



**Terrorist attacks injure more than human bodies.
Congress has funded a center at Saint Joseph's
to heal the scars we cannot see.**



By Thomas W. Durso '91

We had heard the tapping on our door for several years.

It was not the familiar sound of conventional warfare waged by foreign states, or of a Cold War between superpowers; no, these knocks were different, signaling a new and enigmatic threat to the United States and other nations.

In 1993, six people were killed and more than a thousand injured when a terrorist bomb rocked New York City's World Trade Center. One hundred sixty-eight people died in 1995 when a rented truck loaded with explosives ripped the face off the Alfred Murrah Federal Building in Oklahoma City. A month later, Japanese cultists released the deadly nerve gas sarin in a Tokyo subway during the morning rush hour; 12 people were killed and nearly 4,000 injured.

The casualties mounted. More than 200 died and thousands were hurt in 1998 when terrorists bombed the U.S. embassies in Kenya and Tanzania. And a suicide attack blew a hole in the side of the destroyer U.S.S. *Cole* last October, killing 17 sailors and hurting dozens more.



On September 11, the tapping ceased and the door was kicked in. On a sun-drenched morning in the Northeast, hijackers commandeered four commercial airliners. Two were flown into the World Trade Center's "twin towers," felling one of the most potent symbols of American commerce. One was crashed into the Pentagon. The fourth plane went down outside Pittsburgh; it seems likely a band of heroic passengers on board sacrificed their lives to prevent the craft from finding a second target in the Washington, D.C., area. At press time, the final death toll was expected to approach 7,000.

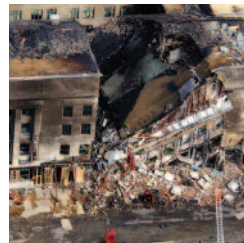
These are the things we see: damaged buildings, damaged bodies.

Here is what we don't: Damaged psyches. The panic that crackled across America. The guilt settling on those who survived. The nightmares haunting rescuers who clawed through the rubble in lower Manhattan—in an area ominously termed "Ground Zero"—to save somebody, anybody, and in the process losing hundreds of their own.

"Even those of us who pondered the unthinkable were absolutely devastated by these events," said Dr. Gabriel Marcella '64, a professor in the department of national security and strategy at the U.S. Army War College, in Carlisle, Pa. "We simply were not prepared for it. It's one thing to think about it intellectually, to spin the various scenarios. It's quite another to see the human tragedy and the devastation and destruction of so many people."

This is the 21st century's grave new world, where threats come from unexpected places and their consequences can afflict victims' minds every bit as much as their bodies.

NEW WORLD



The Cold War ended more than a decade ago and, in its absence, experts note a complicated world landscape in which discerning one's enemies is far more difficult than it ever used to be.

"What's really changed is that the simplistic view of a bipolar world has yielded to the complexity of a less tidy world," said Dr. Marcella. "International systems are characterized by a tremendous amount of insecurity of borders, export of violence, contraband and drugs, and clandestine agents such as terrorists and drug traffickers. In a sense the world has become less organized, less tidy, less manageable."

As a result, the U.S. intelligence and law enforcement communities are facing unprecedented challenges, suggests Marika Luiso '91, a senior national security analyst with DynCorp National Security Programs, who recently completed a nine-year tenure with the Central Intelligence Agency.

The complexity of targeting an organization such as Al-Qa'ida ("The Base") cannot be underestimated, Luiso noted. It was never a simple task, she observed, but terrorist attacks in the 1970s and 1980s were carried out primarily by hierarchical,



Dr. Gabriel Marcella '64

well-organized groups whose command structures were fairly detectable and thus could be tracked more easily. As a result, their leaders could be removed from the equation, leaving the groups to disintegrate in their wake.

No longer.

