial rush to train as many people as possible to as high a level of proficiency as possible has leveled off, the time has come to maintain, reinforce, and upgrade the knowledge, skills, and capabilities of all personnel who were trained previously. A failure to foster interoperability and sustainability caused by a failure to continue both training and *practice* would lead, inescapably, to the failure of the overall NIMS philosophy. The consequences of such a related series of failures are unacceptable.

Stephen Grainer is the chief of IMS programs for the Virginia Department of Fire Programs. He has served Virginia fire and emergency services and emergency management coordination since 1972 in assignments ranging from firefighter to chief officer. As a curriculum developer, content evaluator, and instructor, he currently is developing and managing VDFP programs to enable emergency responders and others to achieve NIMS compliance requirements for incident management.

ServNC Shapes Quick Response to Icy Kentucky

By Ann Marie Brown & Jeffrey Peterson, Public Health

When ice-ravaged Kentucky sent out a call for help in January, North Carolina met the request by deploying a 15-member group of medical personnel within 24 hours. The deployment, for a total of fourteen days, was split between two teams, each serving one week.

The need for help was sent from the Commonwealth of Kentucky to the State of North Carolina via an Emergency Medical Assistance Compact (EMAC) request; EMAC is a mutual-aid agreement that allows states to help one another during major emergencies affecting more than one state.

The quick response was made possible in part by training, and in part by North Carolina's ServNC system, which identified the personnel needed and deployed the response teams to Crittenden County, Kentucky, to augment that county's local hospital staffing.

"This deployment was the first since we've organized through ServNC. It showed our system is working," said Drexdal Pratt, chief of the North Carolina Office of Emergency Medical Services. "I want to thank all who participated in the sharing of these personnel, equipment, and resources for their roles in this important response to Kentucky's emergency situation."

The 15 people deployed were divided into two teams, and stayed on the job for a total of two weeks. One team consisted of a team leader, a physician, a physician assistant, five nurses, and a pharmacist. The other consisted of one team leader and five nurses.

Unexpected Developments Show Team's Diversity

The team's original mission was to augment medical staffing at the Crittenden County Hospital in the western part of the state. The hospital had "decompressed" its floor beds (by discharging or transferring patients to other facilities in Kentucky and Indiana). However, it maintained an emergency department and outpatient clinic in order to continue to provide services to Crittenden County and a number of other communities in the area.

The North Carolina team augmented staffing in the hospital's emergency department, pharmacy, and outpatient clinic. During the team's deployment, however, the facility regained power, after which the team shifted its focus and assisted the hospital in staffing other areas during the so-called "repopulation" phase. While this was going on, the senior decision-making officials on the scene determined that, because the power was restored well ahead of the time anticipated, a full second week of the team's deployment was no longer needed.

Flexibility, Diversity, Adaptability

Following discussions with Crittenden County Hospital officials and the Kentucky ESF-8 (Emergency Support Function (ESF) 8 is a mechanism, administered by the U.S. Department of Health and Human Services (HHS), that consolidates, into a single cohesive unit, multiple agencies – from different states or other jurisdictions, for example – performing similar or like functions. Such consolidations not only reduce costs but also improve the overall coordination and management of emergency-response activities and operations.) desk it was determined that the team would continue its deployment, but instead of remaining in Crittenden County would transition to the Livingston County Hospital (just west of Crittenden County) to provide similar services. In addition, the team would be scaled down to only the nurses and the team leader – enough to meet the anticipated needs of the Livingston facility.

On day seven of the overall deployment, as the team in Crittenden County was demobilizing, the second section of the team was arriving in Paducah (in nearby McCracken County) to help fill the needs of Livingston County. As in the first week of the mission, the team members continued to conduct patient care in the nursing areas of the Livingston County Hospital.

As in most disaster deployments the teams were very flexible in their makeup and, in large part for that reason, were called upon to adapt to a wide variety of situations and experiences. The section of the team in Crittenden County, for example, was asked to take on the role of medical surveillance at a local shelter. During this process the team was able, interestingly, to assist the local county emergency and human services staff in establishing a special medical-needs section, within an existing shelter, that was serving as a temporary home for twenty of the Kentucky residents who had taken refuge in the shelter earlier in the disaster that had hit their state.

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.

