Risk = Hazard + Outrage

The Peter Sandman Risk Communication Website

Risk Communications During a Terrorist Attack or Other Public Health Emergency

Published in: *Terrorism and Other Public Health Emergencies: A Reference Guide for the Media* (Washington, DC: U.S. Department of Health & Human Services, 2005), Chapter 11, pp. 184–193

On the Web at: www.psandman.com/articles/hhs-11.pdf

I have a two-page "essay" in this chapter (pp. 190–191) entitled "Public Reactions to Crisis Situations and Communication Implications," which covers yet again material that is presented in more detail in "Beyond Panic Prevention: Addressing Emotion in Emergency Communication."

The rest of the chapter (on which I collaborated) is worth reading for its advice to journalists on how the public and the official sources are likely to cope with a terrorism crisis. The rest of the manual, no longer available online, is mostly about biological, chemical, and radiological threats and the government agencies that try to address them.

—Peter Sandman

Peter M. Sandman, Ph.D.
Brooklyn, NY
Email: peter@psandman.com Web: www.psandman.com (U.S.) Phone: 1-609-683-4073
Consulting, Training, and Research in Risk Communication

RISK COMMUNICATIONS DURING A TERRORIST ATTACK
or Other Public Health Emergency

The release of health-related information during a terrorist attack or other public health emergency is a critical part of the national response to the event, and government officials at the U.S. Department of Health and Human Services (HHS) and state and local health departments are aware that the quality, timeliness, and credibility of our messages and messengers may make the difference between people staying safe or becoming vulnerable to health risks presented by the emergency.

Federal officials have learned, sometimes the hard way, that institutional pressures and deeply rooted processes can get in the way of effective communication during an emergency. They are also learning that the public receives information and makes decisions about how it will respond differently during emergencies than during nonemergency times. This section reflects a combination of what public health officials have learned from experience as well as lessons learned from previous terrorist attacks, natural disasters, and other public health emergencies; communication research; and the insights of risk communication experts.

Terrorist attacks and public health emergencies present different situational characteristics and different emotional and psychological dynamics in the general public that affect how we deliver information. Some of the most significant emotions expressed include fear and anxiety (This is horrifying. Where can we turn? What awful things are ahead?! What do I do now?); anger (How could they?!); misery, depression, and empathy (poor victims); hurtfulness (Why do they hate us so?); and guilt (How come I survived and they didn't? How dare I still care about day-to-day trivia?). Some of these characteristics and their implications for how HHS and other public health officials plan to communicate are discussed below.

Lives are at stake. As with many public health issues or natural disasters, information has the power to save lives—possibly many, many lives. People require information to find out what is actually happening and also what they must do to safeguard their own and their family's personal safety. But strong emotional responses to the event—fear, misery, concern, guilt, anger—make understanding and acting upon that information more difficult.

There is great uncertainty. Almost every instance of terrorism would present a profoundly new and previously unknown set of circumstances—to government officials working to manage the situation and to the public at large. Many pathogens considered to be potential weapons are almost never seen in the United States. Even though a lot is known about these agents and how they might present themselves, in reality not everything is known, as one would like it to be, in the event of a terrorist attack. (Such was the case when anthrax was distributed through the mail. Before that time, medical experts were not sure whether people could contract anthrax through the mail.) Individuals and communities will be trying to cope with the situation and take necessary actions to protect their health and safety, while what is known and believed is unfolding with the constantly evolving story.

Individual and community levels of distress peak. Fear and uncertainty lead to unusually high levels of distress. Because of the psychological impact of acts of terrorism—and of many public health emergencies—it is not enough for HHS officials to give the facts of the situation and tell the public what to do, and expect that people will actually take these protective actions. High distress levels can keep individuals and communities from engaging in protective behaviors. However, how public health officials communicate can actually help channel this distress into productive and protective behaviors instead of destructive ones. Distress, if not excessive, leads to information-seeking and precautionary behavior. But great distress or fear can also make it hard for people to process information. HHS will be working hard to word messages simply and repeat them often. People can better bear their fear and make appropriate decisions about safeguarding their health and safety when their fears are acknowledged, as opposed to when they are told not to be fearful. HHS' goal will be to clear and be respectful of the distress people are feeling.

