

Hopkins **ON ALERT**

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The Law of Disaster

When legal intricacies threaten to derail responses to catastrophes, medical centers or health care agencies can turn to the Hopkins “law firm.”

With calamities and terrorism honoring no boundaries, it's critical for medical institutions from different states to coordinate the use of health care workers for the handling of victims. Following 9/11, for example, governments on all levels struggled with such issues as which laws control the dispatching of health and emergency response volunteers or which bureaucracy supercedes others in declaring public health emergencies arising from weapons of mass destruction.

But the legal intricacy of public health emergency preparedness is a new area of law. So federal and state officials turned to the Johns Hopkins Center for Law and the Public's Health, located in the Bloomberg School of Public Health.

The lawyers, who also hold faculty positions in Bloomberg's Berman Institute of Bioethics, crafted a model State Emergency Health Powers Act, which subsequently was used as the basis for new statutes in 38 states—and even in some foreign countries, notes James Hodge Jr., one of the law center's directors. “We believe it's the most widely used model public health act in the history of the United States.”

Now, this “law firm” has become one of 17 projects initiated by the CEPAR-led national Center for the Study of Preparedness and Catastrophic Event Response (PACER). (See project listings in box, page 2). Created with the Georgetown University Law School, the center studies legal, ethical and policy issues inherent in preparing for and responding to catastrophic events.

PACER grew out of a \$15 million grant in 2005 from the Department of Homeland Security to a 24-member consortium



put together by CEPAR to conduct multi-disciplinary, trans-institutional research into the issues and principles of preparedness, and then disseminate that knowledge to help develop effective educational and training programs.

Although every university or health system has lawyers for general legal advice, the law center's founders are recognized internationally for their expertise. For example, after 9/11, it was federal and state officials who asked them and their colleagues to draft the State Emergency Health Powers Act, which addressed key legal issues raised when the government must respond to public health emergencies. These include such questions as when a government may declare a public health emergency and then swiftly use an array of

powers to isolate, quarantine, vaccinate, treat or test people. For decades, says Hodge, these quandaries either were not addressed specifically in state laws or were handled through antiquated procedures and policies that were suspect both constitutionally and ethically.

Following Hurricane Katrina, Louisiana, Mississippi and Texas invoked provisions of the model law drafted by the Hopkins public health law firm to facilitate state-based public health emergency efforts, Hodge notes.

Now, the law center has invited all 24 members of PACER to identify legal, ethical or policy questions that their specific projects may involve. Hodge says many are likely to seek guidance concerning a new federal law, the Pandemic and All-Hazards

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RE-THINKING THE UNTHINKABLE

As unthinkable as the Virginia Tech tragedy was last April, the truth is that at least 50 school-related shootings have occurred over the past decade—and not all of them in America.

For example, one of the more horrific incidents took place at a primary school in Dunblane, Scotland, in March 1996. Sixteen children and one adult were slain—more victims than during the April 1999 shooting at Columbine High School in Colorado, where 12 youngsters and one teacher were killed.

In all, 13 elementary and middle schools, 26 high schools and 11 colleges have had to deal with shootings—not counting Virginia Tech. In this country, the incidents have taken place all across the nation, from New York and Pennsylvania (including the peaceful Amish hamlet of Nickel Mines) to Washington state and California. The pain has been apportioned widely.

Despite that grim record, the fact also remains that schools and campuses are among the safest locations where large numbers of people gather regularly. To maintain that record, it is critical for schools to develop and continuously review plans for preventing such incidents or, if need be, responding to them.

Everyone associated with Johns Hopkins Medicine should know that all of our campuses do, indeed, have plans for responding to a shooting incident, and we are re-examining them closely in light of the Virginia Tech tragedy. Rethinking our response to the unthinkable is at the core of what CEPAR does.

