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Editor's Notes

By James D. Hessman, Editor In Chief

The ability to determine the presence of anthrax – and/or other biological-warfare (BW) agents – quickly and with reasonable certitude at the scene of a major national incident is the subject of two important articles in this monthly printable issue of DomPrep Journal. The first of those articles, a Special Report by Kate Rosenblatt, discusses both the extraordinary difficulties involved simply in defining "reasonable certitude" and the several positive steps forward already achieved both by the federal government and by private industry.

The second article, by Chris N. Mangal, sets forth the understandably cautious position taken by the APHL (Association of Public Health Laboratories), which points out, correctly, that – unless thoroughly tested and approved by an appropriate federal agency, and operated by trained professionals – the instruments and devices used for on-site inspections may yield not only false positives but also, and of much greater consequence, false negatives. A false positive – i.e., a reading that suggests the probable presence of anthrax – would waste both time and dollars. The cost of a false negative, indicating that anthrax is not present, would be much higher, though, and would be measured not only in time and dollars but in human lives as well.

The real problem, of course, may be not the reliability of various on-site detection systems and devices but the fact that the executive and legislative branches of government have not given higher priority to the possibility of a biological-warfare attack against the U.S. homeland and, therefore, have not provided the funds needed not only to detect the presence of anthrax but also to develop and distribute an anti-anthrax vaccine and to treat those who have been infected in the initial stages of an attack – which, it should be noted, might easily kill, in one U.S. city or major metropolitan area, more than one hundred times as many people as were killed in the terrorist attacks of 11 September 2001.

The inability to solve a problem of such enormous magnitude is understandable. The unwillingness even to confront that same problem, though, and to assign it to the "too-hard basket" for almost six years, is culpable negligence. The American people deserve and should demand a detailed accounting from those they elect to public office.

One of those elected officials, fortunately, is Rep. Bennie Thompson (D-Miss.), the new chairman of the House Armed Services Committee, who already has played a key role in steering to passage, and enactment into law, of H.R. 1, which promises that all of the homeland-security recommendations of the 911 Commission will be fully and speedily enacted into law. Chairman Thompson has pledged to take an activist approach to other legislation during his term as chairman, and we are honored to have him as a Viewpoint contributor.

The other contributors to the April printable issue are Paul Dimitruk, who not only discusses the need for hospitals to take early action in upgrading their preparedness capabilities but also provides several suggestions to help them do so more efficiently and at lower cost; Joseph Cahill, who comments on the problems involved in the proper management of medical resources ranging from respirators to bed linens; Dr. Michael Allswede, who advises the use of a "pessimistic planning scenario" in developing medical contingency plans; Charles Dodson, who reviews the progress made in the establishment of several high-tech communications and command "fusion centers"; Christopher Doane and Joseph DiRenzo III, who look northward at a U.S./Canadian border-defense success story; and Adam McLaughlin, who writes about new preparedness initiatives taken by California, Minnesota, New York, and Ohio.

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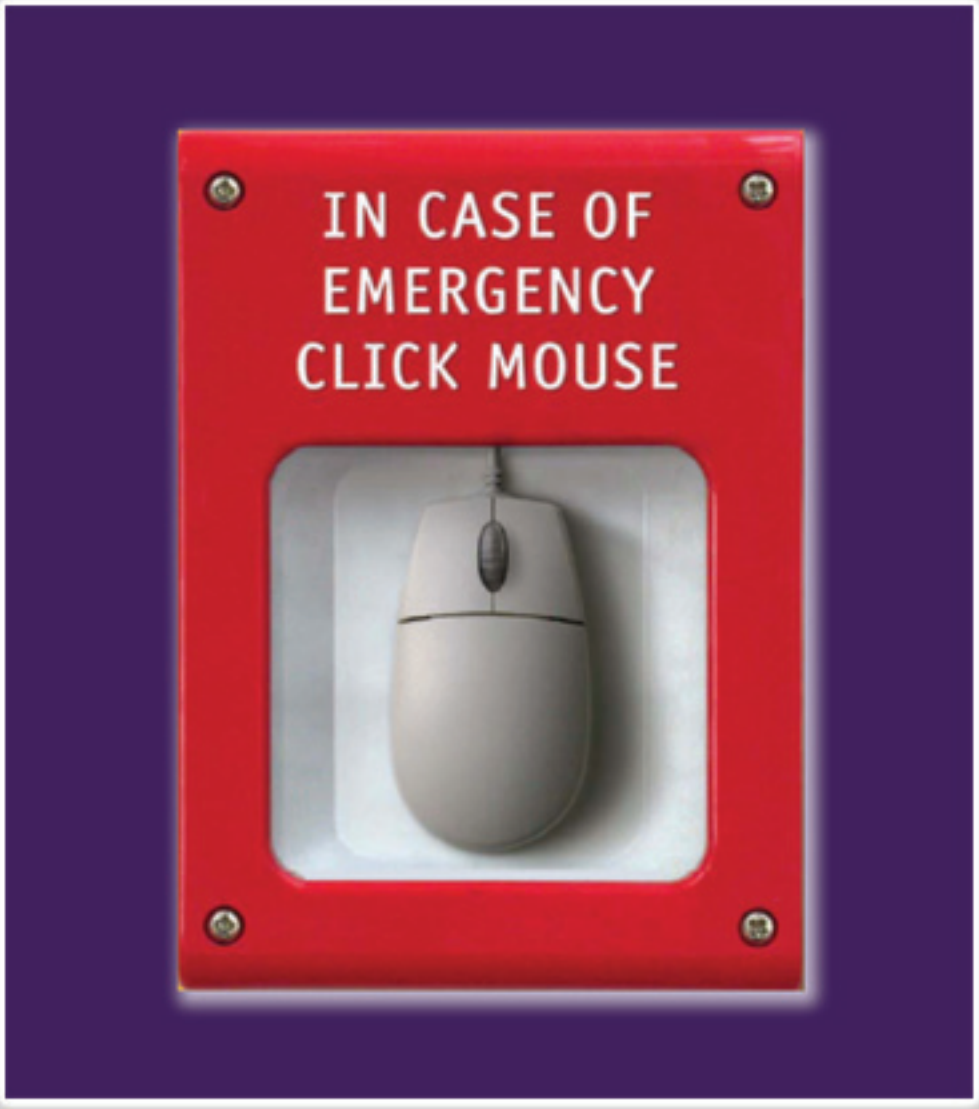

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Upping the Ante Through Fusion Center Technology

By Charles Dodson, Law Enforcement

The attacks more than five years ago on the World Trade Center and the Pentagon by terrorists believed to be fundamental Islamic extremists dramatically changed the lives of all Americans. The global Intelligence Working Group, a high-level national-security unit created in the aftermath of the 11 September 2001 attacks, developed what is called the National Criminal Intelligence Sharing plan as part of a major coordinated effort to prevent and/or cope with future such attacks. From that plan, fusion centers were funded to support a formal intelligence-sharing and communications structure.

The U.S. Department of Justice identified the adoption of standards and the use of a services-oriented architecture as two of the operational steps needed to facilitate information sharing within and between the fusion centers. The adoption of standards includes use of a common terminology and semantic understanding of data elements. This common understanding will enhance the experience of all users through more accurate, more precise, and more comprehensive results. Fusion center technology infrastructures and architectures, it has been determined, should include enterprise level security, scalability, and reliability requirements, but consideration also should be given to the use of federated "single" sign-on and identity-management technologies.

