

fixing the flaws

by Roz D. Lasker

why emergency planners need the public's knowledge

Planners seeking to mitigate the consequences of acts of radiological terrorism—including terrorist attacks on nuclear power infrastructures—are working at a distinct disadvantage. The public is the object of their concern and the focus of their education and risk communication efforts, but strategies and plans are being developed *without* directly involving the public.

Lacking that voice, do we really know what matters to people in these types of situations and what can be done to address the problems they would face? Do we fully appreciate the role that the public can play in contributing to response and recovery? Recent research and experience with disasters in the United States reveal that we don't—with dire consequences.

Evidence from the Redefining Readiness study

In 2003, the Center for the Advancement of Collaborative Strategies in Health designed a study to answer the question: “Is the public's current role in emergency preparedness appropriate, or is their limited and passive involvement something that we should be concerned about?” The “Redefining Readiness” study gave the American people their first opportunity to describe how they would handle two kinds of terrorist attacks, including a “dirty bomb” (radiological dispersal device) explosion. Rather than asking people to think about these events in the abstract or give their opinions about plans or policies, the study used scenarios that put people in specific and realistic situations at a place and time they would be likely to hear about the emergency and be told what to do.

One scenario explored how people would react to instructions to stay inside a building, other than their own home, if a dirty bomb exploded a mile from where they were and a cloud, containing radioactive dust, were moving in their direction. The study found that plans to respond to this kind

of radiological emergency *won't* work because people will not react the way planners want them to. Only 59% of the population said they would stay inside the building they were in for as long as officials told them.

Why is this? Contrary to conventional wisdom, the study found that people's reluctance to follow instructions is not due to ignorance, recalcitrance, or panic. Quite the contrary, most of them have solid, common-sense reasons for their behavior. In other words, the problem is with the plans, *not* the people.

A major problem with current dirty bomb response plans is that little has been done to create the conditions that make it possible for people to protect themselves by sheltering in place.

Many people are likely to be away from home and separated from other family members—at work, in school, or shopping—when a dirty bomb explosion occurs. The study showed that millions of Americans will not follow instructions to stay inside the building they are in unless they are sure that they and their children and spouses are in places that have prepared in advance to take good care of them during the crisis. Unfortunately, very few places in the United States have prepared to function as safe havens should the need arise and even fewer places know the kinds of preparations that would actually make people feel safe.

Evidence from Hurricane Katrina

In 2004, the “Redefining Readiness” study predicted that large numbers of people would suffer and die unnecessarily if response strategies are not based on what people will actually face when a disaster strikes. Less than one year later Hurricane Katrina, which hit ground in New Orleans in 2005, proved that prediction to be correct.

Consider what happened in New Orleans. Everyone in the city was told to evacuate, but many could *not* do so on their

own because they or other family members lacked transportation, didn't have enough money for gas and lodging, had impaired mobility, or had serious health problems. Quite a few of these people died. Those who sought shelter in the Super Dome stadium experienced atrocious conditions, which compounded their psychological and physical suffering. Many of those who were eventually evacuated were separated from other family members and friends, which deprived them of the human support that people need to deal with crisis situations.

If the problems that people face in an evacuation had been identified and addressed in advance, the outcome would have been very different. School buses (which ended up rusting under water) and military planes (which came in after the fact) could have been mobilized before the storm hit to evacuate disabled residents and those without cars. Debit cards could have been pre-issued to poor residents to use in the event of a disaster. Shelters could have been prepared that would actually keep people safe. Evacuation plans could have been developed to keep families and social networks together.

A fundamental flaw in emergency preparedness

Taken together, the "Redefining Readiness" study and the experience with Hurricane Katrina uncover a fundamental flaw in emergency preparedness: Planners are developing instructions for people to follow without finding out whether it is actually possible for them to be followed or whether the instructions are even the best protective action for certain groups of people to take.

Currently, this outcome is virtually inevitable because the approach we are using to prepare to respond to emergencies forces planners to be mind readers. Without hearing from the public directly, planners can't possibly be aware of the barriers and risks that make it difficult for certain groups of people to protect themselves in emergencies or what could be done to address those problems. When planners lack this information from the public, they end up developing instructions that are not feasible or safe for many people to follow.