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Washington, South Carolina, Texas, and Louisiana

By Adam McLaughlin, State Homeland News

Washington
Earthquake Fault Larger, More Dangerous Than Thought

An earthquake fault previously believed to be limited to an area south of Washington state's Whidbey Island actually stretches 250 to 300 miles – from Victoria, B.C., to Yakima, Wash., crossing the Cascade Mountains – and is capable of producing a major earthquake, new research shows.

Many of the other faults in western Washington could be connected to the South Whidbey Island Fault in a network similar to the San Andreas Fault system in California, Craig Weaver, the Seattle-based regional earthquake coordinator for the U.S. Geological Survey (USGS), said in an interview on 20 May.

USGS Acting Director Suzette Kimball told Congress last month that there is "strong evidence" that other faults in western Washington may be connected to the South Whidbey fault. "It appears there is a very large [fault] system in the Cascade arc," she told the House Interior Appropriations Subcommittee on 21 May.

Weaver said that scientists are trying to determine whether the South Whidbey Island Fault extends as far east as the Hanford nuclear reservation, and if it might also be connected to the highly unstable Cascadia subduction zone off the U.S. west coast. "This is big stuff," Weaver said. The South Whidbey fault is the "most dangerous" of several faults under close scrutiny, he added. "A lot of people are looking over our shoulder."

The South Whidbey Fault could be capable of producing a maximum earthquake registering 7.5 on the Richter Scale, which is used to measure the strength of earthquakes, Weaver also said. An earthquake that size would be capable of causing serious damage over large areas of the state.

A 7.5 earthquake would be the largest earthquake in the state's recorded history. In the spring of 1949, a 7.0 quake rocked the Olympia area, damaging nearly all of the large buildings in the area and causing eight deaths. During a magnitude 7.3 earthquake in the Strait of Georgia off British Columbia in June 1946, the seabed dropped nearly 85 feet in some areas.

The USGS, working with state and local agencies, is planning to carry out a major earthquake preparedness drill in Pierce County within the next several months. Using the latest discoveries, Kimball told the House panel, a number of scientists are working to develop various disaster scenarios the state might have to face in the foreseeable future.

Over the past decade, Weaver said, scientists have discovered a dozen faults in western Washington. "We previously thought they were small, unconnected faults," he said. "Now we are sketching out connections." "This is a very serious discovery," commented Rep. Norm Dicks (D-Wash.), chairman of the subcommittee, which oversees funding for USGS and other Interior Department agencies.

South Carolina
Officials Test Their Ability To Respond to Terrorist Attack

Coordination and communication were the buzz words local officials used most often as they simulated a terrorist attack against a major utilities facility in Orangeburg County, S.C., on Wednesday, 27 May. The exercise – a mock biological attack at the Orangeburg Department of Public Utilities Water Treatment Plant – was designed to assess the ability of local agencies to respond to such attacks, according to County Emergency Services Director John Smith.

"I think we are well prepared; we have become more prepared in the last several years," Smith said. "I am particularly pleased it worked very well. We meshed together as a team." Members of the Orangeburg County Sheriff's Office (OCSO), the Orangeburg Department of Public Safety (ODPS), and local EMS (emergency medical services) and hazmat teams – a total of approximately 40 people – were involved in the exercise.

OCSO Maj. Clark Whetstone said that the tactical team's mission was to secure the facility, evaluate the threat, and provide decontamination assets. He said the coordination between the local entities involved was "very strong."

ODPS Capt. Thad Turner said the exercise had three goals: improving communications; assessing the flow of information from the command post to field units; and evaluation of the level of cooperation between the hazmat and tactical teams.

"We all communicated well together and came up with a cohesive plan and … implemented it," he said. He added, though, that the county needs to expand its ability to detect weapons of mass destruction and needs a wider range of protective garments for its tactical teams.

Smith said there were some relatively minor communication issues between the state and Orangeburg County during the exercise. Nonetheless, he added, local counterterrorism planning has greatly improved in recent years. "A lot of these things we did [in last week's exercise] … would not have been possible six years ago."

Whetstone pointed out that the county has a reverse-911 system in place to contact people in areas where a potential threat might be possible. He also noted that the county's disaster-training drills are part of an "ongoing" process, and that exercises are carried out several times a year. "It's not just a law-enforcement issue," he said. "It's a unified- command issue."

Texas

Houston May Build "Dike" Wall to Reduce Storm Effects

Houston-area political leaders are considering a proposal to build a 17-foot-high sea wall along 60 miles of the upper Texas coast to help limit damage to the hub of the U.S. petrochemical industry from storms such as last September's Hurricane Ike, the idea's originator said earlier this month.

