Fight or Flight: The Ethics of Emergency Physician Disaster Response

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Most disaster plans depend on using emergency physicians, nurses, emergency department support staff, and out-of-hospital personnel to maintain the health care system's front line during crises that involve personal risk to themselves or their families. Planners automatically assume that emergency health care workers will respond. However, we need to ask: Should they, and will they, work rather than flee?

The answer involves basic moral and personal issues. This article identifies and examines the factors that influence health care workers' decisions in these situations. After reviewing physicians' response to past disasters and epidemics, we evaluate how much danger they actually faced. Next, we examine guidelines from medical professional organizations about physicians' duty to provide care despite personal risks, although we acknowledge that individuals will interpret and apply professional expectations and norms according to their own situation and values.

The article goes on to articulate moral arguments for a duty to treat during disasters and social crises, as well as moral reasons that may limit or override such a duty. How fear influences behavior is examined, as are the institutional and social measures that can be taken to control fear and to encourage health professionals to provide treatment in crisis situations. Finally, the article emphasizes the importance of effective risk communication in enabling health care professionals and the public to make informed and defensible decisions during disasters.

We conclude that the decision to stay or leave will ultimately depend on individuals' risk assessment and their value systems. Preparations for the next pandemic or disaster should include policies that encourage emergency physicians, who are inevitably among those at highest risk, to "stay and fight." [Ann Emerg Med. 2008;51:345-353.]

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INTRODUCTION

As emergency physicians, nurses, and other health care professionals prepare for disasters that involve personal risk, they face basic moral and personal issues: Should they, and will they, work rather than flee?

The participation of frontline health care providers will be essential to maintain the functioning of the health care system during crises. Although most disaster plans discuss strategies to use these professionals most effectively, we first need to answer 3 questions: If providers are at risk, should they stay and treat patients? Will they choose to stay? And how will ethics and other factors affect their decision?

These are urgent questions. Crises such as widespread natural and manmade disasters, wars, and life-threatening epidemics occur on a disturbingly regular basis. As we prepare for the next pandemic or other disaster, we must consider whether emergency medicine's health care professionals will come to work when they or their families are endangered.

To do this, we will look first to recent history to see how much danger health care professionals have confronted. Reviewing how our colleagues behaved in disasters may help us predict their actions during future crises. We will then examine ethical and social reasons why health care professionals should

stay to treat patients, even if they themselves are at risk, as well as reasons why they may choose not to work.

Next, we will review the values and external factors, including input from the media and our peers, that emergency health care workers may use to decide about the amount of acceptable risk. We will discuss individuals' perceptions of risk levels and the thought processes that lead providers to evaluate risks incorrectly. Finally, we will propose risk communication as a method to enhance the participation of both health care professionals and nonprofessional support personnel during disasters.

ARE THERE CRISES IN OUR FUTURE?

History suggests that pandemics and other crises that pose risks to health care professionals will occur periodically, despite the best efforts of modern medicine. Many scientists argue that it is only a matter of time until the next influenza pandemic occurs.[1] Outbreaks may stem from variations of known diseases, such as with the influenza virus, or from newly recognized pathogens, such as Legionnaire's disease, HIV/AIDS, and Hantavirus. Because of their potentially high mortality rates, uncertain modes of transmission, and possibly ineffective protective measures and equipment, these and other infectious diseases generate immense fear among both the general population and health care workers.

Infectious disease risks are an unavoidable result of caring for patients in emergency medicine because many of those infected do not manifest typical signs or symptoms of their diseases. More than 15 types of airborne infections have been transmitted to health care workers, including tuberculosis, varicella, measles, influenza, and respiratory syncytial virus. These cause significant morbidity and occasional mortality.[2] The recent severe acute respiratory syndrome (SARS) outbreak, for example, claimed the lives of many health care workers, including that of Carlo Urbani, the World Health Organization physician who investigated the initial outbreak and raised worldwide alarm.[3]

In our global society with rapid international travel, traditional public health measures such as quarantine and isolation may not contain many identified illnesses. The high-profile case of a US lawyer who flew commercially to Europe with presumed extensively-drug-resistant tuberculosis is a case in point.[4] Extensively-drug-resistant tuberculosis now has been reported in 17 countries, including 4% of all tuberculosis cases in the United States.[5]