Having a sophisticated communications network—one that links to student cell phones and computers, as well as uses more conventional ways to distribute emergency messages—certainly is important. Yet such a system may not have changed the outcome at VT or anywhere else for that matter: A communication system is only as good as the information it can convey. Without a clear understanding of what is happening—what we in emergency preparedness call “situational awareness”—and specific instructions on what

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Needed: New Technology For an Old Standby

For decades, you’ve heard that loud buzzer, then an announcer intoning: “This has been a test of the Emergency Alert System. Had this been an actual emergency, you would have been instructed to tune to...,” followed by the frequency of the place on the radio where you would switch for emergency information.

Such announcements have been a ritual since 1951—the dawn of the Cold War—when the first national warning system was established to enable the president to address the nation in response to a possible nuclear attack. That original system was replaced by the Emergency Broadcast System in 1963, which in turn was replaced by the Emergency Alert System (EAS) in 1997.

Despite those periodic changes, the EAS still relies solely on the means of communication its predecessors used back when radios had tubes and TVs had rabbit-ear antennas: radio and television.

According to a recent study by the Government Accountability Office (GAO), the nonpartisan investigative agency of the Congress, the EAS has failed to advance with the explosion of communications technologies in the past decade and faces “a range of technical, cultural and other challenges” before it can enter the modern era.

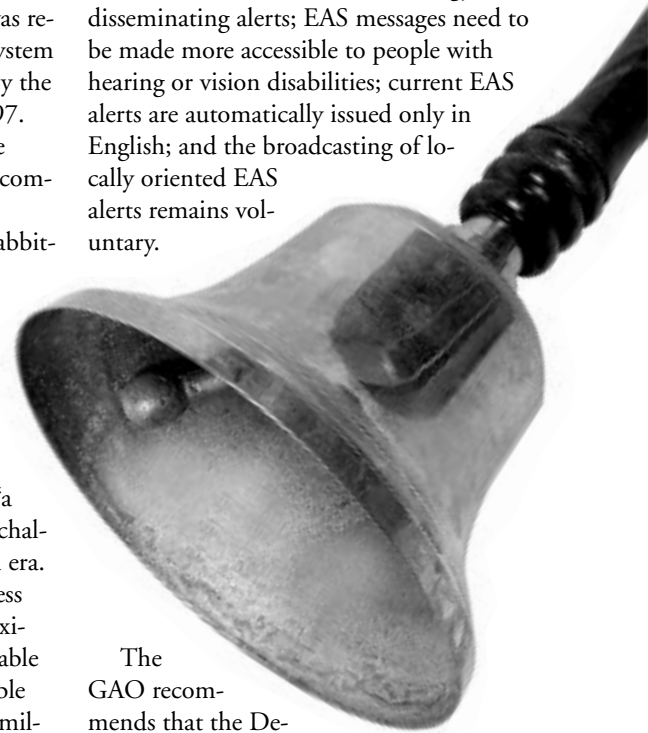
For example, the GAO told Congress that during Hurricane Katrina, “approximately 100 broadcast stations were unable to transmit, hundreds of thousands cable TV customers lost their service, [and] millions of customers’ landline telephones were knocked out” in the Gulf Coast region.

The GAO also found considerable concern among broadcasters about the reliability of the signal relay system that is used to distribute national EAS messages. In a test last January, three main relay stations failed, and in one state test, the message was not received beyond a 50- to 70-mile radius of the state capital.

Although pilot projects by the Federal Emergency Management Agency (FEMA) are under way to improve the reliability of EAS technology and expand

distribution of its messages through cell phones, satellite radio and the Internet, other problems persist.

For example, agreement still has to be reached on a standardized technology for disseminating alerts; EAS messages need to be made more accessible to people with hearing or vision disabilities; current EAS alerts are automatically issued only in English; and the broadcasting of locally oriented EAS alerts remains voluntary.



The GAO recommends that the Department of Homeland Security (DHS) and the Federal Communications Commission (FCC) develop a plan to verify the effectiveness of the current EAS relay system, as well as ensure that participants in the EAS system are better trained in producing effective emergency alert messages.