“Following the first World Trade Center bombing, terrorism began to evolve away from traditional hierarchies into something new,” Luiso said. “Small cells, maybe directed by a state sponsor or a known group, but maybe not. Radical fundamentalists who could operate on the cheap, with little or no contact with their leadership, working in small cells that are extremely difficult to penetrate. In some cases, you could have two cells working next to each other; cell members may know each other but

not know that they’re working toward the same goal, or even what that goal is.

“That means it’s very difficult to act against them,” she continued. “Even if a leader of a group can be identified, bringing that leader to justice will not necessarily eliminate the group itself. They probably are capable of functioning on their own, without central leadership, to assure that the pattern of terror continues.”

Rapid technological advances and the explosion of media outlets and coverage have helped to foster the rise of unconventional threats. Anyone with access to the Internet can discover how to build homemade bombs or deliver chemical agents, and the 24-hour news cycle practically guarantees that the world will be watching when those devices are used. Witness the unprecedented coverage of the events in September. In one of the most heart-wrenching images ever to appear on an American television screen, footage of the second airplane slamming into the World Trade Center was aired live on most networks.

Said Dr. Marcella: “It’s a much smaller world because of the rapidity of travel and communications, the ability of non-state actors to multiply the impact of violence and get immediate attention on the nightly news or CNN, and the ability to stage ‘political events’ through terrorism.”

Further complicating possible responses is the substantially increased threat of weapons of mass destruction (WMD): chemical, biological and radiological weapons that aren’t easily recognizable when deployed and have the ability to produce exponential consequences. The most notable WMD incident was the Tokyo sarin release.

The United States is not well-prepared to handle such attacks, according to experts, because the weapons—anthrax and smallpox, for example—are so virulent and because emergency responders are not trained to deal with them. And terrorist organizations are quite aware of this fact.

“Potential adversaries are pursuing such programs,” CIA director George J. Tenet told the Senate Foreign Relations Committee last year, “and the threat that the United States and our allies face is growing in breadth and sophistication.”

Speaking recently about a national missile defense system, U.S. Senator Joseph R. Biden, Jr. (D-Del.), chair of the committee Tenet addressed, also acknowledged the threat in remarks that proved eerily prescient.

“We should continue to research our strategic protection options, but, in the meantime, we should focus our energies and, in turn, our investments on more likely threat scenarios,” said Biden, who received an honorary doctor of laws from Saint Joseph’s in 1981. “Intelligence analysts and our Joint Chiefs of Staff tell us that shorter-range missiles, cruise missiles, an anonymous boat entering New York Harbor, or a truck crossing our border are all more likely ways for an enemy to attack us with a nuclear, chemical or biological weapon.”

Two weeks after the terrorist strikes, a front-page *New York Times* story detailed the “unrelenting fear [that] persists in the recesses of many people’s minds

DISTANCE-LEARNING



Dr. Paul DeVito consults with Dr. Dickson Diamond, chief psychiatrist of the FBI, through a video teleconference.

that something else bad is going to happen.” One Queens, N.Y., resident said, “Every little thing makes you paranoid. My girlfriends and I went to the movies. When the theater started to shake, I lost it until I realized that it was the subway going by.”

Similar reactions were seen—and continue to be observed—in Oklahoma City and Tokyo.

After such incidents there is a predictable pattern of behaviors, according to Dr. Paul L. DeVito, professor and chair of Saint Joseph’s Department of Psychology. Initially people feel shock, terror and numbness; this is followed by anger and then, finally, an attempt to return to normalcy.

“The question is, will we ever be normal again?” added Dr. DeVito, executive director of the Early Responders Distance Learning Center (ERDLC) at Saint Joseph’s, a federally funded facility which provides online coursework to train first responders in dealing with the psychological aftereffects of WMD incidents. (See related story below.)

“The way we view our country and ourselves is always going to be different than it was, due primarily to our sense of vulnerability—and that’s a psychological change,” he said. “We always had a feeling that we were invulnerable to these things; it happened

elsewhere. Well, the worst possible event happened here. People are going to feel less at ease with our level of security. We’ll feel vulnerable in a way we never have in our past. From my perspective, that’s going to be the largest impact of the incident.”