The fusion centers provide all-source collection and production from multiple agencies and a broad spectrum of federal, state, and local information systems. One of the principal challenges in using this approach is that each system usually requires a separate user identification and password to allow access. Conventional identity management refers to inter-organizational access privileges, while federated identity management allows *intra*-agency identity management and access controls. An excellent example of how federated identity management can be effectively used is the I-Services Gateway system employed by the Michigan State Police. By using this system, federal, state, and local agencies can execute name-check inquiries across the region in a timely and rather easily managed environment.

SOA: A Broad Spectrum of Effectiveness

The term service-oriented architecture (SOA) refers basically to an architecture that allows a user to contract with an existing application to provide a "service" (e.g., a name inquiry) independent of the underlying platform and programming language. This permits faster and more cost-effective integration of disparate data systems to become available. SOA is not tied to any specific underlying technology and may be implemented through use of a wide range of interoperability standards.

Through the combination of service-oriented architecture and federated identity-management fusion centers, participants are able to collect, integrate, and analyze information not only faster but also more easily. This all-source integration is enhanced by the growing trend toward the co-location of fusion centers with emergency operations centers in various regions of the country. Fusion centers are the primary source for the collection and analysis of information. In the event of a major national incident, natural or manmade, or other emergency, the fusion center, depending upon the organizational and governance structures previously established, can: (a) provide the information needed to assist in the coordination and resource allocation of emergency operations centers; (b) assist first-responder agencies and other tactical units; and (c) in certain situations, identify additional emerging threats.

The appropriate and well-timed collection and distribution of key information allows law-enforcement and public-health officials, as well as emergency managers and other first responders, to act rapidly, effectively, and consistently. The end result is a combination of faster and more effective responses, the earlier resolution of crisis situations, and more desirable outcomes. In short, the all-source production of intelligence and information resources provides a better and higher level of the situational awareness needed to detect, deter, prevent, and/or respond to not only major crimes but also acts of terrorism.

Charles Dodson is a Senior Director, Justice and Homeland Security, for Oracle Corporation. He has over 18 years of law-enforcement expertise – including local/state law-enforcement experience & participation in federal law-enforcement investigations and operations.

The Either/Or Dilemma

Hard Choices Ahead in Materials Management

By Joseph Cahill, EMS

The management of materials – food, water, medicines, etc. – in times of disaster depends on citizens at every level of society not only being self-sufficient, insofar as possible, but also willing to help one another. That principle is equally true of households and governments; unfortunately, the problems facing both entities also are the same.

There are some realities that all Americans must understand. The first is that no one, and no agency or organization, including the government, can protect *everyone* from *all* elements of risk, nor can the government (or any family) stockpile enough materials of all types that every possible emergency can be met both immediately and effectively every time. It is also important to understand that this fact does not excuse the community, or the individual, from trying.

The website www.ready.com suggests that a three-day supply of food and other essentials should be set aside to meet the reasonable and foreseeable needs of a family preparing for an emergency. That principle, taken to a higher level, suggests that communities, including local and state governments, must lay in some rather large stockpiles of those same supplies (and many others) for use during a wide spectrum of disasters, with a focus on survival always being the first priority.

The estimated 5.9 million Americans now living below the poverty line and making "heat or eat" decisions every week obviously would be unable to build up enough of an emergency stockpile to sustain themselves for even a few days – which means that special provision must be made, in the planning stage, for the homeless and the helpless.

Major Stockpiles And Major Problems

On a larger scale – e.g., for a pandemic influenza, or any other emergency during which hospitals throughout the nation would have to expand their capacities tenfold or more – the management of materials becomes an immensely greater task. The same is true, on only a slightly reduced scale, for a localized disaster, such as an earthquake or hurricane – that would make the movement of food supplies and other materials into the affected region impossible for perhaps an extended period of time.

> ***A localized disaster such as an earthquake or hurricane would make the movement of food supplies and other materials impossible for an extended period of time***

Materials management is a particularly challenging problem for hospitals and other medical facilities. Although much good work and thought has been put into preparing for a pandemic, much of that effort has focused on the purchase of materials such as ventilators, which would be useful only in events that cause respiratory failure. It probably would save many lives to be able to place as many sick flu patients on ventilators as possible. However, if a hospital is not able at the same time to maintain its basic "housekeeping" and other functions, this higher-level treatment would not have the infrastructure foundation it needs to be effective in treating a greater number of patients for a longer period of time.

Many hospitals have taken a number of forward steps to maintain their cost-effectiveness, but some of those steps actually hinder the emergency-preparedness goals that have been established. It is easy to point to the shrinking number of beds as a loss of the expanded capacity needed in an emergency, but there are other more subtle issues that also should be examined.

Business Costs and Higher Prices

The modern "just-in-time" business model of ordering and storing medicines and other supplies may prove to be the principal difference between the way the nation's medical community as a whole coped with the great flu pandemic of 1918 and the way it will cope, or be unable to cope, with the next pandemic. To avoid keeping large amounts of inventory, many hospitals and other critical-infrastructure facilities have moved in recent years to a model where little inventory is kept in house, and replenishment deliveries are made on an almost daily basis.

A large number of hospitals also have outsourced many of their support functions – e.g., linen cleaning. In the past, most if not all hospitals had their own laundries and linen supplies on site, but in recent years many of them have outsourced the storage and cleaning of linens, almost always as a cost-saving measure. The result, however, is that, even though the supply is replenished periodically, the extra or surge supplies likely to be needed in an emergency are stored off-site.

Unfortunately, during an emergency both the hospital and the roads to and from the linen service may be affected, which means that the theoretically simple but vitally important task of changing the linen on patients' beds would be outside the hospital's control.

What has developed, therefore, amounts to a "pay today or pay twice tomorrow" situation. But even that easy summation understates the real problem, which is that it is either "pay today" (in increased taxes and/or other costs) or "pay tomorrow" – in lives lost that might otherwise have been saved.

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*Joseph Cahill has served as a line paramedic for over ten years in The South Bronx and North Philadelphia. He was awarded the distinguished service medal and seven pre-hospital "saves" ribbons from NYC*EMS and FDNY as well as a unit citation from the Philadelphia Fire Department, and has received both the 100-Year Association's award for "Outstanding Service to New York City" as well as the World Trade Center Survivor's Ribbon (two bronze stars).*

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Medical Resources & Realities

The Rationale for a Pessimistic Preparedness Planning Scenario

By Michael Allswede, Public Health

Imagine for a moment being the quarterback of a football team. There is a big game coming up, but it does not appear on any schedule. Information about the game will be provided at the time of the opening kickoff. In addition, a game plan must be written without prior knowledge of the opposing team or the identity of its player – but the plan still must conform to the league's game-plan format and be kept in a large binder in an office where it is all but inaccessible to the players.

The players themselves are a rather large group of individually capable professionals, only some of whom will play in the game but *all* of whom are required to practice their skills separately. Some do, and some do not. In the best-case situation possible, the receivers run pass routes but do not catch passes; defensive players tackle dummies, but not live running backs. The players may or may not like or even know one another, and no one reviews the game plan until they are on the field. Nevertheless, on the day of the game the players get together in a massive huddle after the kickoff and get their first look at the game plan. A play is then called and the game finally starts in earnest.

One more problem to cope with: If anyone on the team should fumble, miss a tackle, throw an interception, or simply not show up in good physical condition the misplays and mental errors will be televised and there may be fines imposed by the league and/or liabilities imposed against the individual players for their poor performance.