Emergency physicians, nurses, and emergency medical services (EMS) personnel have often been the first source for medical treatment not only when pandemic or unknown infectious diseases appear but also during bioterrorism threats, such as the 2001 anthrax cases. Historically, bioterrorism events have been localized, resulting in few illnesses and deaths. Yet, unlike most natural disasters, they engender widespread fear and, as with pandemics, may cause health care workers to consider their own risks. Without these first responders, social stability could deteriorate as the public learns that health care workers are abandoning their professional roles. Thus, how health care workers respond during a crisis may have broad social consequences and so must be an element of any comprehensive disaster planning strategy.

WILL THEY STAY? HISTORICAL PRECEDENTS

Will physicians stay at their jobs in the face of personal risk? That is unclear, at least to US bioterrorism experts, who have little confidence in health care professionals' willingness to remain at work in the face of danger. For example, military and public health strategists designed 2 pre–September 11 bioterrorism simulation exercises, "TOPOFF" (plague) and "Dark Winter" (smallpox), with the assumption that most health professionals would not report to work if faced with a high risk of infection.[6] A pre–September 11 survey of all of Hawaii's licensed physicians and nurses suggested that, although most would stay and work after a natural disaster, only about half of each group would remain during an epidemic threat.[7] In a more recent survey of 6,428 health care workers in New York City, willingness to work during a disaster varied with the type of event, ranging from a high of 84% during a mass casualty incident to a low of 48% during a SARS outbreak.[8] A review of the historical record shows that, although many physicians have fled, many others have chosen to stay at their jobs despite great personal danger.

When the Antonine Plague struck Rome in the second century CE, Galen, physician to Emperor Marcus Aurelius and the father of Western medicine, fled for his life. Once safely away from the city, he feared that the emperor would drag him back in chains for his cowardice. Ashamed, he later wrote elaborate excuses and apologies for his actions.[9] Other physicians acted more courageously in caring for plague victims. Thucydides wrote that when the Plague of Athens struck in the fifth century BCE during the Peloponnesian War, "Physicians . . . died themselves the most thickly, as they visited the sick most often."[10] Between one third and one half of Europe's population succumbed to the Black Death (*Yersinia pestis*), which first struck in the 14th century and returned intermittently until the 17th century. So many physicians fled that some municipalities appointed specific "pest-doctors," who were contractually obligated to remain during epidemics; other areas were forced to enact laws forbidding physicians to leave during epidemics.[11]

When the Great Plague struck London from 1665 to 1666, Sydenham (of "Chorea" fame) and a few others fled, but many more, such as Glisson (of the "Capsule") and Wharton (of the "Duct"), stayed. A lesser-known physician, William Boghurst, stayed to treat his patients, writing: "Every man that undertakes to bee [sic] of a profession or takes upon himself an office must take all parts of it, the good and the evil, the pleasure and the pain, the profit and the inconveniences all together and not pick and choose; for Ministers must preach, Captains must fight and Physicians attend upon the sick."[12] Similarly, when the dreaded yellow fever struck Philadelphia in 1773, Dr. Benjamin Rush, a prominent physician and a signer of the Declaration of Independence, wrote to his wife, "It would be as much your

duty not to desert me in that situation, as it is mine not to desert my patients."[13] Likewise, in 1918, physicians stayed at their jobs during the great influenza pandemic that followed World War I, and many perished.[14]

During the 1980s and 1990s, some physicians refused to treat patients afflicted with HIV/AIDS because of the social stigma and the medical risks attached to this disease that, at the time, was uniformly fatal.[15] Yet, when a new illness (ultimately found to be the previously unknown Hantavirus) began killing people on New Mexico's Navaho reservation, emergency physicians, among others, continued to treat patients despite the risks.[16] And when SARS struck Asia and Canada in the early 2000s, most physicians and other health care professionals stayed to treat their patients.[17]

MUST PHYSICIANS STAY AND TREAT PATIENTS? PROFESSIONAL GUIDELINES

In deciding how to respond to a health care crisis, emergency physicians may seek guidance from various general physician and specific emergency physician codes of conduct.