The psychology of response to a terrorist attack is different from that of response to other types of emergencies. Current knowledge and widely accepted theories of disaster psychology suggest that there are many aspects of a terrorist attack, biological or other, that have an impact on how the public thinks, feels, and responds to information. This will have implications for how HHS communicates with the public.

HIGH DISTRESS LEVELS

can help keep individuals and communities from engaging in protective behaviors.

Some of these psychological aspects include:

- The intentional nature of the assault (as opposed to hurricanes and floods, for example)
- Unfamiliar agents or pathogens (as opposed to typical strains of influenza, which cause many deaths each year but are not so greatly feared as anthrax, which has caused relatively few deaths)
- The random nature of the attacks and the fact that they are largely outside our (Americans', the officials', the media's, etc.) control
- The potential for permanent and catastrophic harm and loss
- The involuntary nature of exposure (as opposed to smoking, for example, which causes smokers to suffer health and social consequences because of their voluntary exposure to tobacco and smoke)

Given these aspects of terrorism, it is known that people react and respond to information differently in times of attack from the way they do in ordinary times.

In What Ways Do People React Differently to Terrorism?

Based on experience from past emergencies, many public health experts believe that an individual's decisionmaking process changes during a catastrophic emergency related to terrorism. The natural reactions people have in other emergencies may become even more exaggerated. Examples include:

- **People simplify.** Individuals' ability to comprehend numerous levels of detail decreases early in their response to an emergency. This means that people will generally miss nuances that help define the situation early. Public health guidance, including the protective actions individuals need to take, should be stated clearly, simply, and repeatedly.
- **People become much more vigilant in a crisis.** They check out their neighbors for signs of terrorism, surf the Internet for background information, and become glued to the media for news and context. This hypervigilance can have negative emotional consequences (added trauma from additional exposure to a traumatic event, for example), but is also useful as it helps people collect and assess the information they are getting. Is it consistent? What do people they respect think about it?
- **People maintain their current beliefs.** People are adept at maintaining faith in their current beliefs during a crisis. They tend to avoid contradictory or conflicting information. This means that if a new situation challenges conventionally held beliefs or views, it may be difficult to convince people that there is a new truth. Resistance to change in beliefs increases.
- **People rely on past experiences.** Whether or not past experiences are relevant, people use them to help define new ones. People remember what they see. They tend to believe what they have experienced in their own lives. However, faced with a terrorism emergency, they will have to rely on experts. But even reputable experts may disagree about the level of threat, the risks, and the appropriate recommendations. In nonemergency times, there is a natural give and take among experts that is expected and helps shape scientific debate. However, in times of crisis, this lack of agreement may leave the public with increased uncertainty and fear. According to some risk communication experts, the first message to reach listeners may often be the most accepted message, even if more accurate information surfaces later.

What Are the Objectives of the Public in a Public Health Emergency?

Most citizens share five main objectives during public health emergencies, including those caused by acts of terrorism:

- Protect themselves and loved ones
- Get the facts they want and need to protect themselves
- Be able to make choices and take action
- Be involved in the response
- Stabilize and normalize their lives

> **"THE ONLY THING OUR BOSSES TOLD US THAT WE MUST DO** in every story that we did is to remind the public that how this thing spreads and the risk of getting it is low ... with more knowledge people were more comfortable..."
>
> *Piya Chattopadhyay, correspondent, Canadian Broadcasting Radio, Toronto*
> *Reported on the SARS outbreak in Toronto 2003*

How People Feel Can Affect Their Ability To Meet Those Objectives.

There are many ways people's feelings can affect their responses. Some examples include:

- **Fear.** Fear is one of the single most powerful emotions present during a terrorism emergency. It has the capacity to propel community members to action. Whether that action is helpful or harmful to the community depends on whether the individual can hear, understand, and act on sound guidance from public health authorities. Public health officials have the capacity to help individuals channel their fear and distress into protective actions, rather than irrational behaviors. Interestingly, in the aftermath of past emergencies, it has been observed that people seldom panic. People act. Effective communication can help people take the most appropriate actions to support the public health response.
- **Denial.** No doubt, some members of the community will be in denial. They may choose not to hear or heed warnings or recommended actions. They may become confused by the recommendations or simply not believe that the threat is real or that it is an actual personal threat. In such cases, people will not act on even the best advice. Denial, in fact, is one of the reasons why panic is rarer than we realize. People go into denial as a coping mechanism when the fear is too great. But there are several important antidotes to denial. The two key ones are: first, the legitimization of fear—people who feel entitled to be afraid don't have to go into denial; and second, action—people with something to do have more capacity to tolerate their fear and, therefore, are less vulnerable to denial.
- **Hopelessness, helplessness.** Some people can accept that the threat is real, but it looms so large that they believe the situation is hopeless and so they feel helpless to protect themselves. The resulting withdrawal and paralysis can impair their ability to take appropriate protective action in a public health emergency. People who feel powerless to affect the outcome are more likely to retreat to denial and the resulting hopelessness and helplessness that lead to inaction. Therefore, self-efficacy is important. Hopelessness, helplessness, and denial are all reduced by messages of self-efficacy and empowerment (not "everything will be fine," but "it's a bad situation, but there are things you can do to make it better, such as…").
- **Stigmatization.** Some members of the community may suffer even greater effects from the attack if the rest of the community stigmatizes them. Fear or isolation of a group may occur if the community perceives it as contaminated or "risky." For example, in some cities, residents avoided "Chinatown" and Chinese restaurants out of fear of exposure to SARS. This type of stigmatization can hamper community recovery and affect evacuation, relocation, or, when necessary, quarantine efforts. In addition, groups people perceive as related to those who are "to blame," such as Arab-American communities following September 11, can become targets of local violence, even though they are as much victims of the terrorist attack as their neighbors.
- **Vicarious rehearsal.** Interestingly, experience has shown that people farther away (by distance or relationship) may react as strongly as those who are more directly impacted. Today's communication environment allows people to participate vicariously in a crisis in which they are not in immediate danger. This psychologically normal response to new risky situations results in people mentally rehearsing the crisis as if they were experiencing it and asking themselves, "What would I do?" In their minds, they imagine that the risk is here (instead of there), now (instead of soon), and definite (instead of maybe). They may believe that they, too, are at immediate risk and demand unnecessary services; as a result, they may go to the emergency room or take medications they do not need. Their stress reactions will be

> **"THE GOAL OF BIOTERRORISM IS TO CREATE TERROR;** to inflict psychological injury. Terrorist acts involving biological agents and other Weapons of Mass Destruction are particularly terrifying. Uncertainties about exposure, treatment options, and long-term effects will produce widespread fear, anxiety, and distress. It is critical that reporters who write about bioterrorism understand the psychological and mental impacts of bioterrorism."
>
> *Vincent Covello, Ph.D., director of the Center for Risk Communication*

high, even though they are not in immediate danger, often resulting in some of the health consequences of stress. Further, because many of the agents are invisible and difficult to detect, we may not always be able to tell a community with certainty that it has not been exposed. This imaginative leap from there/soon/maybe to here/now/definitely can be beneficial if it is acknowledged and the opportunity is taken to prepare, emotionally and logistically, for a real crisis.

What Does This Mean for How HHS Will Communicate With the Media and the Public?

In times of emergency, HHS will be working hard to deliver the information that people want and need:
What happened? Am I safe? Is my family safe? Who's in charge? What is being done to protect me, my family, and my community? What can I do to protect myself? Why did this happen? When will it be over?

However, some things that people need to know are not easy for them to hear: that people are dying, that the risks are not really understood, that it is not known when the emergency will be over, and that decisions may have to be made with imperfect information.

Most importantly, people need to know what to do to protect themselves and their families. Sometimes this is easy to hear and easy to act on. But there are times when public health guidelines are not consistent with personal beliefs or instincts. These are times when delivering guidance takes more than printing words on a page or reporting to the viewing and listening audiences what they need to do. It takes more because the public will need to be led toward protective actions.

For example, if a community is exposed to the smallpox virus, public health guidance will likely include recommending that people not leave the region. A common response might be: "Not leave the region? But why not? I want to take my children to my mother's house in the next state, where they will be safe." However, if a vaccination program starts, the vaccine will be available in the affected region and possibly not near Grandma's house. In addition, anyone potentially exposed to the virus would not want to carry it to another state, perhaps spreading the disease.

This example shows how public health guidance can conflict with personal inclinations. This conflict can make it difficult for the public to act on such guidance.

Based on the experiences with September 11 and the subsequent anthrax and ricin incidents, public health professionals are developing new ways to deliver information to the news media and the public. Following are the types of critically important information that public health officials hope to be able to deliver to reporters during public health emergencies.

