DISCUSSION POINTS FOR ALL CASES:

1. **Who identified this as a crisis?**
   - Who should recognize that more than routine resources and procedures would need to be followed? In your organization, who really would recognize the situation?
   - Would this individual be able to activate additional resources? What resources wouldn’t they be able to activate?
   - Would that be an adequate response in this situation?
   - Exactly how much time would elapse before the situation was recognized and adequate resources were available in a situation like the one being discussed?
   - Would any delay in activation cause a problem for patients?
   - How could your disaster or action plan be modified to speed up the recognition of a suddenly resource-poor environment and the initiation of modifying procedures/requesting additional resources?

2. **What healthcare-related resources might be scarce in this situation?**
   - The resources you will need not only must help the situation, but also must actually be available.
   - While it might appear that asking for every possible resource will help, having too many resources might actually make the situation worse. They may interfere with one another and, in situations where support will be needed for any additional personnel and equipment, this may complicate an already stressed logistics and distribution effort.
   - Aside from medical equipment and expertise, healthcare infrastructures need basic supplies and equipment to function, including food, water, electricity, and communications.
   - Not only healthcare professionals, but also support personnel are vital to keep a healthcare operation functioning in disasters. Since they often feel
that they are undervalued, in situations where personal risk is involved, they may be less willing to show up than are the healthcare professionals.

3. Is a Crisis Triage Officer (CTO) needed in this case?
   • Do difficult triage decisions need to be made? (In a relatively short-term incident, or in certain organizations, this individual may be termed the Incident Commander, although this individual may not be making triage decisions, but rather “running the show.”) CTOs must be medically trained, preferably very experienced, and ready to assume the burden of making difficult, often life-and-death, decisions.
   • Has a cadre of CTOs been identified, trained, and received practice and updates on a regular basis? Are they available?
   • Is someone other than a trained CTO ready to assume the responsibility of making these decisions? (Perhaps there is some person or group that fulfills the qualifications and does something similar on a regular basis, e.g., emergency physicians at major hospitals or a paramedic-trained FD battalion chief from a large fire department?)

4. What ethical dilemmas would occur?
   • Changes in the level of medical treatment available (i.e., “degraded medical care”) will decrease patient autonomy. This often includes quarantine and isolation of infected cases, or otherwise deprives individuals of their freedom. It also may change the way healthcare and associated resources are distributed—on the basis of group, rather than individual, benefit.
   • How do these changes cause ethical dilemmas? What other aspects of this case causes ethical dilemmas?
   • How will healthcare and other public service support personnel balance the risks to themselves and their families against a professional responsibility to fulfill their job roles?

5. What decisions might the CTO have to make?
   • Bedside resource allocation—allowing some to have potentially lifesaving resources (e.g., ventilators, medications, hospital/ICU beds, operating room time) while denying them to others who would receive them under normal circumstances.
   • How would this apply to the case under discussion?

6. On what ethical basis should and would they make these decisions?
   • Have decisions already been made in your organization or community (perhaps assisted by your local Hospital or Organizational Bioethics Committees) that will help guide these decisions?
   • Do those tasked with—or who would probably be tasked with—making resource allocation decisions understand that these decisions should be made so that the greatest number of people benefit from the least amount of resources used (number of resources and time used)?
• If another ethical basis or method has been suggested, how could that be defended to the larger community?
• Whose resources are being allocated?

7. **What stresses would the CTO encounter?**
   • Might the CTO(s) have conflicts about their resource-allocation decisions with their colleagues, patients, families of patients, and the community?
   • How would they balance their duty to the larger community with decisions that might adversely affect friends and family?
   • Would this apply to the case under discussion?

8. **How could the stresses on CTOs be lessened?**
   • Would support from colleagues, administrators, and community leaders help? How could this be achieved?
   • Would intensive training and system-wide practice help?
   • Would it help to have the medical community, institutional administrators and community leadership briefed about the resource allocation plan in advance and for them to participate in the trainings and practices?
   • Would it help to have leaders publicly discuss these plans and to publicly acknowledge when they are implemented successfully, even on a small scale?
   • How would that work in the case under discussion?

9. **How might risk-communication effectively be used in this case?**
   • Would risk-communication be needed in this case?
   • If so, would the communication be directed at the rescue/healthcare workers? Support personnel? Patients and families? Media? The wider community? Or a combination of these groups?
   • Who would be the most appropriate spokespeople? Are they available?
   • What methods would they use? What information might they provide, such as, where to go for help, routes to get there, self-help methods?