Inspired by Thomas Percival, the American Medical Association's (AMA) first Code of Medical Ethics, published in 1847, was visionary in addressing issues of personal risk when rendering service during epidemics. In fact, the AMA was the first to state boldly that ". . . when pestilence prevails, it is [physicians'] duty to face the danger, and continue their labors for the alleviation of suffering, even at the jeopardy of their own lives."[18]

This strong and largely unprecedented statement helped formalize a sense of physician duty that was sustained until the 1950s and 1960s, when, as the domestic threats of smallpox, polio, and related epidemics dissipated, such heroic statements vanished from the AMA Code.[13,19] Decades later, the HIV threat motivated changes in the code that were less inspired. In 1986, language was added suggesting that treating HIV-positive patients was required only if the physician was "emotionally able to do so."[20] This self-serving stance was ridiculed, however, and within 6 months the AMA approved a revised statement: "A physician may not ethically refuse to treat a patient whose condition is within the physician's current realm of competence solely because the patient is seropositive."[13]

More recently, the events of September 11, 2001, and the subsequent anthrax scare ushered in the AMA's new "Social Contract with Humanity," including a Declaration of Professional Responsibility that contains a statement on personal risk reminiscent of the AMA's 1847 Code: "We, the members of the world community of physicians, solemnly commit ourselves to . . . apply our knowledge and skills when needed, though doing so may put us at risk."[21]

Of course, all physicians do not subscribe to the AMA Code of Ethics, and many emergency physicians rely instead on the American College of Emergency Physicians' (ACEP) Code of Ethics. Developed in 1996, the ACEP Code of Ethics specifically addresses a commitment to open access to all who seek emergency services. The first 2, and arguably most important, of the *Principles of Ethics for Emergency Physicians* read, "Emergency physicians shall . . . embrace patient welfare as their primary professional responsibility . . . [and] . . . respond promptly and expertly, without prejudice or partiality, to the need for emergency medical care."[22]

These principles underscore an emergency physician's responsibility to put patient welfare first and to treat all, regardless of their presenting problem. Such principles from organized emergency medicine may have helped inspire more patient-centered versions of the AMA Code. The 2001 preamble to the AMA Code, for example, states that "a physician must recognize responsibility to patients first and foremost, as well as to society, to other health professionals, and to self."[23,24]

Ethics codes of the Society for Academic Emergency Medicine, the Emergency Medical Residents' Association, and the Emergency Nurses' Association do not directly address this issue.

WILL THEY STAY? REASONS AND CHOICES

Historical precedents and professional guidelines are instructive, but they do not resolve the question of how emergency physicians should behave when patients are dying but their own lives, and those of their families, are also at risk. To answer this question, we must also examine a variety of moral reasons that have been offered to justify a decision either to report to work or to stay away.

For many physicians, personal religious values reinforce professional dicta and motivate them to care for patients during epidemics. Their faith also helps them cope with the accompanying stress.[25] Historically, many physicians who cared for plague victims did so "not to conform to professional norms, but out of a sense of Christian charity and for personal salvation."[13]

Emergency physicians and other health care workers may also be persuaded to remain at their posts during a pandemic or other disaster by the urgent medical needs of large numbers of gravely ill or injured patients. They may recognize that their unique professional skills and expertise are essential for an effective response, to provide urgently needed care, and thereby to secure the great benefits of preservation of life, restoration of function, and relief of suffering for these patients. Emergency physicians may view their efforts to secure these benefits, despite personal risks, as required by their professional duty of beneficence, that is, their duty to act in the best interests of those in need of care.

Emergency physicians may also acknowledge a debt of gratitude for the support that society has provided to them in their professional education and practice. Public funds subsidize the high cost of medical education in both public and private medical schools, and patients in teaching institutions permit medical students and residents to participate in their care. Society also grants to physicians an exclusive right to practice medicine, a high degree of professional autonomy, and a right to regulate the profession of medicine. In return for these social

subsidies, rights, and privileges, emergency physicians may recognize a duty to society to exercise their special skills when society needs them most, that is, in a severe pandemic or other medical disaster.

Emergency physicians may also perceive a duty to their professional colleagues to accept a fair share of the significant risks of caring for patients during a disaster.[26] If a substantial number of emergency physicians choose not to report to work in such a crisis, their colleagues who do report will bear a much greater burden, in hours worked, in stress and isolation, and in personal risk to health. The choice not to work thus imposes an unfair burden on one's coworkers. It can be viewed as an abandonment of both colleagues and patients in a time of great need.

