ISSUE IDENTIFICATION

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I won't pretend that I can summarize everything that has been said here in the past 2½ days or that I can capsulize the most important things that have been said. What I will do is comment on three areas, underlining those that have had an impact on me and, I suggest, are things that we should think about.

I'll divide my comments into three areas: first, a few aphorisms; second, a few issues that have been raised; and third, some recommendations.

Some of the quotes that stuck in my mind:

"The dogs became depressed when they didn't find live bodies" (Linda Wallace). That should tell us something about what happens to people.

"Coordination is akin to leadership without domination" (General Julius Becton, Jr.).

"Natural disasters are not 'acts of God' in the sense of being random in time or space" (Frederick Krimgold, PhD).

"EMS deals with failures of mitigation" (Frederick Krimgold, PhD).

"Improving conditions beyond predisaster levels is not a goal of immediate disaster relief" (Miguel Gueri, MD).

"Donations can delay national development" (Miguel Gueri, MD).

In the context of analyzing terrorism, the following statement was made: "When a patient is hemorrhaging, we usually don't worry about nutritional concerns" (Robert Kupperman, PhD).

"With a picture ID and a clipboard, you can usually go anywhere" (Robert Kupperman, PhD).

"The terrorism was beyond the imagination of those who were planning for security" (Commander Joseph Henderson, MD).

What are some of the issues that came forth clearly? I think we as a group recognize that risk assessment is a very real entity. The technology and expertise exist, not to predict disasters, but to develop "probabilistic scenarios."

Mitigation, meaning reduction of loss and damages once we know that a disaster is coming, is also a very real entity.

Medical response to a disaster raised a number of issues. We clearly heard from our international colleagues that international disaster medical teams are rarely needed, may cause problems, and should not be sent unless specifically requested. More specifically, volunteers should not be accepted unless they are affiliated with recognized agencies, self-sufficient, and familiar with the language and culture of the area involved.

This brings up the murky question of motivation. We have to find a way, particularly in disaster planning and disaster management, to sort out those who are genuinely concerned about their communities and their fellow man from those who are simply disaster ghouls. Disasters may bring out the best and worst in people.

If in certain planning scenarios it is determined that medical response teams are indeed needed, one must try to understand why busy clinicians don't jump at the opportunity to spend a few extra hours or weeks to get more training. We also need to understand the price that would be paid if, rather than selecting active clinicians to serve on medical response teams, we select inactive clinicians who may no longer be performing health care on a regular basis. All these inactive clinicians may be far more motivated for extra training but their skills may not be as current.

Triage was mentioned but not really discussed at any length. Some genuine difficulties of triage need to be recognized. We all have this notion of switching from trying to save *everybody* who is brought to the hospital or who is in the field to trying to save everyone who is *salvageable.* I don't know a universally acceptable definition of when one makes that switch. I do know that triage is probably the toughest job around. In most communities, the person who should be doing triage is probably the oldest, crustiest surgeon around (maybe even the surgeon who doesn't operate any more because his tremor is a bit enhanced). I learned that lesson from a surgeon who told of his experiences in Boston when the Coconut Grove fire, a horrible massacre, occurred. In the initial response, residents and interns were assigned to the parking lot for triage, and senior staff attending physicians were in the emergency departments, starting IVs on burn patients. It didn't work. The senior

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attendings hadn't started IVs in a while, and the poor interns and residents didn't have the emotional and intellectual baggage under their belts to be able to make those decisions. By switching roles, the attendings and residents functioned much more effectively.

It is extremely difficult to make triage decisions on a mass scale, that is, to be able to say, "We're not going to do anything with this one in order to save all of those." We need to consider that in response team planning.

We learned that earthquakes can be anticipated to some extent. Structures can be built and placed appropriately. At least in the large recent earthquakes, there were not great numbers of casualties needing major medical attention. The victims of earthquakes were either dead, had minor injuries, or could be managed by existing medical facilities, even in a community where more than one medical structure had collapsed. That should tell us something about our planning and how we place our resources. Obviously, between those who were dead and those who had minor injuries were those who were trapped for a significant period of time. The problems were not lack of medical teams, but were ones of extrication. We should think about that in our planning.