The Dangerous Effects Of Casual Afterthoughts

Such is the challenge facing today's medical-response disaster planner. For various reasons, medical disaster planning is generally an afterthought in a clinical emergency department. For that reason, among others, a relatively junior member of the medical staff is often assigned to write the plan. Lacking both the experience and qualifications needed, the writer of the plan often has no recourse, therefore, but to take previous plans and adapt or amend them to meet current disaster concerns. There are several obvious problems with this approach, most of which fall into several familiar categories:

- *One size does not fit all:* Although the "all hazards" general model used in disaster planning is useful and reasonably effective for communications and command systems, it breaks down in the intricacies of medical responses. No one would want all-hazards surgery perpetrated on himself or herself after suffering an injury. The ability to tailor medical responses to a particular situation is limited by writing a single all-purpose response plan that does not address the specific medical needs of individual patients suffering from any of a broad spectrum of possible injuries. Medical systems probably should develop at least three different types of disaster plans, therefore – namely, a trauma plan, a HAZMAT response plan, and a communicable disease plan.
- *The failure of translation:* Once an alteration to a plan is made, all those who operated on the old plan must be updated and retrained on the new plan. For disaster plans in print that are kept at multiple locations, this requirement translates into a matter of constant upkeep. For disaster responses that exist primarily (or exclusively) in the minds of the operating professionals, the retraining is still required. In either case, alterations or changes in the plan are both difficult to disseminate and expensive to carry out.
- *The failure of optimism:* Some but not all planners are guilty of planning a "best day" response in which the individual "players" involved can instantaneously extricate themselves from their pre-existing duties and responsibilities and show up at the disaster site properly equipped and briefed. At present, there is very little guidance of any type for medical professionals to follow who are required to transition from the "chaos" phase of disaster response – in which little or nothing is known about the size and scope of the problem – to an orderly and more effective phase of the response effort. Here there is an obvious medical example that serves as a helpful microcosm of the overall problem: Because the staffing of a hospital is different, both in size and in quality, at different times of the day, the assumptions made by an optimistic planner open some major and glaring gaps during off-peak staffing hours.

The failure of the optimistic planner is based on the presumption that enough medical personnel, space, and supplies will be available for the number of victims likely to need medical care during a truly major disaster. By *not* planning for the delivery of care above the usual and customary disaster drill point, the system risks what might be described as "disaster myopia" – i.e., the condition, caused by the unwarranted assumptions of the planner on the scale of the event, of not being able to "see" the extent and scope of larger disasters.

A Rational Surge Capacity Needed

A major problem that must be addressed openly and honestly is that the nation's private-sector hospitals are businesses as well – high-overhead/low-margin businesses, in fact. Most of the nation's private-sector hospitals make an estimated 3-5 percent profit margin on their services. Moreover, because of the high daily overhead costs of paying salaries and both buying and maintaining capital equipment, the hospital must operate near capacity in order not to lose money. As a result, most hospitals must stay within 3-5 percent of their capacity just to break even on a day's overhead costs.

As a practical example of what this means, a 500-bed hospital would, on a best-day scenario for disaster planning, be breaking even with 95 percent occupancy – which

would leave only 25 beds available to accommodate disaster victims. On most days, however, there would be even less capacity in a financially viable hospital system, and some days in which there is 0 percent excess capacity. It should be remembered that a 100-percent capacity hospital is the financial ideal, and hospital administrators take great pains to reach and maintain that goal.

In short, having more than a small number of empty beds available, and the medical staff needed to cope with disasters, is not financially possible for most medical institutions. Hospital planning that assumes the availability of not only enough beds but also the medical staff needed is a significant, but avoidable, problem.

Pessimistic/Realistic Options: Delay, Degrade, Deny Care

Instead of relying on optimistic plans for disaster response, medical systems should understand how to manage if the staff does not show up for work, if the re-supply needed does not arrive in time (and/or in the quantities needed), or if a very large number of victims flood existing capability. In other words, medical systems need *pessimistic* disaster planning.

However, to create a pessimistic "surge" capacity within medical facilities already operating at or near capacity requires an offsetting degradation of the care provided to patients already in the hospital. Simply stated, to care for more victims with the same number of staff and beds requires one or more changes from the daily standards and norms of care that would be both medically sound and professionally ethical. There are three basic strategies that may be employed:

- *Delay Care:* If victims or hospital inpatients are suffering from non-emergent health issues that would not be significantly impaired by the delay of care, they may be asked to return at a later time. Some examples of such conditions: Colds and influenza, certain types of fractures, some lacerations, and elective surgeries.
- *Degrade Care:* Should victims require care despite limitations in staffing or available space, so-called "disaster privileges" to practice medicine outside the scope of normal care may be adopted to expand practice responsibilities and available facilities. Examples: Senior nursing staff can make ventilator or medication changes in accordance with established protocols, patient care rooms could be expanded with additional cots, and surgical and critical-care suites could be used interchangeably.
- *Deny Care:* In an extreme situation, care may be denied to a patient or victim – depending on the resources available and the utility of rendering care to that individual or to another. In this scenario, the concept of "medical marginal utility" would be used to determine where medical care would do the most good. One example: If an avian flu victim believed to have only a 10-percent hope of survival and a myocardial infarction (MI) patient with a 50 percent likelihood of survival both need a single available critical-care space the medical marginal-utility argument would direct care to the MI patient who is "less sick" than the avian flu patient.

Although establishing guidelines to Delay, Degrade, and Deny care may be difficult to consider, *not* to do so, in advance, would mean that these decisions will have to be made later – in a haphazard manner, in all probability, by medical staff operating

under stress. Without effective, and early, guidance, mistakes will be made and lives may be unnecessarily lost. To accommodate ethical, legal, and regulatory issues, a rational discussion on a "normal day" is the best way to consider these principles.

The Solution: A Viable Paradigm

The laws that govern the usual practice of medicine are not written with disaster responses in mind. In the place of statutory guidance, public health executives in most states are considered to possess the authority to make the decisions needed. But public-health officials in most cities, counties, and states of the nation are not acute-care practitioners. Moreover, as a practical matter, public health authorities certainly cannot be in all hospitals at all times to make the decisions needed.

One solution to this almost universal problem may be to establish, ahead of time, certain pre-set numerical thresholds for facilities of different sizes to operate in a delay, degrade, or deny mode (always, of course, in coordination with local public-health officials).

The specific powers of the medical facility and its practitioners in each mode of operation can then also be defined. An expanded scope of care and alternative use of the facility can be triggered by these thresholds, which should automatically be included in a disaster plan. By creating a common understanding with numerical thresholds and the authority to empower efficiency strategies within the medical system, the normal-day overloads that occur may be more efficiently managed and the disaster care provided will conform to common-sense ethical and logistical understandings. The all-hazards plan thus would evolve into a more effective modular disaster plan in which different strategies would be prescribed to meet different scales of events.

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

Four Ways for Hospitals To Prepare for HICS IV Now

By Paul Dimitruk, Viewpoint

August 31, 2008, is not nearly as far away as it seems – and that is the deadline by which all U.S. hospitals are required to comply with the National Incident Management System (NIMS).

The U.S. Department of Health and Human Services (HHS) has designated the Hospital Incident Command System IV (HICS IV) as the hospital industry's route to achieving NIMS compliance. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) also has announced its support for HICS IV (as part of its accreditation process).