For all of the above reasons—the great needs of patients, the special expertise of health care professionals, the professional duty of beneficence, the special societal support given to health care professionals, and the duty to accept a fair share of workplace risks—we are persuaded that there is a prima facie moral duty to work in medical disasters and at other times of great social need. By saying that this duty is "prima facie," we acknowledge that it is a significant, but not an absolute, moral duty. We recognize, in other words, that this moral duty to work during a disaster may, in certain circumstances, be overridden by other professional and personal duties or rights.

We believe that there are 2 main reasons why emergency physicians and other health care workers may not be convinced that there is a special duty to work during a pandemic or other medical disaster. They might claim, first of all, that they have a conflict of duties, with their duty to work in conflict with their duty to provide for their family. Consider, for example, a single-mother emergency physician or emergency nurse whose 3 young children are home when schools close during a pandemic. Must this person report to work even if no one is available to care for her children? If other professionals in the ED are able to care for pandemic patients, perhaps the claims of these young children on their mother's time are stronger than her duty to report to work.

Second, health care professionals might claim that they have a right to protect themselves from grave risks. The strength of this claim obviously depends on how great the risk to health care workers will be during any specific disaster. Yet history shows that accurate information may not be available immediately, will change over time, and may not be known with confidence until the crisis passes. If, for example, an epidemic disease is easily transmissible by casual contact and the case-fatality rate is initially considered to be 50%, would health care workers be duty-bound to accept that risk?[27] Health care professionals arguably are not required to assume suicidal risks to care for patients, but there appears to be no uncontroversial way to establish a threshold at which risk acceptance becomes a duty.

Some may appeal to the concept of professionalism to ground a duty to provide care in a disaster situation. Yet an appeal to professionalism is problematic because physicians have varying and inconsistent definitions of the term. In view of the vagueness of the concept of professionalism, it cannot shed much light on this issue. An appeal to virtue ethics typically suggests that physicians should practice self-effacement, placing their patients' interests ahead of their own.[28] By extension, this means placing their duty to patients above their duty to family members and, to some extent, above even their own safety. We recognize, however, that an appeal to moral duties may not be persuasive to many health care workers during a pandemic. When personal risks to life and health are grave, at least some emergency physicians and other health professionals are likely to choose protection of self and family over provision of care.

We turn now to an examination of how health professionals assess risks to their own health and well-being.

WILL THEY STAY? RISK ASSESSMENT AND RISK REDUCTION

Health care workers are comfortable with a certain level of risk in their jobs. They routinely care for infected patients, in part because they have experience with the consequences and find them acceptable. The discomfort of an upper respiratory or gastrointestinal illness acquired from patients is well known to emergency physicians. Observing patients dying from their disease is also a common experience and unlikely to trigger fear. However, the rumor that a colleague has died from something he or she contracted at work is different. At its heart, the question of whether physicians will report to and remain at work is really about the pivotal point when the perception of risk overwhelms professional values and duties. Morally speaking, when does the right to protect oneself from grave risks outweigh the duty to care for patients in need?

However noble it seems to appeal to values, religion, virtues, professionalism, and ethical theory, fear, the "apprehensive feeling toward anything regarded as a source of danger," often determines people's actions in crises that encompass significant risk, such as during epidemics. Health care workers' fears when dealing with contagion may be due to many things: an unknown pathogen or mode of transmission, questions about the adequacy of personal protection, lack of effective treatment, the disease's lethality, and the possibility of transmitting the infection to loved ones. During the SARS epidemic in Toronto, most physicians stayed at their posts, but some acknowledged that their fear of personal risk made them stay away, saying "I didn't sign up for this," and "They don't pay me enough to take this kind of risk."[17] During the SARS epidemic in Vietnam and Hong Kong, although most physicians stayed at work, similar fears among health care workers had some hospitals working with half the usual staff.[29] In the sometimes risky chaos of 2005's Hurricane Katrina, 75% of emergency physicians in the affected areas continued to treat patients at their hospitals for more than 1 week after the hurricane hit, and another 18% stayed for 5 to 7 days.[30]

Self-preservation and fear are powerful and useful human motivators. It would be untenable to argue that health care

professionals should respond regardless of the potential risks to self. One of the first rules of EMS providers, for example, is to establish scene safety and thus prevent the responder from becoming another patient. Many EMS personnel ignored this rule in the face of the World Trade Center bombing—8 of the initial 400 who responded died; many have subsequently had related illnesses.[31] The question, then, is what should trigger designating a perceived risk as required, permissible, or foolhardy? Moreover, how can emergency physicians hope to identify these tipping points when, for example, the number of pandemic victims in their community is increasing, and rumors and hearsay outnumber facts and evidence?