Amputations in the field are occasionally mentioned. In most situations, an amputation in the field represents a failure of rescue extrication and a failure of medical support. Sometimes, there is nothing else that can be done to preserve life. That is a very difficult decision and one that probably rarely has to be made.

The issue of "who's in charge?" has been discussed for years. It has been somewhat resolved with the incident commander concept, as if that solves the problem. Maybe the reason that we have so much trouble with "who's in charge" in disasters is not just because of the disaster but because it is a problem in everyday life and simply becomes intensified in a disaster. Obviously, "who's in charge" should be omniscient and omnipotent. A divinely designated king would be very nice but in a democratic society, that's a problem. The problems are not just over turf. They probably have another dimension besides space: a lot of people want authority; nobody wants too much responsibility; and nobody wants to give anybody else authority, even if he needs it to fulfill his responsibility.

We didn't talk a great deal about evacuating large populations. Dr. Miguel Gueri, in his presentation about the Colombian volcano, told us what happened when a large population wasn't evacuated, even with warning. I could relate to that.

The authorities in Ocean City, Maryland, had a recent experience in trying to evacuate a community. The third time they went through town before the hurricane arrived, they said, "We urge you to leave promptly." For those who refused, they simply asked for the name and phone number of the next of kin, so they would know whom to notify in the event of death. Some people simply will not leave.

I was reassured in the presentation on legal issues that "legal issues should be a minor concern in disasters." It would be more reassuring if we could say that legal issues are a minor issue in our everyday lives, but we haven't reached that point yet.

A question came up about the litigation issue in this country (not just medical, but medical malpractice, EMS malpractice, local jurisdictional malpractice). Some people connected the litigation crisis with a different attitude toward authority and professionals in the United States compared with other countries. One participant suggested that the problem is not a difference in attitude toward authority or professionals but a difference in attitudes toward life and death. In other countries, when you are sick or injured and you receive treatment and you die, it's part of the natural consequence of life. It was the "will of God." It was fate. But obviously in our country, when you die after treatment, we're getting to the mind set that "that doesn't happen. Somebody must be responsible. Somebody must have made a mistake."

Let me move now to terrorism. Dr. Robert Kupperman gave a very interesting presentation. He indicated that he would not address the social and economic conditions that might generate terrorism. As a surgical analogy, he said that, if a patient is hemorrhaging, you usually don't worry about nutrition. To carry the metaphor another step, once the hemorrhaging has stopped, you do worry about nutrition because it is critically important for healing, warding off infection, and recovery.

A recent edition of *Newsweek,* an unfortunately prophetic one, devoted several pages to terrorism. The author made the interesting observation that terrorists are made and not born. I understand those who refer to terrorists as "sick people," because behavior that is so abhorrent to our perception of ourselves as civilized human beings often cannot be understood in any way other than a disease. Yet in this increasingly complex society with its tremendous technological vulnerability, we must learn to understand more about the roots of terrorism if we are to contain it, control it, and eradicate it.

What reverberates in my mind is that discussion about the rescue dogs. The dogs didn't like finding dead bodies in the same sense that individuals involved in the treatment of critically ill people don't like losing patients. Paramedics have similar frustration if they are unfairly trained with the expectation that every day they are going to be saving lives. They take ACLS, they learn drip rates, they learn about drugs, and they do a tremendous job. Nobody told them ahead of time that a salvage of 6 percent in the field from heart attacks is common in some areas and, at best, 22 percent.

I found myself feeling tremendous sympathy for the dog who was unhappy. If we can feel such sympathy for a dog, how can we adapt that sympathy to understanding the behavior of some people?

Let me turn now to some recommendations:

Most of us are used to speaking primarily with those of our discipline. We need to recognize that all of us have a part to play and something to contribute. All of those individuals who have something to contribute should be involved in a community risk assessment at least annually. Those same individuals also need to determine a mitigation plan. When risk assessment and mitigation fail, EMS comes into play. It would be helpful if EMS personnel were involved in the risk assessment as well as the mitigation plan.

