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Increasing the Quality of Care During Times of Disaster

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I. INTRODUCTION

A number of recent disasters in the United States highlight the importance of being prepared in the medical community when responding to disaster events. Natural disasters, terrorist attacks, and epidemics, all have the potential to put an enormous strain on the healthcare system. Given the devastation these types of events are capable of producing, the overall quality of healthcare is likely to decrease in response to a disaster event. In the wake of a disaster, resources are scarce or even non-existent, sources of communication may be limited, and physicians and other healthcare professionals are working under stressful conditions for which they have not received adequate training.

Although the public may be more forgiving of healthcare providers in times of crisis, a certain level of quality is still expected. If the level of care provided by the medical community in response to a disaster fails to meet the public's expectations, there can be significant legal implications. For example, the events at Memorial Medical Center in New Orleans following Hurricane

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Katrina in September 2005, demonstrates the potential legal ramifications when physicians and other healthcare professionals are not adequately prepared to deal with disaster events.

Irrespective of the legal consequences, studies show that a large percentage of healthcare professionals are willing to provide medical care in response to a disaster; however, most believe they are not properly prepared to do so.¹ Thus, the issue is: how do we ensure that the highest possible quality of care is provided in response to a disaster event? The answer lies in providing increased training and education to healthcare professionals on how to better respond in advance of any disaster event. Such preparation and training may include performing simulated disaster exercises and drills, and requiring periodic attendance at educational and training seminars on disaster response and preparedness.²

This article addresses some of the events that followed Hurricane Katrina and the legal issues faced by healthcare professionals when they provide care in response to a disaster. While various laws exist for protecting healthcare professionals who provide medical care in response to a disaster, the legal landscape is patchy at best. Although not an easy task, the medical community can work to mitigate the potential legal concerns by preparing physicians and

¹ THE COUNCIL ON MED. EDUC., EDUCATION IN DISASTER MEDICINE AND PUBLIC HEALTH PREPAREDNESS DURING MEDICAL SCHOOL AND RESIDENCY TRAINING 6 (2009), available at <http://www.ama-assn.org/ama1/pub/upload/mm/377/cme-report-15a-09.pdf> [hereinafter EDUCATION IN DISASTER MEDICINE].

² See Nikunj K. Chokshi et al., *Disaster Management Among Pediatric Surgeons: Preparedness, Training and Involvement*, 3 AM. J. DISASTER MED. 5, 8 (2008); see also Sten Lennquist, *Education and Training in Disaster Medicine*, 94 SCANDINAVIAN J. SURG. 300, 302 (2005), available at <http://www.fimnet.fi/sjs/articles/SJS42005-300.pdf>.

other healthcare providers to provide the best quality of care possible under the circumstances. This article discusses how the medical community can mitigate liability concerns by proactively preparing to provide care during disaster events, such as natural disasters, terrorist attacks, and epidemics. Through more focused training and education, the healthcare community can significantly increase the quality of care provided in response to disaster events.

II. THE EVENTS AT MEMORIAL MEDICAL CENTER

The story of what happened at Memorial Medical Center (Memorial) following Hurricane Katrina demonstrates the complications and potential liabilities that can arise when physicians and other healthcare professionals are inadequately prepared to provide healthcare during disasters, and the need for better disaster preparedness. In the aftermath of Hurricane Katrina, Memorial experienced more fatalities than any other hospital of comparable size.³ A handful of the deaths that occurred at Memorial led to a subsequent investigation and allegations of murder against Dr. Anna Pou, a cancer surgeon at Memorial, and two nurses who provided care to patients in the days following the storm.⁴

When Hurricane Katrina hit New Orleans in the early hours of Monday, August 29, 2005, more than 2,000 people took shelter from the storm at Memorial, including more than 200 patients.⁵ By Thursday, September 1, after losing all power, working with limited resources and under horrendous

³ Sheri Fink, *Strained by Katrina, a Hospital Faced Deadly Choices*, N.Y. TIMES, Aug. 30, 2009, at MM28, available at <http://www.nytimes.com/2009/08/30/magazine/30doctors.html?pagewanted=print>.

⁴ *Id.*; Kevin B. O'Reilly, *Grand Jury Clears Dr. Pou; Medicine Wants to Protect Future Disaster Responders*, AMNEWS, Aug. 13, 2007, <http://www.ama-assn.org/amednews/2007/08/13/prl20813.htm>.