A Hawaiian study lends credence to the way physicians measure personal risk. Although those with more knowledge were more likely, in general, to volunteer to help, their willingness diminished as the personal risk increased. For example, in a natural disaster, 83% said they would volunteer to help; after an explosion, 67%; after a chemical incident, 59%; after biological incident or contagious epidemic, 56%; and after a radiological event, just 52%. Responses from nurses approximated those of physicians.[7]

Fear is commonly thought of as a deterrent, but it can also act as a motivator. Physicians may fear the shame or social ostracism that results from abandoning patients. Emergency physicians, in particular, may feel a greater sense of responsibility and commitment to the community because of their unique skill set.[32] Health care personnel may also fear the shame of abandoning their colleagues in a time of crisis. For many emergency medicine professionals, the ED represents a place of mutual support, and they may naturally gravitate there in times of crisis. Should they abdicate their responsibilities—regardless of their reasons for doing so—they may not be able to return to work when the crisis passes and still command the same level of respect from their peers, their staff, their patients, and even themselves.

In the midst of a disaster, physicians will base their decision to report for duty at the hospital mostly on their perception of the consequences of their choice, for themselves, their families, patients, colleagues, and perhaps others. This complex calculation, encompassing elements of decision theory with intense psychological overtones, will also include their ability to have some control over those risks, their sense of duty, and their willingness to engage in a potentially dangerous activity.

In the early phase of a pandemic, awareness of the risk will be low and the behavior of health care professionals will be largely unaffected. In the late stages of a pandemic, reliable data on the risks and consequences of exposure will be available, as will plans and systems to mitigate those risks. The greatest challenge for health care workers will come during the middle phase of a pandemic, when accurate information is limited; the stakes, in potential benefits and risks, are high; and the potential outcome includes severe illness and death.

Additional cognitive biases that influence an individual's perceived risk include the ease or familiarity of an imagined outcome. Anecdotal stories and memories that support a preconceived notion reinforce an idea, regardless of its probability. Superficial similarities with an established course of events, generalizations, and emotional responses can also influence an individual's predictions about potential future outcomes. The factors affecting risk perception are undoubtedly complex, but they may be influenced by a phenomenon termed the "adaptive unconscious," an intuitive response in unfamiliar situations, often based on the attitudes and actions of those around us.[33] For example, generalized panic is expected if a "dirty bomb" (radiological hazard) explodes: many people will likely follow their neighbors' lead and rush toward health care facilities or out of the area, although the device will endanger only those in the very close vicinity. During crises with possible risks, people will not be able to assess their true risks until accurate information replaces what they imagine the risks to be.

As a group, emergency physicians, like EMS personnel, possess rescue personalities and are more likely to stay at their stations than others.[34,35] They may also ignore or downplay some risks because of group camaraderie, that is, a sense of loyalty and mutual regard when carrying out a difficult task together. This was certainly seen during the SARS epidemic, when health care professionals regarded patient care as part of their professional obligation, despite the perception of great personal risk.[17]

Societies and health care institutions can strengthen the moral grounds for a duty to care (and encourage health care professionals to embrace this duty) by embracing reciprocal duties to protect and support professionals in crisis situations. Such reciprocal duties could include guaranteeing access to appropriate personal protective equipment, prophylaxis for the inciting agent, family support, mental health support, and health care, if needed. By reducing the personal risks and addressing the basic needs of health care workers, these actions make it more likely that they will accept a responsibility to work during a pandemic or other disaster that poses a personal danger.