For every person injured physically in attacks such as those in New York, Washington, Oklahoma City and Tokyo, four to 25 experience some kind of psychological impact, according to Dr. Thomas N. Tavantzis, ERDLC’s associate director and director of research.

“The idea is to plant the seeds of doubt and mistrust that our own institutions aren’t working,” he said. “Make people frightened and filled with terror. Biologicals, chemicals, radiologicals—these are things that are mysterious. They’re very different to what we’re used to in the past.”

Indeed, the dangers posed by chemical and biological agents have been much more graphically depicted in thrillers such as the film *Outbreak* and Stephen King’s novel *The Stand* than in newspapers and magazines.

“The knowledge that most Americans have about a biological attack is for the most part limited to what



Photo: Pam Minor, Photo Solutions

Marika Luiso '91

CENTER FOR EMERGENCY WORKERS OPENS AT SJU

Using nearly \$5 million in federal grants, Saint Joseph’s University has established a distance-learning center to prepare the country’s emergency-response community for the psychological consequences of incidents involving weapons of mass destruction.

The Early Responders Distance Learning Center (ERDLC) provides first-line responders across the country—National Guard members, emergency medical technicians, firefighters and others—with accredited, Web-based coursework and teleconferences on the effects of nuclear, biological and chemical attacks on their peers and on victims.

ERDLC staffers swung immediately into action in the aftermath of the September 11 terrorist attacks on New York and Washington. Executive director Dr. Paul L. DeVito, professor and chair of Saint Joseph’s Department of Psychology, and associate director Dr. Thomas Tavantzis made several media appearances to explain the psychological effects of the incidents, and ERDLC made available to the public several of its resources, including a complete Web course, *Psychological Consequences of Terrorism*.

“Down the road, there will be psychological aftermaths that we’ll have to deal with as a nation,” said Dr. DeVito. “There will be a large group of people, especially those directly involved with the incidents, who will not be able to get rid of the images of the buildings collapsing, the dead bodies and so forth. It’s those individuals we’ll have to watch closely, particularly for the possibility of post-traumatic stress disorder. That’s something that may not appear immediately. It could be months; it could be years after the incident. That’s what we need to be looking for.”

Funding for the Early Responders Distance Learning Center, through the U.S. Departments of Defense and Justice, was authorized in 1999 by Congress, which was concerned about

domestic terrorist attacks similar to the 1995 release of sarin gas in a Tokyo subway, which killed 12 people.

Online training provided by ERDLC—known as advanced distributed learning courses—includes all levels of educational requirements, from credits toward additional professional certification and advancement in some cases to certificate and continuing-education credits in others. Online courses also are available on a non-credit basis.

Coursework enables military and civilian early responders to effectively contain and control damage and minimize public hysteria with the fewest possible casualties, until state and federal authorities arrive on scene. ERDLC also provides information to hospital emergency caregivers who would be called on in the event of an attack.

Saint Joseph’s ability to house ERDLC and provide distance-learning content is based on both academics and infrastructure. Related to Saint Joseph’s distance-learning capabilities, the construction of state-of-the-art Mandeville Hall and the complete technological refurbishment of Post Hall are the most visible elements of the university’s commitment to providing the very latest educational tools to students, faculty and staff.

The academic components of the center will be provided by Saint Joseph’s, as will many of the technological resources, with assistance from MountainTop Technologies Inc. of Johnstown, Pa. Coursework will be delivered via the existing National Guard Distance Learning Network sites in Pennsylvania and across the country.

For more information, call ERDLC at 610/660-3392, or visit its Web site, <http://erdlc@sju.edu>.

—Tom Durso



Dr. Thomas Tavantzis

they've been exposed to in fiction, which is usually more scary than real," said Dr. Clete DiGiovanni, a federal psychiatrist with experience in counterterrorism and WMD matters.