> ***The impact of mass-casualty events is usually not limited to a single hospital, but often affects entire communities***

Developed by leading experts, including Craig DeAtley at the Washington (D.C.) Hospital Center, Director of the HICS Center that developed HICS IV, HICS IV uses an "All Hazards" approach to assist hospitals in improving their emergency preparedness, mitigation, response, and recovery capabilities. This approach represents a substantial raising of the bar for hospital disaster-management best practices.

Following are four steps that hospitals can take today to help ensure on-time HICS IV compliance:

1. **Assess how HICS IV will affect existing disaster-management plans.** Hospitals should familiarize themselves with the HICS IV structure, guidelines, and documents, and designate appropriate staff to participate in "train the trainer" classes. The California Emergency Medical Services Authority website posts the complete HICS IV guidebook, as well as some quick learning modules. The Federal Emergency Management Agency conducts some helpful classes, such as "Introduction to the Incident Command System for Healthcare/Hospitals."

   Hospitals that previously created their own HEICS III plans must now incorporate the more detailed requirements postulated in HICS IV. One example: "Job Action Sheets" have been extensively revised to include additional action steps, broken down into four time periods – immediate, intermediate, extended, and recovery. Emergency-preparedness coordinators should carry out a "gap analysis" of their existing plans to identify the need for specific HICS IV updates.

2. **Incorporate HICS IV requirements in this year's JCAHO disaster drills.** Hospitals should incorporate the HICS IV requirements in their 2007 training and drilling exercises. Because of the importance that JCAHO places on post-drill and post-incident process improvements, hospitals would be well advised to focus primarily on capturing the "lessons learned" during drills and incidents so they can improve their own plans and bring them into HICS IV compliance in advance of JCAHO visits.

3. **Start (or continue) developing mutual-aid agreements.** The impact of mass-casualty events is usually not limited to a single hospital, but often affects entire communities and regions. For this reason, HICS IV recommends that hospitals in close proximity to one another agree in advance, and in as much detail as possible, on how they will work together and/or share resources during an actual incident. To the extent that not enough,

or not sufficiently detailed, mutual-aid agreements are already in place, hospital executives should reach out to their counterparts in neighboring hospitals to negotiate those agreements. Local and regional hospital associations also can aid in this effort.

4. **Consider replacing binders with automated incident management systems.** Many hospitals keep their disaster-management plans in three-ring binders, the minimum file requirement mandated by HICS IV. Binders are therefore de facto "compliant." However, they also are notoriously hard to keep up-to-date, and they may be inaccessible if the hospital itself is damaged or if a key team member is not on site during any of the phases of the typical incident.

Moreover, binders are not automatically "customized" by role and/or type of incident, a deficiency which for practical purposes means that users may have to search long and hard for relevant guidance before they can determine exactly what to do in specific circumstances.

An Easy "Always On" Alternative

The use of HICS IV-compliant web-based incident-management systems can be a far more effective alternative. A comprehensive all-hazards web-based system can provide interactive work-process and decision-support tools for all four stages of hospital incident management, including – to cite but one example – interactive dashboards with hazard-specific Job Action Sheets for each position in the command structure.

Such systems can incorporate purpose-built communications, and would be particularly useful in tracking and reporting on beds, patients, equipment, supplies, and critical infrastructure, thereby reducing error, confusion, and inefficiency during the response and recovery stages of an incident. Another advantage is that web-based systems tend to be more robust and flexible than cell phones, landlines, pagers, and "runners" are, and also can provide far more comprehensive information and guidance than is likely to be available from other communications media.

During actual incidents, disaster managers can access these "always on," decentralized, web-based systems via their HTML browsers – anywhere and anytime – instead of having to carry the binders with them, jotting down notes, leaving cell phone messages, or waiting for runners.

Paul Dimitruk is the chief executive officer of the Los Angeles-based PortBlue Corporation, which specializes in the development of expert systems for business and government applications, primarily in the fields of health care, national defense, homeland security, and law enforcement. Prior to assuming his current post he was chairman and CEO of Pareto Partners, a London-based investment management firm which is today the largest currency risk-management firm in the world. Dimitruk, an honors graduate of Denison University, also holds a Juris Doctor Degree from New York University. An associate member of the Association of Former Intelligence Officers, he also serves as a member of the Advisory Board of the Center for Strategic and International Studies in Washington, D.C., and as a member of the Department of Homeland Security's Private-Sector Advisory Group.

Guarding the Great Lakes

Athena and the Northern Maritime Border Initiative

By Christopher Doane and Joseph DiRenzo III, Coast Guard

The U.S. northern maritime border poses a significant challenge for U.S. and Canadian law-enforcement agencies. The Great Lakes border between the two nations, which extends over 1,500 miles, and the Saint Lawrence Seaway teem with commercial and recreational traffic routinely moving back and forth between the territorial waters separating the United States and Canada. More than 600 U.S.- and foreign-flag commercial vessels and 5.4 million recreational boats transit these same waters, providing ample camouflage for smugglers and terrorists. U.S. and Canadian law-enforcement agencies have initiated a variety of joint efforts and experimented with various technologies to minimize the collective vulnerability of the two nations.

A key joint initiative is a memorandum of understanding establishing a regional strategy for maritime security for the Great Lakes-St. Lawrence Seaway System. In the memorandum, the states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin – plus the U.S. Coast Guard and U.S. Customs and Border Patrol – agreed to cooperatively institute a defense-in-depth strategy that would, on the one hand, preserve freedom of the seas and ensure the uninterrupted flow of shipping, and, on the other, facilitate the legitimate cross-border movement of goods and people. With over 200 net million tons of cargo passing annually through the ports on the Great Lakes, the economic importance of the initiative is already substantial – and growing annually.

A major component of the defense-in-depth plan requires the conduct of joint U.S.-Canadian examinations of vessels entering the St. Lawrence Seaway (at Montreal) to ensure that the vessels are in compliance with applicable security, safety, and environmental laws before proceeding into the Great Lakes-Seaway system. Transport Canada Security inspectors take the lead during these examinations, with U.S. Coast Guard personnel acting as observers. In addition to the joint operations out of Montreal, U.S. and Canadian law-enforcement officials also share information out of maritime centers in Halifax, Nova Scotia (on the east coast of Canada), and Vancouver, British Columbia (on Canada's west coast). A third maritime center is planned for the Great Lakes area.

North and South; Local and National

A particularly promising border-security technology recently tested on Lake Erie is the "Athena" integrated sensor and data system, developed by the Raytheon Corporation in what was called "Project Athena" (but also known as "Operation Lakeview"). During the test-and-evaluation stage of the project, law-enforcement officials were able to use the system to track and evaluate more than 3,500 boats, and even low-flying aircraft, over a 23-day period.

Officials of the two nations said they were impressed with the system's capabilities and potential, and are actively pursuing the funds needed to permanently install the system along the northern maritime border. The Athena system also was tested along the U.S. southern border, officials said, with equally promising results.

The flow of maritime commerce between Canada and the United States as well as through the Great Lakes-St. Lawrence Seaway System contributes significantly to the economic well-being of both nations. Businesses on both sides of the border depend upon the timely flow of goods and materials to replenish their inventories and sustain production.