A new approach to working with the public

What can be done to remedy the situation? One change involves *mindset*. In addition to seeing the public as the object of their concern, planners need to view the public as a valuable and knowledgeable resource in preparing communities to respond to emergencies. The people who live and

work in communities are the only ones who really know what they would face in these kinds of situations. Planners cannot be effective without their knowledge.

The other changes have to do with *process*. The public needs opportunities to think about emergency situations in advance and to contribute their knowledge to community preparedness efforts. The public also needs opportunities to work with other people and organizations in the community to develop and take actions to address preparedness issues.



Hurricane Katrina, in 2005, proved a wake-up call to the US emergency response community as emergency preparations were clearly not adequate. Many residents could not heed the call to evacuate and were stranded without access to basic services.

Pictured here: the U.S. Army National Guard offers a helping hand in post-Katrina relief efforts by distributing bags of ice. Dauphin Island, Alabama.

Photo: www.army.mil

The community engagement process

An inclusive public engagement process is being instituted by four diverse communities in the “Redefining Readiness” local demonstrations. Working together and with the Center, the sites have been developing a three-step community engagement process involving:

- ◆ small group discussions with the people who live and work in each of the demonstration communities;
- ◆ larger interactive gatherings with as many people as possible in each community; and
- ◆ action teams that bring community residents, experts, and people from public and private organizations together.

The small group discussions were designed to: (1) tap into the public’s common-sense knowledge to find out what the community needs to do to protect as many people as possible if certain kinds of emergencies occur; and (2) build resilience by giving the public an opportunity to think about those situations in advance.

To achieve these objectives, the discussions were organized very differently than traditional focus groups, public deliberations, or town hall meetings. Rather than asking people to think about emergency preparedness in the abstract or to provide input about plans or policy options that have already been developed by experts, the discussions used specific and realistic scenarios that enabled participants to think about emergencies in a frame of reference that was meaningful to them.

The discussion about each scenario started by exploring the particular problems the participants would face trying to protect themselves in that situation. Then the group explored the kinds of actions that they and others in the community could take to address the problems they had identified.

Although only ten individuals were involved in each discussion, a large and representative group of people participated overall. In the four sites, almost 2,000 people participated in over 200 discussions. A comparison with census data shows that the participants in the discussions closely resemble the people who live in each community.

To make sure that participants could express what really mattered to them, the discussions were unconstrained—focusing on whatever problems and actions were raised by each group—and no value judgments were made about anything said. Care was also taken to make sure that the participants, and the community as a whole, have a complete and accurate record of the discussions. The combined findings from all of the discussions are now being shared

not only with the people who participated, but also with the broader community.

What we can learn from the public

One of the scenarios explored the problems people would face if they tried to protect themselves by sheltering in place following a dirty bomb explosion. The discussion findings challenge some expert assumptions about the public, identify a range of serious and unanticipated problems that people face when they try to shelter in place, and show how individuals and organizations in communities can make sheltering in place a safer and more feasible protective strategy.

One assumption that the findings call into question concerns “radiophobia”: an irrational fear of radiation that is disproportionate to the real health risks involved and that trumps other, more familiar dangers. Observed in military units during tests in the 1940s and 1950s, many planners assume that radiophobia will be very prevalent among civilians in an act of radiological terrorism, contributing substantially to the psychological damage and social disruption caused by the attack.

Looking at a dirty bomb explosion from the public’s perspective, however, reveals that radiation is not the only—or even the most important—risk that people face. The small group discussions show that people want to avoid being exposed to the dust and radiation outside, and they are concerned about dust and radiation coming into the building they are in (through the ventilation system, broken windows, or open doors). But there are other risks people face staying inside a building that would compel them to go outside and expose themselves to radiation, such as:

- ◆ not having medications or supplies for their chronic medical conditions with them;
- ◆ not having food, water, working bathroom facilities, or a place to lie down and sleep;
- ◆ being excessively hot or cold;
- ◆ not having access to substances they depend on (such as caffeine, nicotine, or alcohol);
- ◆ being in overcrowded conditions; or
- ◆ being with unruly or violent people.