One of the recollections I'll take away is something that I hard in a breakout group. A person described a situation in another city in which EMS services are provided to a stadium. Every Sunday there are 60,000 people in that stadium. Outside the stadium runs a train, which occasionally handles nasty chemicals. Inside the stadium is an exhaust system that blows air into the stadium to keep the roof up. Is anybody looking at that? Is anybody at least scheduling the train when the people aren't inside? I should ask our legal expert what liability we all have for recognizing this potentially disastrous situation and not acting upon it.

We need to remember that during and after the response, we have to keep providing the public with good information. The next time we hear of a far-away disaster and we hear on the evening news about the fear of epidemics because of dead bodies and the need for mass vaccinations, we'll question that. We'll all hesitate to send our winter clothing to the tropics every time there's a request for clothing following a far-away disaster.

Let me turn to a couple of points about responsibility. Who should be doing that risk assessment? Summary sessions this morning made the point that somehow we're all responsible. We need to define that a bit further, because if everyone is responsible, as you know, nobody's responsible. I don't know who that person or authority should be. Is it a public safety manager, is it the EMS agency, is it the governor's office? We need to define that function and that person much more clearly.

We also clearly heard that people function better if they know that their families are safe and secure. Those contingencies should be put into prehospital disaster plans as well as hospital disaster plans. You can't call in single parents at 3 am to ask them to function for 24 hours unless they have a contingency for taking care of their children.

The interesting observation was made by Dr. Raquel Cohen, in discussing the effects of disasters on children, that it takes a level of sophistication to be afraid, so that the reaction of children is somewhat age-dependent. I suggest that the reaction of adults is also age-dependent and dependent upon our levels of sophistication.

Psychological Impact

We need to know how to get people out of a disaster situation psychologically, with the solid scientific approach that Dr. Cohen presents. We also need to look at the behavioral consequences of growing up in a state of chronic catastrophe. Growing up in Northern Ireland, South Africa, or West Beirut certainly alters one's approach to life and the value one places on tactics and life.

Statistically we may have one opportunity to contribute solidly to a major disaster in our life time. We really ought to get it right the first time.

Nuclear Disaster

Finally, there is a kind of disaster that I'd like to discuss because no one else wishes to. I'm speaking not on behalf of any of the participating organizations or for the organization which employs me. I'm speaking on behalf of myself, as an individual physician expressing a concern. We as health care providers need to be aware of the greatest risk. If we define our community as somewhere within the boundaries of the planet, what's the greatest risk? We can categorize earthquakes, hurricanes, building collapses, fires, but there is one that we just don't want to talk about. To deny that the threat of nuclear injury exists is the ultimate denial. To say that it is so unthinkable, so totally unmanageable, so totally overwhelming that we can't discuss it is pure nihilism. I don't buy the standard answer that "I wouldn't want to live in that kind of world," because that presumes that every-

thing is all or none, that the entire continent is going to go up. Because of personal experience, I believe that people use what's at their disposal when they feel that their backs are to the wall. I also don't accept the philosophy that thinking about it, reading about it, and knowing something about it somehow make an event more likely. That's like saying encouraging people to wear seat belts makes them more likely to crash. I don't think that discussing nuclear injury hastens nuclear war. I simply disagree with organized groups of physicians who say that nothing can be done and therefore our total effort should be political. Someone else can work on the political efforts; they are valid. There are some things that we as health care providers need to know: every health care provider should know something about radiation (rads and rems). We should know about acceptable exposure levels. Every surgeon should know how to take care of wounds and how to do a skin graft. Prevention and management are not mutually exclusive.

Mostly, I think that we need to remember to stay a little humble as health care providers, EMS managers, scientists, and engineers. If we're in the business of helping people, our ultimate goal is not supposed to be to make ourselves more important, more needed, or more secure in our jobs. Our ultimate goal as helpers of people is to make ourselves obsolete so that they don't need us anymore.