Overzealous security efforts to ensure the legitimacy of cross-border movements, and/or attacks against critical infrastructure within the system, officials of both countries agree, could create unanticipated disruptions that might seriously affect not only local communities but also the national economies of both the United States and Canada. The bi-national, trans-state, and trans-agency cooperation for regional maritime security that already has been implemented, according to the same officials, as well as the development of supporting surveillance technologies, are critical forward steps, they said, toward a balanced-security regime.

Dr. Joseph DiRenzo III (pictured) & Christopher Doane are retired Coast Guard Officers and adjunct faculty members of the Joint Forces Staff College; they also are regular contributors to DomPrep Journal.

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Real Resources and Real Reforms

A Report From the Committee Chairman

By Bennie G. Thompson, Viewpoint

In the years since 9/11, the American people have been faced with the challenge of working collectively to plan, prepare, and protect our nation should another major terrorist attack or natural disaster occur. It is the responsibility of government – federal, state, and local – to prevent any future attacks and to be prepared to quickly and efficiently respond after disaster strikes.

As Chairman of the House Committee on Homeland Security, I know all too well that homeland security is an issue that affects all Americans, and I will do my best to make sure the Department of Homeland Security is equipped to protect our nation. Today, nearly six years after 9/11, our country still has enormous security vulnerabilities – including those in rail and other mass-transit systems, ports, borders, and other critical infrastructure. In addition, as we learned from Hurricane Katrina, we must take an all-hazards approach to homeland security and not focus all of our attention on terrorism.

In January, my colleagues and I started out the first 100 hours of the 110th Congress by overwhelmingly passing H.R. 1, a bill to implement the remaining recommendations of the 9/11 Commission. A key component of the legislation was a provision to distribute a larger portion of homeland-security grant dollars based on risk, an issue the members of the 9/11 Commission gave an "F" to in their last report card. I believe the bill strikes the proper balance between allocating most of the funding based on risk and ensuring that each State will have the funding needed to reach a minimum level of preparedness.

The bill also protects other grant programs, such as the Assistance to Firefighters Grant Program (FIRE Grants), and Emergency Management Performance Grants to ensure they are not consolidated in the Homeland Security Grant Program. These programs were created prior to 9/11 to address basic all-hazards needs and must continue to address these issues.

Congress must also be willing to provide the long-term sustainable funding necessary to develop interoperable communications networks. To address this, H.R. 1 creates a stand-alone grant program at the Department of Homeland Security to improve emergency communications among state, regional, national, and, in some instances, along the international border communities. To ensure that the funds provided under the program are spent judiciously, the funding will not be allocated until the department's completion of a national emergency communication plan and a baseline interoperability assessment, as well as substantial progress in equipment and technology standards.

> ***The true catastrophe of the storm was not the storm itself but the failure of our government – at all levels***

As a former volunteer firefighter for 26 years, I have had first-hand experience in emergency response and preparedness. I am committed to strengthening the initiatives that will support interoperable communications and emergency planning and ensure that those on the front lines – firefighters, police officers, and emergency medical personnel – are given the tools necessary to carry out their expanded responsibilities in this post-9/11 world. It is critical that the FIRE and SAFER grant programs, which are designed to help meet the basic needs of fire departments and firefighters across the country, receive adequate funding. The Bush Administration has tried to slash these programs year after year.

The 2005 hurricane season has left our country scarred forever. While we could not have controlled the hurricane winds and waters of Katrina, we certainly could have controlled how our government responded. The true catastrophe of the storm was not the storm itself but the failure of our government – at all levels. That failure is what has left thousands of Gulf Coast residents displaced and unable to go home.

We must absolutely assure that FEMA (the Federal Emergency Management Administration) is being reformed and reborn into an entity that can provide cohesive preparedness, response, mitigation, and recovery efforts.

Last year, Congress passed comprehensive legislation to reform FEMA and give it the tools it needs to respond to disasters, both large and small. At the core of these reforms were the recommendations of a February 2006 report that several Democrats on the House Committee on Homeland Security released and which recommended specific reforms for federal emergency management.

The most basic recommendation was that the person who runs FEMA should be required to have experience in emergency management. While the current leadership team at FEMA, led by David Paulison, is very experienced, we need to guarantee that FEMA never again becomes a dumping ground for political cronies. While I believe that Chief Paulison is taking some big steps to fix FEMA, he still has his work cut out for him. There are still huge gaps in FEMA's logistics capabilities, contracting practices, and its ability to provide mass care and housing programs for large numbers of disaster victims. While I recognize that these problems won't be solved overnight, we must move more swiftly because the next Hurricane Katrina or 9/11 could be right around the corner.

As you can see, this new Congress is actively working to provide real resources for our first responders, implement real reforms to our federal emergency-response system, and provide real security to our nation.

U.S. Representative Bennie G. Thompson (D-Miss.) is Chairman of the House Committee

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Question: Is Anthrax Present?

Too Long to Wait for an Answer

By Kate Rosenblatt, Viewpoint

Since anthrax was sent through the U.S. mail in October 2001, the nation's first responders have been using commercially available detection devices to test suspicious powders. The attacks inspired fear, panic, false alarms, and hoaxes – and some helpful change as well. There was a clear need for a structured process, with open lines of communication, reliable testing, and accurate results – all as quickly as the equipment would allow and the specific emergency situation demanded.

Progress has been made since 2001, when the U.S. General Services Administration (GSA) first developed guidelines for how to handle an anthrax threat. The massive annual increases in the budget requests for homeland security during the past several years make it clear that there has been no lack of financial support for such projects. And yet, nearly six years after the first known acts of biological terrorism on American soil, and after a national study was funded to determine standards for detection devices for *Bacillus anthracis* (anthrax), U.S. national policy and federal guidelines have yet to reflect the results of this progress.

The Gold Standard

The CDC (Centers for Disease Control and Prevention) is considered the authority on disease prevention and control and has a validated lab test for anthrax determined to be the "gold standard" by the White House Office of Science and Technology Policy (OSTP). However, lab tests are not field tests and this poses a time problem. Assuming that samples from an exposed site arrive at a properly equipped lab in suitable testing form, results can be determined within 24 to 48 hours after the sample has arrived. The good news is CDC has partnered with the Laboratory Response Network (LRN) to form a network of certified labs able to perform tests and identify biological threats such as anthrax. As of the end of 2006 there were over 100 labs in the network. This is in addition to state health departments and public health labs that have the capacity to test for suspected biowarfare agents.

A positive test for anthrax at a lab level would be confirmed by testing done by the CDC itself. Some of this testing involves growing the organism to verify if it is live and virulent – testing that is of critical importance but can take several days. There is no doubt that these tests are necessary to confirm and identify the strain of anthrax, but they do not allow on-site decision making that can be critical to the people on the scene and for proper evidence handling to prosecute those responsible for release of the anthrax.

There also are concerns about the safety of first responders entering a site possibly contaminated by a suspected biological agent. CDC itself made certain interim recommendations, in October 2001, for safety gear usage during a potential exposure to biological hazards. The CDC certified the self-contained breathing apparatus (SCBA) respirator, equipped with a full face piece, as providing the highest level of protection against airborne hazards. Half-mask or even full-face-mask air-purifying respirators with particulate filter efficiencies recommended for exposure to biological hazards such as pulmonary tuberculosis and the hantavirus are endorsed as the minimum level of protection for exposure to anthrax. Protective suits are also suggested.

Hoaxes, Reliability, And the DOD Exception

First responders took the CDC personal protective gear recommendations seriously – but they also took commercially available anthrax-detection devices with them. The reason was obvious: A quick verification test can save lives and thousands of dollars. If the devices do not detect anthrax, it means the responders probably are investigating a hoax.