The proposed "Ike Dike" – named for the massive storm that caused $32 billion in damages to the greater Houston area – could protect almost all of the Galveston-Bolivar Peninsula area from water and storm-surge damage caused by future hurricanes, said William Merrell, the Texas A&M University at Galveston oceanographer who first proposed the wall several months ago.

"People do not realize that about 50 percent of the country's petrochemicals and about 25 percent of its oil comes up from the Houston Ship Channel," Merrell said. "If traffic there is affected, it becomes truly a national problem, not just a Texas problem."

The wall, which would take at least a decade to complete, would run along the narrow entrance to Galveston Bay; one of the major components of the wall would be 1,000-foot-long

floodgates that, upon the approach of a storm, would be closed to block the floodwaters expected.
Robert Mitchell, president of the Bay Area Houston Economic Partnership, a local business group, said that conversations with Houston-based chemical-industry leaders have already started and that Merrell's idea has received widespread support so far. Support from other segments of the chemical industry "is the next real big push we're going to make to get [everyone] on-board," Mitchell said. "It is incredible how there has been such little pushback. Everyone knows this … [has] to get done."

Merrell said he based the basic principles in his idea on how existing floodgates are used in such major port areas as London, England, and Rotterdam in The Netherlands. According to his projections, the Galveston-Bolivar wall would cost $3 billion or less, a relatively small price to pay when compared with the billions of dollars of damage caused by earlier storms that have made landfall in the Houston area. "We get hit by a major tropical event about every 15 years in the Houston-Galveston area," Merrell said. "This thing is going to pay for itself quickly."

Texas Governor Rick Perry's hurricane preparation commission also has recommended the building of a wall, Merrell said. The next step, he said, would be reviewing a recommendation from the commission to create a six-county public corporation to examine a number of surge-protection measures that have been proposed; the building of the Ike Dike would be the most protective, as well as the most costly, of those measures.

"I am actually shocked that this idea has gone as far as it has," Merrell also said. "From having an idea a few months ago to going to the governor's commission to getting a positive recommendation to the governor, this is going pretty fast and pretty far."

Louisiana
Opens New State-of-the-Art Medical Clinic in Baton Rouge

An $18 million state-of-the-art Louisiana State University (LSU) medical clinic officially opened earlier this month in the northern outskirts of Baton Rouge, the state capitol. Sometime in the next few weeks, officials said, primary care, women's health, and cancer services will transfer from the campus of LSU's Earl K. Long Medical Center north on Airline Highway to the new clinic.

During the opening ceremonies in the first week of June, state Senator Sharon Broome (D-Baton Rouge) was already promoting "a vision" for future expansion of the facility, which is in her legislative district. "We need an urgent-care center attached right over there," Broome told Republican Governor Bobby Jindal, another of the principal speakers. "I wanted to say it in front of all these witnesses."

Jindal described the clinic as "the way" of Louisiana's health-care future. It will emphasize preventive medicine and primary care. He praised LSU officials for the leadership role they played in establishing "medical homes" that provide patients with medical care in their communities.

Jindal pointed out that Louisiana is one of the nation's leading states in using its emergency rooms for non-emergency medical problems. He also said that facilities such as the north Baton Rouge clinic would provide early diagnosis and care that would reduce the need for expensive emergency-room visits and hospital stays.

"This is exactly our vision for reform," said Alan Levine, secretary of Louisiana's Department of Health and Hospitals. "We are going to give you the tools and infrastructure where it can be done properly." The new 44,000-square-foot, two-story facility has 30 examination rooms, a community meeting room, a diagnostic laboratory, a pharmacy, and radiological-services spaces.

Broome also pointed out in her remarks that it took "a lot of different people" to make the clinic a reality. Prominent among those people were a Florida businessman, who donated the land, and former Louisiana Governor Kathleen Blanco, whose administration obtained the construction funds provided by the state legislature.

Earl K. Long (EKL) Medical Center Administrator Kathy Viator said that doctors started seeing obstetrics and gynecology patients at the clinic on June 8. Cancer services will be moved from the EKL campus next, Viator said, and will be followed by internal medicine services sometime after the first of July.

Patient care will continue to be provided "at the same high level" – but in different and better surroundings for patients, physicians, nurses, and everyone else – Viator also said. "You have a modern state-of-the-art facility that will effectively serve patients' needs; our building down the street is antiquated," she said.