HHS is committed to providing accurate and timely information to affected audiences, including state, local, and tribal governments; the media; the private sector; and the local populace. Communication with special needs audiences, including hearing and sight impaired populations or people with other disabilities; non-English speaking populations; and low-literacy audiences is a high priority in a public health emergency. In the case of terrorism or a severe public health emergency where several other federal agencies are involved, HHS will coordinate its response with other federal agencies as well as through the federal Joint Information Center.

TABLE 1: INFORMATION THAT PUBLIC HEALTH OFFICIALS MAY PROVIDE IN A PUBLIC HEALTH EMERGENCY

WHAT	WHY	EXAMPLE
Expression of empathy and acknowledgment of fear and uncertainty	Public health officials have historically been trained not to speak with or about emotions; rather, about fact. Therefore, expressing empathy, fear, or uncertainty can be particularly difficult for officials to do. Experts believe that citizens need to know that their feelings are understood and acknowledged by authorities. This helps establish a connection and makes it a little easier for audiences to hear the difficult information that usually follows.	"Whatever it [the loss of lives] is, it will be more than we can bear…" R. Giuliani, September 11, 2001
Clarification of facts	Public health officials will try to provide as much factual information as they can about the situation.	"At 2 p.m. today, a 34-year-old woman entered the Johnston Hospital Emergency Room with an unknown illness…"
What is not known	Just as expressions of empathy do not always come naturally, discussing the unknown elements of the situation also goes against years of professional training and experience. Many public health officials are used to having confirmation of all of the facts before releasing information. Just as important as what is known is what is not known. There will be many things public health officials do not know, especially when they suspect an illness but have not yet confirmed it. It is also likely that, in the initial stages of the investigation, they will not know the route of exposure or what/who caused the situation. The nature of terrorism is pushing public health officials to change the way they release information to the public. They realize that waiting until they have an answer to every possible question could jeopardize public safety. As their understanding of the situation evolves, they will provide you with updates on what is known and what is not known.	"We know that we have two confirmed cases of pneumonic plague, but we do not know right now how these patients were exposed to plague bacteria."
Steps taken to get more facts	Although there is much they may not know, public health officials can tell you the immediate steps taken to get more facts and to begin to manage the public health emergency. Immediate steps might include isolating patients, conducting an epidemiological investigation, alerting the public to signs and symptoms, activating the Health Alert Network, etc. The public can more easily accept high levels of uncertainty when they are aware of the actions taken to find answers.	"We do not know yet how many people have been exposed to the contaminated food, but we are talking to everyone who ate at the restaurant on May 6. If you ate at Joe's Restaurant on May 6, please call 1-800-xxx-xxxx."
Call to action—giving people things to do	In a crisis where immediate action needs to be taken (e.g., sheltering-in-place due to a radiological incident), this may be a key part of the message. In some cases, even symbolic actions can help channel people's energy and desire to do something.	Protective actions: Boil water before drinking or drink bottled water. Helpful actions: Donate time or money to a charity providing assistance, check on elderly neighbors. Symbolic actions: Attend a vigil or fly the flag.
Referrals	Public health officials will tell you when the next update will occur and where you and the public can go for more information, help, or support, such as hotlines or Web sites with more detailed information.	"We expect to have the test results confirmed within the next 12 hours and will let you know what we are dealing with at that time…"

“IN THIS ENVIRONMENT, EVENTS AND INFORMATION PLAY OUT IN REAL-TIME; LIVE; 24/7; NONSTOP.

As a result, we get news by increment. Each little development becomes the latest ‘breaking news’ piece set into the mosaic of the larger story. This can be helpful or it can be a terrible distraction. One of the challenges for news organizations is to make sure incremental news is proportional and provides context.

The advent of incremental news brings with it the danger of ‘information lag.’ That is the time between when the media asks a question and a responsible official can answer it. That time lag can be minutes or it can be hours. In some cases—such as with certain types of bioterrorism—it may even be days. This truly is the most precarious time in the story process, when uninformed speculation and rumor can fill the information void. This can be a very dangerous thing. We saw this play out during the anthrax attacks of 2001. It is why news organizations and public officials alike need to learn and appreciate what I call the ‘language of live.’ The ‘language of live’ recognizes the realities of the 24/7 world. It is a transparent language that is deliberate and clear. It explicitly states what is and what is not known, confirmed or corroborated. It directly attributes sources of information. It labels speculation as such. It quickly doubles back on bad information to correct the record. The ‘language of live’ is a language that many journalists employed fluently in the days after 9/11...