Even if people feel it is safe for them to stay inside the building, many would still feel compelled to leave—exposing themselves to radiation in the process—in order to avoid endangering others who depend on them, such as children or disabled family members, or pets who are home alone. Others would need to leave to avoid losing their home, possessions, or livelihood (for example, if they believe that someone may break into their home or if they can’t show up for work while they are sheltering in another building).

Clearly, people face a number of serious problems in this kind of emergency. Yet under current conditions, many see no way to protect themselves and the other people, animals, and things they care about. This is because the strategy designed to protect them from the radiation—sheltering in place—exposes them or their loved ones to other serious and previously unrecognized dangers.

The discussions reveal that much of what people are currently being told to do in the United States does little to help and sometimes makes matters worse. For example:

- ◆ Americans are currently being instructed to keep a three-day supply of food and water in their homes, and most keep their medications there as well. But in a dirty bomb explosion, many people will need to take shelter in a building *other* than their home, so any food, water, or medicines that they have at home won't be available to them.

- ◆ Community residents are being told to identify places for family members to meet in the event of an emergency. But in a dirty bomb explosion, going to such a place can put family members in harm's way if they have to go through or into the contaminated zone in order to get there.

- ◆ Building and work place managers are being told to designate people to be in charge during emergency situations. But since these people are also part of the effected community, some of them will leave to take care of their own children or other family members. If critical information about the building is not available—as is often the case—no one else will know where things are or what to do.

- ◆ Managers are also being told to identify “safe rooms” where people can go to be protected from toxic substances outside. But many of these interior, windowless rooms aren't large enough to accommodate the number of people who are likely to need shelter (which, in shops and public buildings, is considerably more than the number of employees). Some don't provide people with enough space to move around or lie down. And some don't provide people with safe access to communications, supplies, and bathroom facilities. Safe rooms like this will not only fail to meet people's basic needs, they can also create conditions that *provoke* people to become unruly or violent.

The discussion findings show that sheltering in place is not currently a safe or feasible strategy for many people. Yet once the participants in discussions identified the problems they would face, they were in a good position to think about ways to address those problems. Collectively, their ideas about actions demonstrate that communities *can* make sheltering in place a feasible protective strategy for most people—a strategy that keeps individuals safe without endangering the people and animals they care about who aren't with them at the time and without putting their home or livelihood at risk. Many people and organizations are

part of the solution—*not* just government—and the understanding and ideas generated through the discussions provide them with a useful road map for getting started.

A more reciprocal relationship with the public

Planners responsible for developing strategies to respond to acts of radiological terrorism can enhance their effectiveness by developing a more reciprocal relationship with the public. In radiological terrorist attacks, the primary concern of most people is to take actions that will protect themselves and the other people, animals, and things they care about.

Experts in radiological terrorism can be a valuable resource to the public by describing how people in different circumstances can best protect themselves from one of the risks they would face in such an emergency: radiation. For example, in scenarios in which radioactive substances are dispersed through different means, what is the best thing for people to do who are outdoors, indoors, and in different locations around the community?

Once that information is available, the public can be a valuable resource to experts and community planners by describing the barriers and risks they would face trying to follow those instructions and by identifying the kinds of actions that they and others could take to address the problems that people would face. The “Redefining Readiness” demonstration sites are learning how to engage the public in this way.

By giving the public an opportunity to think about emergencies in advance—and to put their own problem-solving abilities to use—this engagement process is helping community residents build the resilience they need to cope with acts of radiological terrorism and other emergencies. By enabling the general public, experts, and people from public and private organizations to combine their knowledge and resources, the process is helping communities create conditions that make it feasible and safe for as many people as possible to protect themselves in emergencies. By creating those conditions, the process is leading to the development of preparedness plans that are worthy of the public's trust and confidence.

*Roz D. Lasker, M.D. directs the Center for the Advancement of Collaborative Strategies in Health and the Division of Public Health at The New York Academy of Medicine.
E-mail: rlasker@nyam.org*

For more information on the “Redefining Readiness” study, please see: www.cacsh.org