Dr. DiGiovanni breaks down the psychological aftereffects into two general areas: The first is short- and long-term disorders and distress, such as post-traumatic stress disorder and depression; the second "doesn't involve psychological pathology," he said, "but rather the kinds of behaviors that people caught up in any crisis may demonstrate, which may well complicate the management of the crisis."

According to Dr. DiGiovanni, anticipating these very different reactions—and then managing them when they do occur—are critical exercises, yet difficult to carry out.

"Most people don't like to imagine having to deal with people whose behaviors and actions are not logical, not amenable to accurate information, and are not controllable by a normal show of authority," he said. "Anyone who has a teenager can understand this."

The federal government has run simulations designed to illustrate what may happen during WMD incidents, but they have been criticized as failing to realistically portray the number of psychological casualties that would result. ERDLC coursework is designed to compensate for this and give responders—EMTs, firefighters and the like—usable training in what they could expect to face and how they could help.

"If there are rumors that vaccines are limited, how do you handle that?" said Dr. Tavantzis, citing just one example. "Will there be panic? Do you have the police stand guard where the vaccine is kept? And do they shoot people who try to gain access to it?"

"I don't know if there are good answers to a lot of these things, but to be able to think about them ahead of time is good. With simulations, [responders] don't get to see the consequences of their decisions. In the courses, we try to move more and more to an interactive experience, to simulate some consequences."

Proper training can also help the rescuers in more personal ways, observed Dr. John R. Tasse, who heads the health psychology clinic at the Department of Veterans Affairs Medical Center in Oklahoma City and is a national mental health consultant for the American Red Cross. Because WMD incidents can affect the families of emergency personnel—unlike the typical incidents to which they respond—it is critical to prepare them mentally.

"First responders that may have had 24 hours of [hazardous material] or WMD training are going to be freaked out," Dr. Tasse said. "What's going to keep these [workers] online? What's going to make them

optimal as far as doing a job that puts them in harm's way? That's where the mental-health piece goes."

Such preparation is the exception rather than the rule, at least in the U.S., Tasse added. "We're not quite there yet. A lot of people are wondering what to do. A lot of people are kind of taking their best guesses and going forward, and not looking at the data and saying, 'Is that really what you should be doing?'"

Explosions, hurricanes, earthquakes—these things happen, and then they're over. But if a terrorist with a biological, chemical or radiological agent ever decides to target the United States, the boundaries of the incident—geographically and chronologically—will be much fuzzier. This will only exacerbate the incident's psychological aftereffects.

"Natural disasters have a beginning and end," Dr. Tavantzis said. "If someone introduces a plague, it may not show up for a week. People go to doctors and think they have the flu. Then the numbers start to mount."

"In the sarin attack in Japan, there were fatalities, but thousands of people went to emergency rooms thinking they had been infected. That's the kind of terror we're talking about. In the event of chemical releases there will be alarm set off in people. You see someone next to you convulsing and wonder if you're infected."

The United States' status as an open society makes it especially vulnerable to attacks involving biological, chemical and radiological weapons, according to experts. The release of such an agent at an airport, or into a public reservoir, could kill scores and injure countless others, well before anyone is even aware of what's happening.

As noted, while the physical damage would be bad enough, the psychological hurts likely would affect far more, and for much longer. The Early Responders Distance Learning Center hopes to alleviate some of these effects by providing much-needed training to those who need it most.

"For the most part, first responders in our country deal with threats that are familiar to them," noted Dr. DiGiovanni. "They respond to automobile accidents. When they do that they're not likely to be involved in the accident. They're there to treat the victims. But if their community is caught up in a biological threat, they're just as susceptible as the people they're rescuing."

"They need to recognize that the people they are dealing with—as victims and relatives and co-workers and others—may be exhibiting these kinds of behaviors. They need to recognize them for what they are and not be overwhelmed."

Tom Durso is director of University Communications at Saint Joseph's University.