Similarly, news organizations were broadly praised after 9/11 for their measured and purposeful work. There was a responsible attitude, humanity but also professionalism. Questions were asked and answered in a measured way. The information and the tone were straightforward and sober. Most sought to keep speculation to a minimum.

There are some things the ‘language of live’ should not be—especially when we’re talking about the coverage of terrorism. It should not be breathless. It should not be hyped. It does not need to be accompanied by sensational graphics or ominous music. The facts will be ominous enough.”

Frank Sesno, university professor of public policy and communication at George Mason University and former Washington, D.C. bureau chief for CNN

Testimony before the House Select Committee on Homeland Security, September 2004

PUBLIC REACTIONS TO CRISIS SITUATIONS
and Communication Implications *by Peter M. Sandman, Ph.D.*

ESSAY

In the stairwells of the World Trade Center on September 11, 2001, survivors tell us, many people felt panicky, but their behavior was calm, orderly, helpful to others, sometimes even heroic. The panic attacks came later, when the crisis and the need for urgent action were over.

The impression that people are panicking and the prediction that they are likely to panic are not just mistakes. They are dangerous mistakes. The impulse to "avert" panic too often leads authorities—and sometimes even journalists—to sound over-reassuring, withholding or shrugging off information they consider too alarming for the public to tolerate. Paradoxically, this may actually increase the probability of panic, as people come to feel that those in charge are "handling" and misleading them instead of leveling with them.

The strongest antidote to denial is, paradoxically, the legitimization of fear.

Whereas panic is rare, another extreme reaction—denial—is fairly common. Denial, in fact, is partly why panic is rare; people at risk of panicking often trip a mental circuit-breaker and go into denial instead. The dangerous thing about denial is that people in denial do not take precautions in a crisis (or the run-up to a crisis), and this can lead to more harm to themselves and others. Apathetic people, of course, also fail to take precautions. In communication terms, the problem with denial is that it looks a lot like apathy. The difference is that apathy responds well to scary warnings—but that is the wrong prescription for denial, since it only forces people deeper into it. Nor will over reassurance work for denial; it colludes with the denial and thus strengthens it. The strongest antidote to denial is, paradoxically, the legitimization of fear. If it is okay to be afraid, then I do not have to deny my fear and can find ways to tolerate it instead.

The public can usually tolerate its own fear fairly well, especially if there are things people can do to protect themselves.

Crisis managers often find even modest levels of public fear intolerable—which may be why some interpret the public's fear as panic. The public, on the other hand, can usually tolerate its own fear fairly well, especially if there are things people can do to protect themselves; as psychiatrists and soldiers have long recognized, action binds anxiety.

We are hardwired to respond fearfully to new dangers; that response is more conducive to survival than fearlessness is. In fact, it is arguable that we tend to recover rather too easily from fear. We quickly get used to the New Normal; we relax our vigilance and our sense of shared urgency. Finally, note that when people become suddenly afraid of X, they typically become less afraid of Y and Z and less vulnerable to free-floating anxiety. For the most part, each individual is as anxiety-prone and fear-prone as he or she is wired to be. We allocate our fear. During a crisis, we are temporarily more afraid; we draw on a reservoir of untapped fearfulness. But very quickly we revert to our normal level of fearfulness—but with more of our normal fear attached to the new risk and less of it available for other risks.

Fear is not a problem in a crisis. It is part of the solution.

What level of fear is optimal for a public response so that people will protect themselves and those around them? Panic, denial, and apathy are all undesirable extremes. So is terror—that is the terrorists' goal. But if terror is too strong a response, mere interest or mild concern is often too weak. In a crisis, we want people to put their ordinary concerns aside, to be vigilant, to take precautions, to tolerate inconveniences. Fear is not a problem in a crisis. It is part of the solution.

But of course fear is not the only emotional response to crisis. Just as important is the empathy/misery/depression complex of emotions. One of the principal reactions to September 11 was and still is a sense of shared misery. Most people expect to survive whatever the terrorists throw at us. But we expect to have to watch a succession of terrorist attacks on CNN. Whether or not life got scarier after September 11, it certainly got more miserable. To a lesser but significant extent, all calamities provoke misery.