Some risks cited by emergency physicians and other health care professionals are either unfounded or highly exaggerated. One is a fear of legal sanctions. Physicians and most health care workers are not legally bound to treat patients during epidemics. Similarly, physicians and other health care professionals who are asked to assume new tasks during a disaster will not be required to demonstrate the same level of expertise as would be expected in normal circumstances.[27] However, some health care workers might break their contractual duties to their employers if they were to fail to report to work and, therefore, might be subject to adverse actions by their employers. They could even be fired, as were many New Orleans police officers who abandoned their posts during Hurricane Katrina.[36] Physicians who bravely cared for patients during recent risk-prone crises were called "heroes" not because their actions were generally expected or legally required but because they were beyond the call of duty.

RISK COMMUNICATION

In crises, worldwide communication systems, especially the Internet and the news media, play a large role in disseminating information—and in inspiring fear. During recent epidemics, information for clinicians was often more readily available through the media than from scientific or medical administrative sources. Biased media coverage may skew both the physician's and the population's estimation of risk.[37] Sensational stories inspire herd or group behavior, such as the run on ciprofloxacin after the anthrax cases and the hoarding of Tamiflu (Hoffman-La Roche, Inc, Nutley, NJ) after early news stories on avian influenza. Frequent "hype" and incomplete or false information has led to a conclusion that, in many cases, "epidemics rage more in the media than in reality."[14] Fear can also be augmented or allayed, depending on the public's perception that the government is being forthcoming and honest.[38] In China, for example, the government did not release information about the extent of the SARS outbreak until months after the initial events.

Risk communication is a process of effectively delivering information in situations that generate fear from health or environmental risks. Appropriate risk communication should provide sufficient, credible information to help the entire community accurately assess the risks in crisis situations. Effective risk communication can also enhance health care workers' participation during a pandemic or other risk-prone disaster. The audiences are the media (who can then more accurately disseminate information), health care professionals, staff, and the public. Although national health agencies have developed plans for risk communication at the national, regional, and local levels, few communities, hospitals, or local EMS agencies have such plans.[39-41]

People naturally exaggerate the risk of phenomena that are unknown or "dreaded," such as those with delayed, irreversible or manmade effects; that have new, unknown, or unobservable risks; or that are global. They also exaggerate the risks of phenomena "hyped" by the media. Conversely, people tend to play down risks with which they are familiar. In crises, risk communication helps health care workers and the public identify the actual risks to themselves and their loved ones and understand what others are doing and what they can do to avoid risk.[42]

Specific risk communication methods help fearful populations to hear, understand, and remember messages better, including delivering no more than 3 brief, clear messages in their order of importance; repeating key messages; and using clear visual aids or demonstrations to help clarify the information (video is available online at http://www.annemergmed.com).[43] Senior clinicians in the ED and EMS can use risk communication strategies and also model behavior at the bedside, for example, demonstrating their belief that the protective measures in place are effective. They can also articulate the essential role that members of the health care team play in responding to a disaster. Many nonprofessionals in Toronto's SARS epidemic failed to show up to work because they believed that they were not valued or given important information (S. H. Gray, oral communication, 2005).[44] This is paralleled by a recent study in Maryland, which found that 46% of the public health workers surveyed would be unlikely to report for work during a pandemic: one third said it was because they would not play an important role.[45] Crisis leaders should emphasize the vital role of all health care workers so that health care facilities and systems will have enough people available to function effectively.

Risk communicators also should limit their use of negative messages; these are always heard better and remembered longer than are positive messages. If a negative phrase is used, at least 3 positive statements should follow to balance it.[46,47] Successful risk communication also requires that a consistent, trusted spokesperson deliver the message. In fear-producing crises, people will not listen to the message unless they think that the person delivering the message cares about them, so the spokesperson must be seen as caring and empathetic, which listeners determine in the first 30 seconds after they begin speaking.[48] Spokespeople also must be seen as experts who are competent, honest, and dedicated. Risk communication should be implemented with multiple communication methods, including press releases; press conferences; public meetings, if safe; newspaper interviews; live interviews on radio, television, and the Internet; telephone banks; e-mail messages; Web sites; flyers; and fact sheets. Institutions and organizations should also use their public announcement systems, closed intranet systems, in-house television systems, and employee hotlines to communicate risks.[43]

Behavior modeling is a special type of risk communication. Senior emergency physicians should be the models for all emergency medicine personnel in reporting for work, doing their jobs, and not overreacting to the situation. Because emergency medicine personnel look to senior emergency physicians for their leadership and counsel, their absence says to the emergency medicine team, "Do not go to work; it's not safe." The fact that emergency physicians are at their posts may give them the moral authority to control their ED and its plight during a disaster and may factor into the entire team's "sway to stay."