The agency also urges the DHS and FCC to establish a forum for those in the broadcast and emergency response fields to address the challenges of creating a system that integrates all of the possible technological means for disseminating alerts. ■

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Preparedness Act, which substantially reorganizes federal, state and local responsibilities for responding to public health crises. For example, it vests greater accountability in the federal government for national public health emergencies and provides benchmarks for states to follow to better prepare for emergencies within their borders.

By centralizing many preparedness re-

sponse efforts within the federal Department of Health and Human Services (DHHS), the new law may significantly “alter the legal landscape for public health emergency preparedness in public and private sectors by clarifying DHHS’ responsibility to coordinate responses,” says Hodge.

Despite the new federal law, various levels of government still struggle with

these and other issues, says Stephen Teret, another law center director. “A catastrophic occurrence happens and there’s a potential for chaos, because it’s still unclear what authority the locals have versus the state versus the federal government. There are legal and political issues that still need refinement.” ■

PACER PROJECTS

PREPAREDNESS THEORY AND PRACTICE studies will develop methods and tools for measuring the readiness of health systems to respond to a surge of patients during critical events. Projects include:

- Developing a mathematically based measuring system for determining a region’s ability to respond to a sudden surge of patients, as well as creating a disaster-response checklist for emergency planners to assess their area’s readiness for handling various hazards and catastrophes.
- Convening experts in homeland defense and national security, among whom are specialists from Hopkins’ School of Advanced International Studies (SAIS), to devise comprehensive policies that the Department of Homeland Security (DHS) can employ to minimize the chances of foreign-led terrorist attacks in the United States.
- Using attorneys from Hopkins’ Center for Law and the Public’s Health in the Bloomberg School of Public Health to analyze the legal ramifications of emergency response efforts.

RESPONSE NETWORKS studies will determine the best means by which formal networks for disaster response, such as fire departments and emergency medicine systems, can harness the abilities of informal disaster response networks, such as community associations and faith-based groups. Projects include:

- Using detailed data from the response by health care, government and private entities to hurricanes Katrina, Rita and Andrew to create a model for assessing the potential capacity of regions to use the resources they have to deal with disasters.
- Developing a standardized memorandum of understanding that describes the key criteria for mutual aid arrangements between a region’s health care institutions, such as hospitals, nursing homes, and clinics, and such first responder groups as police and fire departments.

ANALYSIS, MODELING AND SIMULATION experts will work on integrating existing computer-simulation programs that estimate the impacts of a wide variety of disasters. Projects include:

- Creating a comprehensive, computerized disaster simulation program into which data from smaller, more specific disaster simulations can be combined to assess and address the multidisciplinary problems associated with catastrophes.
- Developing a sophisticated computer program for determining the

complex public health impact of bioterror weapons and the economic ramifications of such attacks.

SCIENCE, TECHNOLOGY AND ENGINEERING specialists will identify the best means for combining disaster data that are assembled as an event unfolds and communicating that information to those who must make decisions on how to respond to the crisis. Projects include:

- Developing procedural recommendations known as standard disaster response concepts of operations (CONOPS) for state and local officials and the frontline, first responders to critical events, as well as recommendations for overcoming disruptions in computers, telephones or any other means of communication.
- Determining how to create networks of wireless sensors to detect such public health threats as biological, chemical or nuclear agents.
- Developing methods for determining the accuracy of data from exist-

ing sensors for bioterror weapons and assembling it with data from other sources so that the combined information is more useful.

- Improving methods for the earliest possible detection of the release of contamination from bioterror devices to enable a rapid response to it.
- Devising methods for measuring the effectiveness of technologies now being developed to provide warning and data about disasters and determine how well the nation is prepared to respond to them.



