Standard of Care During a Crisis: What Should a Surgeon Know (and Do)?

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Numerous catastrophic events in the 21st century have motivated renewed discussion regarding whether the traditional definition of standard of care appropriately applies to clinical decision-making in crisis scenarios. Some authorities have proposed the adoption of a crisis standard of care, which refines physician responsibilities during a crisis event in accordance with population health principles. However, this proposal is fraught with controversy, and current medical and legal scholarship on this topic remains complex and conflicted. To clarify these points and provide practicing neurosurgeons with guidance, we provide a review of current literature on the evolving definitions of crisis standard of care. Additionally, we provide an assessment of the implications of a crisis standard of care, as it relates to legal liability, clinical ethics, and neurosurgical practice.

KEY WORDS: Standard of care, Crisis, Medicolegal, Mass casualty, Natural disaster, Pandemic

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A number of recent catastrophic events have placed unparalleled demands on medical resources and physician efforts. These events include mass casualties (September 11 attacks and 2017 Las Vegas shooting), natural disasters (Hurricane Katrina), and pandemics (COVID-19), and they hold the potential to overwhelm the surge capacities of individual healthcare systems. Additionally, the rapid evolution of social media and the proliferation of online journalism outlets place physicians under increased public scrutiny when responding to these events. As such, medical and legal experts have devoted renewed efforts to examining the definitions of standard of care, and how these definitions apply to physicians responding to catastrophic events. Specifically, some authorities argue that crisis standards of care, which account for the exceptional burdens of a crisis scenario, should replace the traditional definition of standard of care in select circumstances. Conversely, others argue that the established definition of standard of care is sufficient, as it is defined in accordance with a physician acting in the same or similar circumstances, regardless of what these circumstances are. These conflicting definitions can introduce ambiguity into medicolegal discourse, which can be problematic when litigating complex medical malpractice cases according to state-specific standards.

Clarifying this ambiguity is particularly relevant for the practice of neurosurgery. Neurosurgeons who provide emergency care are often required to make rapid treatment decisions of significant consequence for high-risk patients. Furthermore, management of neurosurgical pathology requires coordination of multiple resources, including highly specialized care teams and intraoperative technology. Whether healthcare systems are at surge capacity during a crisis, and whether appropriate resources for optimum care are available, can influence the calculus underlying treatment decisions. To this end, we present a review of the literature concerning the provision of health care during a catastrophic event, as it relates to the evolving definition of standard of care in crisis scenarios. We will discuss principles of surgeon liability, clinical ethics, and example legal policies and clinical scenarios that will help educate neurosurgeons when providing crisis care.

DEFINING STANDARD OF CARE

"Standard of care" has a medical and legal context. In medicine, standard of care traditionally refers to actions of diagnosis, treatment, or technique that a physician should generally follow for an individual patient's trauma, presentation, or illness.[1] This aligns with the working conception of standard of care among physicians, which encompasses actions that reasonable, similarly trained physicians would

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pursue, given the same or similar circumstances. This definition implicitly acknowledges that physicians cannot guarantee results, nor are they liable for errors of judgement, mistaken diagnoses, or an undesirable result, provided that they are acting as reasonable prudent physicians would.[1] It also assumes that medical training is standardized.[2] However, from a legal standpoint, standard of care can be defined in accordance with existing definitions of negligence, which consists of 4 elements: duty of care, breach of duty, causation, and damages.[3] In this context, a physician's breach of duty can imply a violation of standard of care. The nuances separating medical and legal definitions of standard of care become more nebulous when one considers that a combination of clinical guidelines and physician expert witness testimony contribute to evolving definitions of standard of care in individual cases.[4]

However, medical authorities have recently reconsidered what constitutes standard of care during catastrophic events.[5,6] Following the attacks in New York City on September 11, 2001, and subsequent high-profile anthrax attacks, the Department of Health and Human Services produced a white paper entitled, "Altered Standards of Care in Mass Casualty Events."[7] This review noted that "rather than doing everything possible to save every life, it will be necessary to allocate scarce resources in a different manner to save as many lives as possible," and that relevant bodies must "consider modification of Federal, State, and local laws and regulations that affect the delivery of health and medical care during a mass casualty event."[7] They sought to design an alternative definition of standard of care that appropriately accounts for the exigent circumstances of a catastrophic event, which was subsequently referred to as a "crisis standard of care."[5,7,8]

THE COMPLEXITIES OF "CRISIS STANDARD OF CARE"

It can be difficult to define crisis standard of care. Some argue that "because the legal standard of care is by definition fact specific … there is no single standard of care that is expected at all times, and thus there is no "altered" standard of care during an emergency."[9] However, the Institute of Medicine proposes that crisis standard of care can be defined as the optimal level of health and medical care that can be delivered during a catastrophic event.[10] It necessitates "a substantial change in usual healthcare operations and the level of care it is possible to deliver … justified by special circumstances," it is "formally declared by a state government," and this formal declaration "enables specific legal/regulatory powers and protections for healthcare providers in the necessary tasks of allocating and using scarce medical resources."[10] Recently, the COVID-19 pandemic has led individual states to adopt crisis standard of care plans, including Idaho and Alaska in September 2021. These plans include strategies for allocation of scarce resources, high-demand medications and treatments, and coordination of care at long-term care facilities.[11,12] Levels of capacity are divided into conventional, contingency, and crisis categories (according to demand). Specific recommendations include triage of severe traumatic brain injury patients (those with no motor response to painful stimulus) to noncritical care status and consideration of early transfer of critical pediatric neurotrauma cases to facilities with pediatric intensive care unit services.[12]