⁵ Fink, *supra* note 3.

conditions, and receiving only sporadic help from the outside, Memorial physicians decided to give certain patients a combination of morphine and midazolam, a sedative.⁶ According to Dr. Pou, who took the lead in administering the drugs, the intention “was only to ‘help the patients that were having pain and sedate the patients who were anxious.’”⁷ All of the patients that received the morphine and midazolam cocktail, however, died at Memorial.⁸

For nearly two years following Hurricane Katrina, Dr. Pou fought to clear her name of any criminal wrongdoing, arguing that she only acted in the best interests of her patients under horrendous conditions.⁹ In July 2007, a grand jury refused to indict Dr. Pou on nine murder counts stemming from the events that occurred at Memorial following Hurricane Katrina; however, Dr. Pou continues to face civil liability.¹⁰ Since the events following Hurricane Katrina, Dr. Pou has noted that more focus must be placed on the issues that were brought to light during Hurricane Katrina, including “inadequate preparation and a systems failure at every level.”¹¹ Dr. Pou believes that in order to properly respond to disasters, civilian physicians should receive training similar to that given to military physicians, including disaster and battlefield triage and military evacuation protocols.¹² In addition, Dr. Pou emphasizes that hospitals should implement and

⁶ *Id.*; see also Susan Okie, M.D., *Dr. Pou and the Hurricane – Implications for Patient Care During Disasters*, 358 NEW ENG. J. MED. 1, 1 (2008).

⁷ Fink, *supra* note 3.

⁸ *Id.*

⁹ See O'Reilly, *supra* note 4.

¹⁰ *Id.*

¹¹ Anna Maria Pou, M.D., *Hurricane Katrina and Disaster Preparedness*, 358 NEW ENG. J. MED. 1524, 1524 (2008).

¹² *Id.*

test comprehensive disaster plans that are capable of being followed in a time of crisis.¹³

III. LIABILITY CONCERNS MAY LIMIT THE CARE PROVIDED DURING DISASTERS

The story of Dr. Pou demonstrates the extreme liability issues healthcare providers may face when they choose to provide care in response to disaster events. Physicians and other healthcare professionals may find themselves facing civil and criminal penalties arising from “claims of medical malpractice, discrimination, invasions of privacy, or violations of other state and federal statutes.”¹⁴ Such concerns over liability have the potential to deter healthcare professionals from providing much needed care in disaster situations. A 2006 survey by the American Public Health Association reported that “[a]lmost [70%] of [clinicians] answered that immunity from civil lawsuits would be an important (35.6%) or essential (33.8%) factor when considering whether to volunteer in an emergency.”¹⁵

Various state and federal statutes exist for limiting the liability for healthcare professionals in disaster situations; however, the liability protections are often described as “patchwork” in terms of when they apply and whom they protect.¹⁶ In response to a declared emergency “an array of state and federal

¹³ *Id.*

¹⁴ INST. OF MED., GUIDANCE FOR ESTABLISHING CRISIS STANDARDS OF CARE FOR USE IN DISASTER SITUATIONS: A LETTER REPORT 48 (2009) [hereinafter IOM REPORT]; *see also* Sharona Hoffman, *Responders' Responsibility: Liability and Immunity in Public Health Emergencies*, 96 GEO. L.J. 1913, 1925-37 (2008) (noting that in addition to negligence, physicians and healthcare professionals may also face potential liability for privacy and confidentiality violations, constitutional claims, and violations of various other federal and state statutes).

¹⁵ Hoffman, *supra* note 14, at 1917.

¹⁶ *See id.* at 1950; *see also* IOM REPORT, *supra* note 14, at 49.

liability protections exist for providers—particularly volunteers and government entities and officials acting in their official duties—who act in good faith and without willful misconduct, gross negligence, or recklessness.”¹⁷ Paid healthcare providers, however, are largely unprotected from liability under state and federal statutes.¹⁸ Yet, as the likely first responders, paid healthcare professionals are the most vulnerable to liability in disaster situations.¹⁹ Thus, the “existing patchwork of liability protections can complicate planning and response efforts and deter emergency response participation.”²⁰

Federal, state, and even many local governments are working on ways to address and deal with liability issues in disaster situations. In the wake of Hurricane Katrina and the subsequent charges levied against Dr. Pou, Louisiana passed a number of statutes addressing the liability of healthcare professionals in times of disaster.²¹ In addition, the Institute of Medicine recently convened a “committee to develop guidance that state and local public health officials and health-sector agencies and institutions can use to establish and implement standards of care that should apply in disaster situations—both naturally occurring and manmade—under scarce resource conditions.”²² The apparent goal of these statutes and the Institute of Medicine report is for the legal system to acknowledge the need for modified medical standards during disaster events by

¹⁷ IOM REPORT, *supra* note 14, at 48.

¹⁸ Hoffman, *supra* note 14, at 1953.

¹⁹ *Id.*

²⁰ IOM REPORT, *supra* note 14, at 49.