EDUCATION program development for training those who must try to prevent and deter critical events or lead the response to and recovery from them. Projects include:

- Developing higher education curricula for the homeland security workforce of the future.
- Devising leadership training programs for key members of the first responder community, including police, firefighters and emergency medical services personnel.
- Studying the media’s role in covering catastrophic events and fostering a response to them.
- Identifying and studying the special social service requirements of individuals who are isolated geographically or have economic, language or cultural limitations.
- Defining the role that secondary school teachers may play in disaster response. ■

Sounding an Alert—in Seconds

Long before the recent mass slayings at Virginia Tech threw a spotlight on how an ineffective emergency alert system could produce tragic consequences, Howard Gwon had figured out that Hopkins Hospital was in its own vulnerable position should it face a crisis.

What Gwon, director of emergency management, then had at his disposal was a technologically outdated notification system. It relied on people in telecommunications to send out alerts by individual page messages or phone calls to some 100 executives, care providers and other key personnel—without any assurance that the message got through.

This summer, Hopkins Hospital is slated to replace this sluggish system with a new, Web-based emergency notification system called Notifind. With it, a single person can zip alerts to thousands of recipients simultaneously through e-mail, pagers, cells phones, office and home phones and faxes—in as little as five seconds.

The message, Gwon explains, is simple. It will ask if the person can report to the Smith Room, the Hospital's disaster center, and the respondent only has to answer yes or no. "I have an instant overview," Gwon says, "of who received the message, who can make it to the center and who I need to alert as backups for those who can't respond. Under the old system, that whole process could take hours."

Gwon learned about Notifind from the Johns Hopkins Medicine Center for Information Services (JHMCIS), which was looking at the alert system to initiate automated call trees for its crisis assessment and response teams should Hopkins' computer networks be endangered or crash.

Notifind was developed in 2002 by Strohl Systems, a Pennsyl-



vania-based firm specializing in business continuity software and services. The system uses Strohl's Web site to distribute its messages, enabling it to work even if the Hopkins computer systems or telephones are down, explains William Rider, who manages information security and disaster recovery for JHMCIS.

With Notifind, Gwon and emergency response planners can develop automated call trees based on a wide variety of factors, including the type of emergency—fire, flood, weather, terrorist incident and more—as well as 256 different personnel attributes.

A contract was signed with Strohl last winter to provide service for 1,000 Notifind recipients, including 140 Hopkins Hospital disaster responders, some 238 IT crisis assessment, damage and recovery experts, and 100 Hopkins Bayview rehabilitation services personnel, among others. The system was tested three times in March and April—once for a prototype alert that Joint Commission inspectors had arrived at Hopkins Hospital; twice to ask Hospital emergency response managers if they could report to the Billings Building's Smith Room for a disaster briefing.

On April 10, Hopkins Hospital Executive Vice President and Chief Operating Officer Judy Reitz authorized Gwon's office to sign another contract with Notifind to increase the number of Hospital recipients it will serve to 5,000. The service cost will be split between the Hospital and the departments and may begin operation by July 1.

Initially, Notifind only will be used by Hopkins Hospital, Gwon says, but he believes that the School of Medicine, the Homewood campus and other Hopkins entities may adopt it, too. ■

Re-Thinking the Unthinkable

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to do in response to it, the effectiveness of any communication system is limited.

As part of the re-examination of our emergency response plans, the Office of Corporate Security has developed a personal survival guide to follow should a shooting incident on campus occur. It includes names of authorities to contact, what to report, how to secure your immediate area, the risks to consider before leaving a secure area and what the response of the campus police will be.

Apart from the situational awareness required by emergency response officials, there also is the individual awareness that each of us needs to maintain. If we become aware that a colleague's actions or demeanor are becoming worrisome—erratic, depressed, irrational—we should alert that person's supervisor: Hopkins' Faculty and Staff Assistance Program (FASAP) helps faculty, staff and their families cope with a wide variety of personal problems. Its counseling services are private and

confidential. For more information about FASAP, go to www.fasap.org or call 410-955-1220 or 443-997-3800.

A handwritten signature in black ink, appearing to read "G.D. Kelen".

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