Unfortunately, the commercially available devices used were not always reliable. For that reason, and possibly others, a 2002 OSTP memorandum advised a freeze on ordering any anthrax testing equipment. The memo stated, among other things, that "recent scientific evaluation of these commercially available detection systems concludes that this equipment does not pass acceptable standards for effectiveness. … Field-testing solely using commercially available polymerase chain reaction [PCR] or handheld immunoassays [HHA] for the detection of *Bacillus anthracis* is not recommended."

The OSTP memo did not describe the evaluation process for PCRs and HHAs in detail, but did state that the detection thresholds set for the devices required a level of anthrax that was above the minimum level needed for infection. In other words, there could be enough anthrax at the site to infect humans, but not enough for the device to register a positive result. In addition to this problem, OSTP found that at least some of the devices were giving false positives.

Although calling for a termination of current and future federal orders of PCRs or HHAs, OSTP singled out the Department of Defense as an exception to the freeze, stating that DOD would be able to "continue to procure military-standard biological-detection equipment" under its own regulations. DOD has for some time used HHAs as a standard equipment item in its biological-warfare (BW) detection program, and after receipt of the OSTP memo issued a document, including a white paper on HHAs, to support the department's continued use of such devices. "HHAs can be properly employed to provide information in an expedient fashion when they are used as intended and are supported by additional technologies," wrote Dr. David Cullin in the DOD response.

"HHAs were designed to provide data quickly," he continued, "to enhance early command assessment and response to a given scenario." DOD further pointed out that HHAs "provided the first indication of the presence of *Bacillus anthracis* in the letter sent to Senator Daschle." The reference here is to an anthrax-laced letter received in late September 2001 in the offices of then-Senate Majority Leader Thomas A. Daschle (D-S.D.).

The issue at hand – the reliability of detection devices, specifically HHAs – was a legitimate concern. HHAs are extremely sensitive and, although DOD supported the use of HHAs, the department was careful to emphasize that the devices had to be properly used and should be supported by additional technology. By design, HHAs are not meant to be the only form of identification for BW agents, and are

not prescribed for diagnosis. They are designed to presumptively identify one BW agent; in the case of anthrax, the HHA is meant to answer one question: Is *Bacillus anthracis* present?

There was no government-recognized test done of the HHAs to standardize the market at the time the OSTP memo was issued. So, although DOD supported the use of HHAs by first responders, there was no way to rule that one device was better than another or even if devices met minimum acceptable standards.

Setting the Standards

The Department of Homeland Security established its own Science and Technology (S&T) directorate in 2003 to conduct "research, development, test, evaluation, and timely transition of homeland-security capabilities to federal, state, and local government and private-sector entities to anticipate, prevent, respond to, and recover from terrorist acts." The 2004 DHS budget for Science and Technology requested $25 million for a Standards Program both to focus on the development of test and evaluation criteria and to "conduct analyses for state/local first-responder detection equipment and communication protocols." The DHS S&T Standards Portfolio partnered with OSTP and the Office of Management and Budget to form an interagency group to develop national standards for biological detectors.

The S&T directorate also reached out to AOAC International, a scientific association committed to "worldwide confidence in analytical results," to develop the standards. The AOAC created a task force that included DHS Director of Standards Bert Coursey, OSTP Assistant Director of Homeland Security Lawrence Kerr, and a broad spectrum of experts on anthrax, validation study design, and assay development from 36 federal and nine military agencies, complemented by representatives from numerous state agencies, academia, industry, and first-responder units. This task force recommended inclusion and test criteria, and a study design for the standards test.

For a device to be included in the AOAC testing the HHA had to be portable and able to provide results in less than 30 minutes; in addition, the test had to be reasonably easy to carry out and the test results easy to read. The HHAs also had to be beyond the research and development stage, and those that fit the AOAC criteria had to use a lateral-flow format – which means they test and present results in a fashion more or less similar to a pregnancy test. (More simply stated, the sample is applied on one end of the device, and after a short period of time the results appear on the other end.)

The AOAC used two recognized programs for validation of analytical methods, the Performance Tested Methods (PTM) and the Official Methods for the HHAs test data. Briefly stated, PTM calls for test kit performance evaluation, reproducibility testing, and stability data (which tests the shelf life of the kit). The Official Methods includes test data review by a committee, and a collaborative study – i.e., a performance test in 10-12 labs to determine lab-to-lab reproducibility – followed by another round of data reviews.

The AOAC synchronized the two methods for the first time when testing the HHAs. The PTM results became the first phase of the testing; the second phase was the collaborative study component of Official Methods.

During this same time frame, AOAC scientific consultants met with CDC scientists to review the way that the Laboratory Response Network was confirming the initial anthrax test results. After much collaboration between the two groups, the LRN method for presumptive identification of anthrax (the screening test) was approved as the Official Method for the standardization tests.

Carrying Out the Tests

Five HHAs were selected for testing. The first phase of the testing determined a device's ability to detect anthrax, to distinguish *Bacillus anthracis* from non-Bacillus anthracis, and to measure the sensitivity of the device when a certain quantity of anthrax spores are present and when a certain quantity of non-Bacillus anthracis spores are present. This phase of the testing program was completed in one lab. The second phase of the testing involved 12 labs analyzing common samples to test the reproducibility of the HHA results.

The two phases of the testing replicated the multiple lab process followed by the LRN and CDC. Completing the first phase of testing implied that the HHA can provide clear and reliable results; completing the second phase aligned the HHAs' testing accuracy with the CDC's process. In short, a positive anthrax result from an HHA that meets the AOAC's standards should be as accurate as the LRN results.

When phase one of the testing program was completed in November 2004, only one of the five HHAs tested passed the tests – Response Biomedical Corporation's RAMP anthrax test, which met the reliability and sensitivity standards. AOAC Executive Director James Bradford summarized the results as follows: "Response Biomedical's RAMP was first approved by AOAC as an Official Method of Analysis (our certification) for laboratory use only." After the final rounds of testing and data review, RAMP was certified, so the AOAC was able to approve it for field use, Bradford said.

Counterpoint: The Arguments in Favor

Following, from a position paper developed by one of the companies involved in the RDT&E and production phases of field-testing kits, is a brief summary of the principal points made by those who say that additional slowdowns in the already long-delayed U.S. anti-anthrax program would be much more dangerous than the admitted possibility (but of relatively low magnitude) of encountering either false positives or false negatives in the field-testing phase of the program.

Points of Consideration FOR HHAs:

- Hand Held Assays (HHAs) allow rapid field detection
- 2002 OSTP memorandum advised not using HHA due to lack of standards
- Post 2001, standards have been developed for HHAs
  - Extensive testing, sponsored by DHS
- Lab tests take too long to generate meaningful field results
  - Still gold standard and will always be required as final confirmation
- First responders are using HHAs
  - They provide accurate, reliable, and timely information

It is clear that HHAs now meet minimal standards and that several government agencies have been willing participants in setting and accepting those standards. However, for a variety of reasons, major governmental organizations - CDC, FBI, DHS - are reluctant to endorse the standards they have been involved in setting. First responders have and will continue to use HHAs in emergency situations because they are a valuable tool in managing the potential victims, their people, and the evidence. HHAs can now be used in confidence if the devices used are certified by the AOAC and have undergone the rigorous testing required to get that certification.