10. **Is there a need for short- or long-term alternative care sites in this case?**
    • Will the number of patients overwhelm currently available healthcare facilities?
    • Will alternative care sites be need for short- or long-term use?
    • What facilities could you use and staff?
    • Do they have or need potable water, oxygen, bathroom/waste disposal/food preparation areas/controlled entrances?
    • Which patients or types of patients could be accommodated in these facilities? How would they get there?
    • Are there contracts already in place for any such facilities? Are there plans about which patients will use them or how they will be staffed?
CASE BACKGROUND (Typical. Modify it to meet your own situation):

- Region: City of 300,000, with surrounding community nearing 1 million people. Several smaller communities are more distant, but rely on this city to provide their significant medical treatment.
- Hospital System: A large tertiary care teaching hospital/trauma center with ten other hospitals in the region, some offering tertiary care for some medical problems.
- Emergency Medical System: Several paramedic/BLS systems dispatched by a single 911 facility.
- Police: Numerous municipal, county, federal, and tribal police agencies.
- Fire: Numerous municipal, county, federal, and tribal fire departments.
- Regional Disaster Plan: Some mutual-assistance agreements exist between police and fire departments. Otherwise, the disaster plan is only on paper to fulfill administrative requirements. Not tested or adequate.

SCENARIOS

MAN-MADE DISASTER (SHORT-TERM)

This Saturday night you have been called to the scene of a large supper club fire. The club holds more than 5,000 patrons; it was full. The fire has engulfed the club and victims are everywhere. Some have been burned; others have crush injuries or smoke inhalation. It appears that there are already about 70 bodies lying in the open; no one has checked to see if they are really dead.

You have about 20 ambulances and an equal number of fire trucks. Their crew’s medical training ranges from EMT to paramedic. About 60 police are on the scene. Not everyone can talk to each other on the radio, since they are from different agencies and jurisdictions. Some doctors and nurses have identified themselves and are willing to help.

The closest burn/trauma center is about 20 miles away. Some victims have already been taken to the very small local hospitals.

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4. What ethical dilemmas would occur?
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6. On what ethical basis should and would they make these decisions?
7. What stresses would the CTO encounter?
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DIRTY BOMB

You are attending in your Emergency Department, which also acts as the local Level 1 trauma center.
The EMS dispatcher reports that a bomb has gone off near the city center, about 3 miles from you. The first responding truck company, per protocol, activated its radiation detector, and it shows a high level of radioactivity. They have established a cordon around the site and report that there seem to be about 50 blast victims, but everyone in the downtown area seems to have already heard about the radiation and is panicked.

The news stations report that a “radioactive device” has been detonated in the city.

You are in communication with the incident commander, the EMT fire department lieutenant commanding the first fire truck. He states that he is having difficulty getting other units to the scene due to the chaos.

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NATURAL DISASTER (LONG-TERM EFFECTS/HURRICANE)—INFRASTRUCTURE FAILED

A Category 5 hurricane directly hit your city 15 hours ago and “parked” over the area for several hours before continuing inland. There was little advance notice, since it took a sudden, unexpected turn into your city. You are at work in your hospital, EMS agency, or office.

All primary electrical, communications, water, and sewage systems are inoperable. Most back-up power has failed due to primary destruction from the winds or from flooding. It appears that in most of the populated areas, the only useable transportation is by boat. There is no entry to or exit from the area except by boat or helicopter.

Battery-operated radios are occasionally picking up reports from outside stations, but it seems that confusion reigns; no specific rescue plans are being announced.

Medical personnel have been bagging all ventilated patients for about 12 hours. Those on alternative ventilation not amendable to bagging (such as ECMO) are dead and have been placed in a room that is acting as a temporary morgue. (The odor is becoming intolerable in the surrounding area.)

Battery powered IV pumps have long stopped working and all drips are now being monitored by the nursing staff as best as possible. Blood bank refrigeration no longer functions, so frozen and refrigerated blood products have been compromised—as have refrigerated medications.

The pharmacy, central supply, the operating rooms, the emergency department, radiology and medical records have been flooded; all materials not transferred to upper
floors (after the elevators failed) have been lost. The only medications are those that were in the upper floor’s stock.

The temperature is about 105°F in patient rooms and 115°F in the hallways. The stairwell temperatures are higher. Humidity is about 100% and many areas do not have windows that can be opened (or broken open).

The last message that was received from a fire department boat that is acting as an ad hoc messenger service between the hospital and the outside is that they should expect no help in the “foreseeable future.”

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