The benefits of effective risk communication in crises include increased cooperation if resource allocation is necessary, increased likelihood that health care and support staff will remain on the job, and dissemination of the most current and accurate safety and health information to staff and the public. Properly communicating with health care colleagues, staff, and the public can replace irrational fear and panic with increased knowledge and decreased anxiety.

WILL WE HAVE ENOUGH EMERGENCY PHYSICIANS?

Will we have sufficient emergency physicians in crises that pose significant risk? Most emergency departments and acute care hospitals throughout the United States are running at

100% or more of their safe capacity, with no capability to "surge" in times of crisis, because of a dysfunctional health care system, which includes a lack of inpatient beds, on-call specialists, and primary care providers who are willing to see insured and uninsured patients in a timely manner. The lack of adequate routes into the medical care system has also resulted in an increase in ED use and an increased illness severity of the patients being treated in EDs.[49] Major disasters could quickly overwhelm the already limited excess capacity of the health care system. Emergency physicians would then confront difficult challenges in expanding capacity and in triaging patients.

Recent experiences with SARS, anthrax, and Hantavirus suggest we will have enough physicians who remain to treat patients, even if they are at significant risk. Whether this occurs during the next crisis may depend, in large measure, on preparing in advance to ameliorate risks to health care workers and on using methods to reduce stress by communicating effectively during and after the crisis. Public health departments, EMS agencies, hospitals, and EDs should develop plans to address foreseeable major health care crises. As this article has suggested, how emergency physicians respond to crises will depend on several factors, including their risk perception, willingness to accept risk, and ethical imperatives grounded in professional codes, personal values, and virtue.

CONCLUSIONS

Pandemics and other natural and manmade disasters will continue to occur with disturbing regularity. Microbes devastating populations halfway around the globe are, in reality, only a plane ride away. The current political climate and terrorist threats also demand that we recognize and prepare for a bioterrorist attack. Perhaps most worrisome is the simple fact that microbes have demonstrated again and again that our sophisticated technology and brainpower don't always equal their ability to adapt and flourish.

How will physicians respond when a catastrophe involving personal risk strikes? The moral backbone of medical professionals, a duty to put the needs of patients first, may be tested as health care providers weigh multiple factors to determine whether to stay and carry out their professional roles or to step back and decrease their risk. Professional medical associations can play a vital role here, in articulating the fundamental professional responsibilities of physicians. Medical educators can give physicians-in-training an understanding of and appreciation for these fundamental responsibilities. By focusing attention on the medical consequences of disasters, both professional societies and teachers can help physicians examine the scope and limits of their professional responsibility in these special circumstances. These normative and analytic tools are essential for making morally sound decisions about how to respond in specific crisis situations.

When disaster strikes, in addition to a strong moral foundation, physicians need good factual information. With incomplete information, providers may make decisions based on heated emotions and panic; their risk perception may be inaccurate. Providing the best current information about risks and opportunities to assist during a crisis will help health care professionals make defensible decisions in difficult circumstances.

The decision to stay or leave will ultimately depend on individuals' risk assessment and their value systems. Professional ethical statements about expected conduct establish important professional expectations and norms, but each individual will interpret and apply them according to his or her own situation and values. Recent historical precedent suggests that many physicians and other health care providers will courageously care for the sick and needy, even at great risk to themselves. Although some emergency physicians have worked in dangerous situations, most have not: nothing in day-to-day emergency medicine practice prepares emergency physicians for the great opportunities and challenges that will accompany a pandemic. Emergency physicians can, however, reflect on their professional and personal responsibilities in crisis situations, and public and private institutions can create plans for effective communication and care when a disaster strikes. By doing this before the next pandemic or disaster that includes personal risk to clinicians, we can encourage emergency physicians, who are inevitably among those at highest risk, to "stay and fight."

For the ACEP Ethics Committee.

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Supplementary Data

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