It is important to distinguish empathic overreactions—misery, even depression—from fear and its relatives. To tell a

miserable person to calm down misses the point; he or she is calm already. For those who communicate with a public in misery, here are a few effective ways to do so:

- Acknowledge and help us acknowledge that misery is part of what we are feeling
- Affirm that in a situation like this misery is an appropriate feeling
- Let us know that you feel it too
- Expect us (and yourself) to bear it, and in time to get past it
- Suggest empathic actions, ways we can help others

Hopefully, these guidelines will be followed by public officials and can be of use to media as well, as the media also play a critical leadership role in times of crisis.

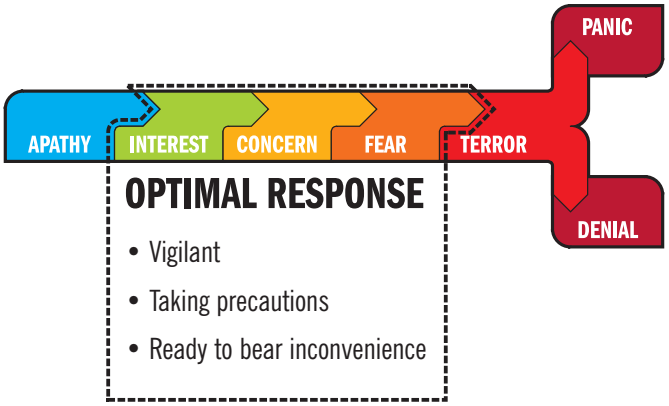
Anger, hurt, and guilt are also common and appropriate reactions to a crisis.

Anger is also an appropriate reaction to crisis, and especially to terrorism. It is useful: it fuels resolve, vigilance, precaution-taking. Of course it can also fuel scapegoating and harassment—not all angry behaviors are useful, but some degree of anger itself is. When anger escalates into rage or flips into denial, it is no longer functional.

Hurt feelings often go unnoticed or unacknowledged as a response to crisis, but many crises do threaten our self-esteem: "Why did this happen to me?" Once again, terrorism crises are an extremely vivid example. After September 11, virtually everyone was asking the bewildered question, "Why do they hate us so?" This is an important question to ask and to try to answer. But not everyone was looking for answers; many just wanted to express their hurt feelings. Hurt, too, can flip into denial; it is hard to hold onto the idea that people actually hate you so much that they want to kill you.

Guilt also plays an important role—caretaker guilt (I feel powerless to protect my family, my community, my constituents); survivor guilt (which results largely from projected relief—I'm okay and they're not); and above all guilt at continuing to be preoccupied with our own mundane concerns. A Minnesota County Commissioner who is also a florist told me about all his

FIGURE 11–1: RESPONSE TO CRISES



wedding customers in the days and weeks after September 11. Shipments of flowers (among other things) were disrupted, and his customers were worried about the flowers for their weddings. But they also felt guilty about worrying about such things. So he learned that he not only needed to reassure them that they would have their flowers, he needed to reassure them that we all need beauty right now … that their floral worries were not wrong or selfish.

Fear, misery, anger, hurt, guilt—all normal responses to crisis (for public officials and media as well as the public). But we bear them and we get beyond them—perhaps not immediately, perhaps not easily, but we do it. Resilience is also a normal response to crisis.

Peter M. Sandman, Ph.D., is a risk communication consultant based in Princeton, NJ. Much of this essay is drawn from work done jointly with his wife and colleague, Jody Lanard, M.D. For more information, see the articles listed at http://www.psandman.com/terror.htm#links.

A JOURNALIST'S REFLECTIONS
on Fear and Risk *by David Ropeik*

ESSAY

It is generally not the news media's responsibility to consider the effect their coverage will have on the public. But in extraordinary cases, such as a terrorist attack, in which fear is part of what the attackers are trying to inflict, news editors and TV news directors, print and broadcast writers and producers, and reporters and photographers need to consider that their coverage may in fact serve as part of the attackers arsenal. And while coverage of terrorism may not spawn direct copycats the way coverage of suicide or bomb scares might, it certainly will spawn public fear, and that fear can threaten public health far more profoundly than the suicide and bomb scare stories about which the press is already rightfully careful.