²¹ See S. 301, 2008 Reg. Sess. (La. 2008); S. 330, 2008 Reg. Sess. (La. 2008); see also Tammy Worth, *Disaster Legislation Shields Healthcare Workers in Louisiana*, 108 AM. J. NURSING 20, 20 (2008), available at <http://www.nursingcenter.com/pdf.asp?AID=818847>.

²² IOM REPORT, *supra* note 14, at 1.

allowing for altered legal standards of care during such events.²³ Efforts to protect healthcare professionals providing care in times of disaster are only just beginning in most states. Thus, the medical community must do its own part to try to limit liability concerns by focusing on improving the quality of care provided in the wake of a disaster.

IV. HEALTHCARE PROFESSIONALS ARE INADEQUATELY PREPARED TO HANDLE DISASTER EVENTS

Currently, most healthcare professionals are inadequately prepared to deal with disaster events. The American Medical Association (AMA) and even the federal government have attempted over the years to encourage, and in some cases even fund, disaster medicine and public health preparedness, education, and training. For example, in 2003, the AMA began working on a “national education and training initiative called the National Disaster Life Support Program (NDLS) to provide physicians, medical students, other health professionals, and other emergency responders with a fundamental understanding and working knowledge of their integrated roles and responsibilities in disaster management and response efforts.”²⁴ Despite these efforts, reports continue to show that the current medical school curriculum related to disaster medicine and public health preparedness is insufficient.²⁵

The disaster preparedness curriculum in medical schools and in other healthcare programs is spotty, and most recent medical school graduates are

²³ See *id.* at 46-50; see also Worth, *supra* note 21.

²⁴ EDUCATION IN DISASTER MEDICINE, *supra* note 1, at 3-4.

²⁵ See *id.* at 6; see also Christopher T. Born, M.D. et al., *Disasters and Mass Casualties: I. General Principles of Response and Management*, 15 J. AM. ACAD. ORTHOPAEDIC SURGEONS 388, 388 (2007) (“There is no provision in medical school or during residency training in the unique demands and approaches required for the medical care of mass casualties.”).

wholly unprepared to deal with disaster situations on the scale of the September 11 terrorist attacks or Hurricane Katrina.²⁶ In a recent survey, almost half of the medical school students surveyed stated that they are inadequately prepared during medical school to respond to disaster events.²⁷ In another survey, 96% of medical students stated they were willing to provide care during a disaster event, yet only 17% of those students actually believed they received the appropriate training and education during medical school to do so.²⁸

Based on the events at Memorial in the wake of Hurricane Katrina, it is safe to say that not only are medical students unprepared to deal with disaster events, but so too are experienced healthcare professionals. “Disaster planning in most hospitals is rudimentary at best and is frequently geared to the minimal passing requirement standards as determined by the . . . government and the Joint Commission on Accreditation of Healthcare Organizations.”²⁹ For example, a critical component to managing and providing healthcare during a disaster is triage, which is “the prioritizing of patients according to injury severity and the need for immediate care.”³⁰ Yet, most healthcare professionals have neither triage experience nor are they otherwise trained to perform patient triage.³¹ In one survey of pediatric surgeons, 77% of respondents stated they would respond in a disaster, but only 24% “felt ‘definitely’ prepared to respond.”³²

²⁶ EDUCATION IN DISASTER MEDICINE, *supra* note 1, at 6.

²⁷ *Id.*

²⁸ *Id.*

²⁹ Born et al., *supra* note 25, at 388-89.

³⁰ *Id.* at 389.

³¹ *Id.*

³² Chokshi et al., *supra* note 2, at 5, 8 (a high percentage of respondents also stated that they needed more training in the area of disaster response and management).

V. HOW TO IMPROVE THE QUALITY OF CARE PROVIDED
DURING DISASTER EVENTS

In general, healthcare professionals with prior disaster response experience, prior military service experience, or are in a leadership role in their everyday job, are more prepared for disaster events.³³ Thus, in order to improve the quality of care provided in response to a disaster event, it is necessary for healthcare professionals to receive more extensive and focused training and education in the area of disaster response.

Training and education are crucial steps in preparing healthcare professionals to respond to disaster events.³⁴ Education in the form of attendance at conferences and seminars focusing on disaster response and management can be an effective tool.³⁵ Individuals who attended national disaster training meetings felt three times more prepared than those healthcare professionals who had not participated in such training.³⁶ Thus, more participation in such programs can be beneficial in preparing healthcare professionals for disasters.³⁷

Because large-scale disasters are uncommon, real world experience with disaster response is limited. Training in the form of simulated disaster drills and exercises is critical in teaching healthcare professionals how to respond properly during disaster events.³⁸ Such training “must be based on simulated situations,

³³ *Id.* at 8.