As of early April, RAMP was still the only HHA to be certified by the AOAC for field use for the detection of anthrax.

Reading the Results

Bradford said that a second round of HHA testing is now underway. Meanwhile, although the CDC collaborated with AOAC on the validation methods, the CDC still does not recommend the use of HHAs. The agency's policy toward HHAs has not changed, in fact, since the official health advisory issued on 18 October 2001. That advisory states that "These assays are intended only for the screening of environmental samples. First-responder and law-enforcement communities are using these as instant screening devices and should forward any positive samples to authorities for more sensitive and specialized confirmatory testing. The results of these assays should not be used to make decisions about patient management or prophylaxis."

The CDC is not the only federal agency wary, despite the AOAC testing, of recommending HHAs. The DHS policy toward HHAs is in line with the federal government's overall policy, which remains the same since the 2002 release of the OSTP memo. "The federal government position as stated by Dr. Marburger at OSTP in July 2002 is that first responders are not to use HHAs," according to one official statement. "DHS and other agencies continue to develop standards for both anthrax (*Bacillus anthracis*) and ricin so that first responders will understand when they could use these detectors for screening visible suspicious powders and the limitations of the technology. At this time, DHS does not recommend their use."

Any equipment that the DHS does recommend is included on both the Authorized Equipment List (AEL) and the Standardized Equipment List (SEL). A search of both lists reveals a listing for a field-assay kit for the detection of biological agents, but includes, in boldface type, the following notation: **"Recommendations from IAB - NOT DHS requirement or part of DHS grant guidance."** IAB – the InterAgency Board for Equipment Standardization and Interoperability – was founded in 1998 by DOD and the Department of Justice. Its mission is to establish coordinating standards for first responders for preparing for or responding to chemical, biological, radiological, nuclear, or explosive incidents at the local, state, and federal levels of government.

Policy, Practice, And Practical Considerations

There is policy, and there is practice – and the two are not necessarily, and not always, the same. The nation's first responders have been using commercially available detection devices for some time now, and will undoubtedly continue to do so. "One has to weigh public safety concerns with accuracy, and preservation of evidence," says former fireman, first responder, and detection expert Christopher Hawley. "Not all HHAs are created equal, and some are better than others. With the AOAC testing, RAMP has been shown to be an accurate device for visible powder with accuracy rates in the 97-98 percent and higher range. Some HHAs have been shown to have 30 percent or less accuracy rates. Some HHAs have issues with false negatives – where real anthrax is present but the HHA doesn't see it, which is a large concern.

Nearly six years after the first known acts of biological terrorism on American soil, U.S. federal guidelines have yet to reflect the results of the progress [made]

"As a former local responder," Hawley continued, "I am not in favor of the federal government recommending one particular technology over another. … There are many tools in the detection device toolbox, and HHAs are one tool."

Hawley is a highly qualified RAMP trainer, and has written books on detection and various related issues. He says that what is really needed is a highly accurate device that is also relatively inexpensive – but to get that, additional research and development work is required. "There are a number of new technologies that are in the research phase that we are told look promising, but are still 5-10 years away from first responders."

The most important component of using an anthrax detection device is the knowledge factor. "When testing for biological threat agents, we have stepped into the laboratory and responders should adopt laboratory policies and procedures," Hawley said. "ANSI [the American National Standards Institute] has a standard for collection of potential biological threat agents that responders should be familiar with. Having a good relationship with the local FBI WMD [weapons of mass destruction] coordinator, who is the gatekeeper to the LRN, is important. Knowing what they need, how much they need, and in what format they need it in is crucial for accurate testing."

In the long run, the search for a better and lower-cost HHA might be a case of wait-and-see, with the federal government holding off recommending the use of HHAs until more than one model has received certification. However, the AOAC is an independent third-party organization, and is not in the habit of making recommendations. In Bradford's words, "All we care about is the performance of an assay and its reproducibility when used by many hands." The bottom line here is that the AOAC's recommendations matter primarily because *accuracy* matters, and the only thing worse than a false positive is a false negative – which means that the anthrax is present, but goes undetected.

"I think more testing should be done, and the AOAC testing was a good first step," Hawley summarized. "I think that even HHAs can be improved, [and] we should not be satisfied with 98 percent accuracy; we should strive for 100 percent accuracy with the results being obtained in one minute, and costing pennies."

Sources: James Bradford, Christopher Hawley, Christopher Kelly (Associate Director of Strategic Communications at DHS), Von Roebuck of the CDC

Kate Rosenblatt is a writer and editor in the Washington, D.C., metropolitan area. She has a background in communications and business development, and has written about a variety of topics, from finance to fashion.

APHL Position Statement

Field Testing Kits, Devices Must Be Validated

By Chris N. Mangal, Viewpoint

Not quite three months ago, the Association of Public Health Laboratories (APHL) issued a member-approved position statement, *Standardized Validation of Screening Kits and Devices for Use in the Field to Identify Hazardous Biological and Chemical Agents*, developed by the association's Emergency Preparedness and Response (EPR) Committee. The position statement is consistent with current guidance from the Department of Health and Human Services (HHS), which recommends against the use of field testing for biological agents. However, the APHL expanded on the HHS recommendation and stated that the association strongly opposes the use of biological and chemical-agent detection kits and devices for field testing in the absence of performance standardization, field validation, and the participation by certified individuals trained in the application of such kits and devices.

The APHL recognizes the potential usefulness of field kits and devices; however, their use without proper field validation and appropriate training is problematic. At sites where hazardous biological or chemical agents may be present, field screening kits and devices often are used by first responders to make decisions related to actions necessary to assure public safety.

For chemical agents, although such field tests have been available for a number of years, minimum standards for performance have not been established. For biological agents, the kits and devices being developed commercially for this purpose have not been validated under field conditions.

A Continuing Emphasis on Public Safety

Validation is essential to ensure that kits and devices used in the field are appropriately sensitive and specific to detect the agents for which they are designed. Analytical results obtained in the field without appropriate device validation and performance training can yield false positive or false negative results. Such data can be dangerously misleading. Incorrect field test results may actually delay appropriate responses.

In addition, failure to conduct field testing correctly, using standardized protocols prescribed by the validation process, may result in depletion of the sample material available with consequential loss of criminal evidence and the ability to conduct the appropriate confirmatory analytical testing essential for implementing effective public-safety and public-health measures. In the absence of standardized and validated field kits and devices, public health laboratories must be contacted for confirmatory testing or guidance for such testing.

The APHL position statement also addressed implementation steps, such as the need for a single federal entity – specifically, the U.S. Department of Homeland Security (DHS), Standards Portfolio – to establish standardized federal guidelines for the performance standardization and validation of all commercially developed screening kits and devices designed for use in the field by first responders to detect hazardous biological and chemical agents, including standards to assure adequate training. When standard parameters for validation and training established by these federal guidelines are met, each screening kit or device should be placed on a federal-approved list made available to all potential users.

The association further recommended that DHS collaborate with the Laboratory Response Network (LRN) reference laboratories during the validation process; all field testing results from credible threats should be confirmed at the nearest qualified LRN reference laboratory to guide state and local public health action.

Additional recommendations focused on the need for DHS to develop and implement, through partnerships with other organizations, a training, certification, and proficiency testing program for first responders.

The APHL position statement is available at http://www.aphl.org/policy/position_statements/APHLFieldDevicesPositionStatement.pdf

Chris N. Mangal, MPH, is the senior manager for emergency preparedness and response at the Association of Public Health Laboratories (APHL). She also serves as the staff liaison to the APHL Emergency Preparedness & Response Committee.