There is a body of research that can help news organizations understand and consider the effect their coverage of a terrorist attack might have on public attitudes, and therefore, on public health. Psychological studies of risk perception show that such an event will hit several intuitive "fear factors" that we all use, subconsciously, to decide what to be afraid of and how afraid to be.

Research has shown that our perceptions of risk are more intuitive and emotional than fact-based, and that risks that feature certain characteristics evoke a degree of fear that rarely matches the actual degree of hazard. People are more afraid of risks that are:

- New (as opposed to risks we've lived with for a while)
- Uncertain (compared with risks we fully understand)
- Imposed (compared to risks we choose to take)
- Catastrophic ("event" risks, like plane crashes, as opposed to risks that occur to individuals over time, like heart disease)
- Available to our consciousness (the greater the awareness, the greater the concern; studies show that the news media play a critical role here)
- Personified (a risk that has a real victim with a name and a face in comparison to a theoretical risk)
- A personal threat (a risk you think can happen to you, like anthrax in the U.S. mail, compared to a risk that is real but you think will only happen to someone else)

A terrorist attack involves many of these perceived risks, and therefore, is the perfect formula for elevated fear. This fear can lead to dangerous choices, denial, or extreme stress and resulting damage to health and safety.

Clearly, the public will look to the news media for information in the event of a terrorist attack. Appropriately, coverage will be extensive, and certainly dramatic. The "Who, What, Where, When, and Why" of the story will be inescapably alarming. But, as with other disaster and emergency stories that can directly affect public health, the quantity, quality, and tone of the coverage of a terrorist attack will have a dramatic impact on public behavior and health. It is my hope, as both a journalist and a risk communicator, that responsible news organizations will want to consider these issues as part of pre-event reflection on covering such an attack should one occur:

- Keep the risk in perspective. Consider how many people are actually exposed (radiation from a dirty bomb is a localized risk) and the severity of the consequences (some weapons are less harmful than others).
- Remember that, as mentioned above, the more frightening your coverage, the more fear it will breed and the more the coverage might help terrorists achieve their goals.
- While giving the public all the information available, try to incorporate relevant public health instructions. When appropriate, provide information that will help readers, viewers, or listeners take actions to protect themselves, their loved ones, and others for whom they may be responsible.
- Accept that in the unique circumstances of any such attack, officials can't possibly have all the answers to many critical questions, especially early on. (Beware those that do!) That's not incompetence, just reality.

› Beware of the instant experts. They're a dime a dozen at times like this and the knowledge many of them profess is often quite shallow. "Information" from self-described experts stepping beyond the bounds of their knowledge can potentially confuse the public.

Don't ignore the stress, loss, and other danger you and your peers face. As some of the reporting from embedded journalists under fire in Iraq demonstrated, the feelings you face covering the story can challenge your objectivity.

David Ropeik is the director of risk communications at the Harvard Center for Risk Analysis. Co-author of "RISK: A Practical Guide to What's Really Safe and What's Really Dangerous in the World Around You," he was a television journalist for 22 years and has written for the *Boston Globe*, MSNBC.com, and other news organizations.

REFERENCES

Covello, V.T., Peters, R.G., Wojtecki, J.G., & Hyde, R.C. (2001). Risk communication, the West Nile virus epidemic, and bioterrorism: Responding to the communication challenges posed by the intentional or unintentional release of a pathogen in an urban setting. *Journal of Urban Health: Bulletin of the New York Academy of Medicine, 78*, 382–391.

Fischhoff, B., Gonzalez, R., Small, D., & Lerner, J. (2003). Evaluating the success of terror risk communications. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science, 1*, 255–258. http://www.liebertonline.com/doi/pdf/10.1089/153871303771861450.

Hall, M., Norwood, A., Ursano, R., & Fullerton, C. (2003). The psychological impacts of bioterrorism. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science, 1*, 139–144. http://www.liebertonline.com/doi/pdf/10.1089/153871303766275817.

Mullin, S. (2003). New York City's communications trials by fire, from West Nile to SARS. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science, 1*, 267–272. http://www.liebertonline.com/doi/pdf/10.1089/153871303771861478.

Sandman, P. (2004). Seminar handouts—Crisis communication: Guidelines for action. Planning what to say when terrorists, epidemics, or other emergencies strike. http://www.psandman.com/handouts/AIHA-DVD.htm.

Sesno, F. (2004, September). *Covering terrorism: New challenges in a new era*. Testimony before the House Select Committee on Homeland Security.