³⁴ Born et al., *supra* note 25, at 395 (“Commitment in the form of education, training, and interdisciplinary communication . . . is the key to an effective medical response.”).

³⁵ See Chokshi et al., *supra* note 2, at 8.

³⁶ *Id.*

³⁷ See *id.* (noting that only 14% percent of respondents had attended national disaster training programs).

³⁸ Lennquist, *supra* note 2, at 302.

employing a wide array of mock casualties, simulators and educational tools.”³⁹

It is necessary that the simulation be as close to a real life disaster event as possible in order to be effective.⁴⁰ Thus, for example, the exercises should include a realistic consumption of time, resources, personnel, and supplies as would be present in an actual disaster.⁴¹

At a minimum, training should include procedures for the coordination of staff, resources and supplies, patient triage, palliative care, and evacuation procedures.⁴² It is logical that proper coordination and training of healthcare professionals will inform those involved of the role they will play during a disaster event, and limit the amount of chaos that is likely to be present during such an event. Coordination of resources and supplies will also help physicians and staff to work more effectively and efficiently and allocate limited resources to those patients in need.⁴³ As noted, such coordination should not simply be planned and communicated to healthcare professionals, but also practiced in a realistic setting. Without training, “or with erratic and insufficient training, the possibility of achieving an optimal outcome with regard to survival and health in major accidents and disasters is significantly reduced.”⁴⁴

Finally, disaster response training must be evaluated to maximize its effectiveness. Healthcare professionals participating in such training need to

³⁹ *Id.*

⁴⁰ *Id.* at 302-303; *see also* Chokshi et al., *supra* note 2, at 8 (noting that a fairly high percentage of physicians with previous simulated disaster training feel “ill-prepared,” but still twice as likely to feel prepared compared with professionals with no simulated disaster training).

⁴¹ Lennquist, *supra* note 2, at 302-303.

⁴² *See* IOM Report, *supra* note 14, at 58-59.

⁴³ *Id.* at 68.

⁴⁴ Lennquist, *supra* note 2, at 300.

understand the consequences of the decisions they make when providing care in disaster situations in order to learn the proper response.⁴⁵ In all fields of medicine, constructive evaluation is critical to developing proper skills and techniques.⁴⁶ Requiring constructive and thorough evaluation in disaster response training will help prepare healthcare professionals for the realistic possibility that during a disaster, with limited resources, some consequences are not preventable regardless of the time and effort put forth.

One suggested example of how to conduct such training and evaluation is through the use of charts and illustrations attached to mock patients.⁴⁷ The charts allow the instructor to continuously indicate changes to the patient's condition according to the interventions and procedures, or lack thereof that have been performed by the trainees.⁴⁸ This is accomplished by moving the markers on the chart to reflect any changes to the patient's condition based on the trainee's course of treatment.⁴⁹ If there is a failure to treat or inappropriate treatment is given to the patient, the changes to the patient's condition will be charted to illustrate the patient's deteriorating condition, which may eventually result in death.⁵⁰ Thus, for example, a patient presenting "with internal bleeding and clinical signs of shock, if left untreated, should not remain in the same circulatory condition but instead show progressive circulatory impairment and finally die."⁵¹

⁴⁵ *Id.* at 303.

⁴⁶ *Id.* at 306.

⁴⁷ *Id.* at 303.

⁴⁸ *Id.* at 303-04.

⁴⁹ Lennquist, *supra* note 2, at 304.

⁵⁰ *Id.*

⁵¹ *Id.* at 303.

If death occurs in that situation, the instructor may flag it as a preventable death.⁵²

By working through the possible consequences of their decisions, the trainees will become better decisions makers when providing care in response to disaster events.⁵³

VI. CONCLUSION

Recent events, such as terrorist attacks, natural disasters, and epidemics, highlight the need for more extensive preparation by healthcare professionals to be able to provide high quality healthcare in response to disaster events. Research shows that most healthcare professionals feel unprepared to deal with disasters due to lack of education and training focused on disaster response. Given the potential liability issues that can arise when care is provided in the wake of a disaster, it is prudent for healthcare professionals to focus on disaster response and preparedness. The medical community can take steps to try to decrease the potential liability concerns by placing more emphasis on training and education, including requiring attendance by healthcare professionals at seminars and participation in simulated disaster drills and exercises. Such training and education will give healthcare professionals the tools necessary in order to effectively and efficiently respond in the event of a disaster, and thereby allowing such professionals to provide the best care possible under difficult circumstances.

⁵² *See id.*

⁵³ *Id.*