New York, California, Ohio, and Minnesota

By Adam McLaughlin, State Homeland News

New York ARNG May Lack Resources Needed for Hurricane Response

If Long Island were hit with a major hurricane, debilitating shortages of equipment could slow the response effort by the New York Army National Guard (ARNG) and put many lives in jeopardy. Data from the Guard files shows that the vehicles needed to navigate through waterlogged streets and to transport medicine and supplies after a natural disaster hits would be in short supply.

Only 35 percent of the Guard's authorized Humvees and cargo trucks, for example, are currently available for use. In addition, radio equipment is at less than half the authorized levels. "The thing we would need the most, we have the least of," said Rep. Steve Israel, (D-N.Y.), who released the data in late March. "That is the most distressing element. In my district on Long Island, it is not a matter of if, but when a hurricane may strike. A fully staffed and equipped National Guard … [would be] the difference between a smooth recovery and another New Orleans."

Five years after grueling deployments to Iraq and Afghanistan, the New York ARNG, like many other Guard units throughout the United States, is under a huge strain as it seeks to balance war fighting, guarding the homeland, and responding to natural disasters.

"We are concerned about it," said Joseph J. Taluto, the state's adjutant general, who oversees the New York Guard. "We have equipment shortages. We have manpower shortages. These are impacting our ability to leverage all we would want. In the meantime, we still have a great deal of capability. And we try to leverage every single … [asset] we have by being innovative."

In the event of a major storm or other natural disaster, Taluto added, the Guard would pre-position equipment and manpower and, if necessary, look to neighboring states for backup. But he acknowledged that the shortage of Humvees and cargo trucks that could traverse flooded neighborhoods "limits our capacity."

New York Deputy Secretary for Public Safety Michael Balboni also acknowledged the Guard's degraded capabilities, but said there is no immediate crisis. In the event of a hurricane or other disaster, many other agencies would respond, he said. "We are able to do our missions this year," Balboni said. "We'll be able to do our missions next year probably. It is the [long term] ... that would become a problem. ... The federal government has to reinvest in the domestic military infrastructure."

California Launches Test Of Bay Area Dispatch Network

In late March, a pilot program for a cutting-edge emergency dispatch system was launched in California's Silicon Valley.

The patching together of dispatch and field communications has been considered a pressing need among emergency responders and government officials since the terrorist attacks of 11 September 2001.

The pilot program announced by Northrop Grumman will include the cities of San Jose and Milpitas and the Santa Clara County Communications Center. The program will test a data solution that will allow the interoperability of different CAD (computer-aided dispatch) systems and streamline coordination during incidents in which several first-responder and government agencies are involved.

"Our CAD-to-CAD solution shortens response time for first responders and allows improved access to equipment," said Northrop's Hugh Taylor. "The system reinforces consistent actions by first responders in emergency situations."

The test is a primary component of the Silicon Valley Regional Interoperability Project (SVRIP), which aims to tie together 32 agencies in 18 Santa Clara County jurisdictions to deal with major emergencies. The SVRIP goal is to strengthen interagency coordination and permit the region's responder community to exchange critical information and resources in real time. Another SVRIP mission is to assist law-enforcement agencies in leveraging their intelligence and information-sharing capabilities to combat terrorism threats and provide a portal to share information with other regions, and with state and federal law-enforcement agencies, in a combined effort to synergize their individual capabilities.

Ohio
College Opens Center for Emergency Preparedness

Owens Community College will open its $20.5 million state-of-the-art Center for Emergency Preparedness on 29 April, putting it in good position to offer concurrent training for multiple first-responder agencies.

Dr. Paul Unger, Owens executive vice president and provost, said that construction of the center, which will serve as a regional training site for first responders, has been a long-standing vision for community leaders since the early 1990s. However, since the terrorist attacks of 2001, he said, the plan has had to be modified to incorporate additional training curricula to accommodate the need to counter several new types of threats.

The Center for Emergency Preparedness, Unger said, is built to deal not only with the different types of emergencies and accidents common to most major communities, but also with the larger-scale types of disasters the Department of Homeland Security handles. The new center will be able to provide a virtually unlimited number of training scenarios, he said, that will allow first responders to "engage in real-life applications during their training."

The center will feature numerous full-size training props, including a flashover simulator, a five-story burn building, a tanker truck-fire simulator, a propane tank burn simulator, a collapsed-building tunnel system, a confined-space rescue area, a gas station with car burn, a dive-and-rescue pond, and a car-extrication site. Later phases of the long-range plans will add an emergency operations center, a command-and-simulation center, a mock city (with retail, business, and residential facades), and other simulation systems reflecting real-life scenarios.

Unger said the center also would include Ohio's Third Frontier Network, a national fiber-optic network used for research, education, and economic development

that will allow first-responder and law-enforcement agencies in the area to simulate exercises on emergency hazards, natural disasters, and terrorist incidents through distance learning.

"The center will have an impact on the area, providing high-quality and comprehensive concurrent training for first responders and by making the community safer," Unger said. The center already has drawn attention from Brazil and from several other states – agencies from Texas and Florida, for example, have inquired about what department teams they could bring to the facility for training. Unger said he believes the proximity and scale of the facility are among the more important reasons it already has received both national and international attention.

Minnesota
New 911 System Enhances Minneapolis's Emergency-Response Capability

Minneapolis's new computer-aided dispatch (CAD) system is up and running, giving 911 operators and emergency responders several new ways to respond to emergency calls both faster and more effectively. The new system, a nationwide model, represents a major down payment on the city's ongoing commitment to finding new and innovative ways to make the Minneapolis area "a safe place to call home."

The city's 911 operators now handle more than 1,200 emergency calls on a typical day, and many of those calls require response from the police or firefighters, who often act as first responders in medical emergencies. The new system includes a number of special features that give 911 dispatchers and emergency responders more and better information during an emergency.

One of the more impressive components of the new CAD system is an Automatic Vehicle Location (AVL) system that allows dispatchers to see on a map the current locations of the city's police cars, fire trucks, and ambulances, even when those vehicles are on the move. The AVL feature allows dispatchers to dispatch the closest vehicle to the scene of an incident, regardless of where the vehicle is normally stationed.

It is not only the 911 dispatchers who will have the vehicle location information at their fingertips. In addition, almost 200 police squad cars also have the CAD system installed on laptop computers that will allow officers responding to an incident to see not only their own location but also the locations of other responders in the same general vicinity. As of late April, 32 of the city's 44 fire vehicles had both the CAD and the AVL systems installed; the systems will be installed in the remaining 12 vehicles in the near future, officials said.

The center will feature numerous full-size training props, including a five-story burn building, a tanker truck-fire simulator, a dive-and-rescue pond, and a car-extrication site

For firefighters, vehicle location is just one useful new tool provided by the new system, which also allows fire crews on the way to an incident to view the entire dispatch report in full detail, and even to see building plans and aerial photographs so they can be better prepared when they arrive at the scene. Previously, firefighters received only an address and an acronym describing the general nature of the incident (but without providing any significant details).

Currently, 28 ambulances also are fitted with the CAD system and thus are able to be tracked through the system. Because Minneapolis firefighters often act as first responders to medical emergencies, the new CAD system allows them to see the same medical pre-arrival information previously available only to Hennepen County Medical Center paramedics.

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