These policies reflect how crisis standard of care can mean prioritizing population goals of care over individual goals of care,[13] and a "shift in focus from the individual patient to optimizing outcomes for populations of patients in a scarce resource environment."[14] However, a population-based crisis standard of care may subject clinicians to a more stringent standard compared with the minimum legal standard of clinical care, because this argument conflates legal standards of clinical duty with the application of this duty to optimize resource stratification. These are fundamentally different ideals with socioeconomic implications that transcend the medical needs of a patient at a specific moment in time,[8] and they may impose an additional burden on physicians who must justify their clinical decisions in a legal setting. Recent analyses of care standards during the COVID-19 pandemic underscore these conflicting priorities.[15] Additionally, implementing population-based crisis standard of care has practical barriers, because the definition of "crisis" can vary according to circumstance,[5] and federal declaration of a given event as a "crisis" may be unreliable.[5] Therefore, we argue that the traditional definition of standard of care appropriately encompasses the actions of physicians during crises.

APPLICATIONS FOR THE PRACTICING NEUROSURGEON

Although a separate crisis standard of care may not be necessary to govern physician action during a crisis, we acknowledge that the circumstances of a clinical scenario can impact how care is rendered. The American Association of Neurological Surgeons Rules for Neurosurgical Medical/Legal Expert Opinion Services reference this, noting that "the neurosurgical expert witness shall recognize and correctly represent the full standard of neurosurgical care and shall with reasonable accuracy state whether a particular action was clearly within, clearly outside of, or *close to the margins* of the standard of neurosurgical care."[16] This reference to being "close to the margins" of the standard of care suggests that controversy can exist regarding what the standard of care is in a given clinical circumstance. By this rationale, the details of the case necessarily dictate the standard of care.

To further illustrate this point, we invite the reader to consider the following clinical vignette: a neurosurgeon is on call at a small rural community hospital when multiple victims of a mass shooting are brought to the emergency department, and several patients require a life-saving operation for cranial trauma. Optimal neurosurgical care would entail performance of these operations

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by a qualified neurosurgeon, in an emergent fashion, at a facility that has the necessary equipment and support staff to perform cranial trauma cases. However, in this circumstance, the quantity of available staff (even with backup), operating rooms, or equipment may not be sufficient to treat each patient in an emergent fashion. If the on-call neurosurgeon delayed operative management of some patients to accommodate their transfer to another facility, or to plan sequential surgeries, this would not be an unreasonable decision. We argue that this decision would meet the traditional standard of care (actions that a reasonable, similarly trained physician would pursue given the same or similar circumstances), which would render a distinct "crisis standard of care" superfluous.

LIABILITY AND ETHICS

Another argument for a crisis standard of care is concern for physician liability. Specifically, there is concern that if care in a crisis differs from care that would be rendered during typical conditions,[7,13,14,17] liability protections are incomplete,[9] and health care during a crisis may lead to unpredictable outcomes in postcare legal disputes.[17] However, Schultz and Annas argue that "no cases of liability claims filed against individual physicians [resulted] from provision of medical care during a declared disaster."[8] Furthermore, they note that the criminal proceedings against Dr Anna Pou, who was embroiled in controversy after providing emergency care during Hurricane Katrina, would not have been covered by any existing liability reforms.[8] If clear liability protections for physicians are lacking using a crisis standard of care, and if this standard is incompletely defined and implemented, it is possible that adopting a crisis standard of care may hinder the average physician's understanding of their duty and protections in a crisis scenario.

Nevertheless, it remains important to examine scenarios in which physicians may or may not be held liable for care rendered in a crisis. Good Samaritan statutes exist in certain states to protect physicians from criminal and civil penalties when providing care to victims outside of a healthcare setting.[18,19] Although these statutes may apply to off-duty physicians in crisis scenarios, they do not typically apply to physicians who are at work in a healthcare setting at the time of the emergency,[18,19] and it is unlikely that they would provide protection to on-duty physicians in crisis scenarios. Additionally, there is substantial variation in state law on similarly relevant topics, including protections for volunteers with formal medical training, crossing state lines to provide emergency care, and malpractice coverage in crisis scenarios. This confusion is not conducive to the introduction of additional laws that dictate standards of care for specific crisis circumstances.

Many advocates of a crisis standard of care rightly prioritize clinical ethics. Chang et al[13] identify the need for physicians to "respect ethical principles of beneficence, stewardship, equity, and trust" when providing care in a crisis, and the Institute of Medicine references the following ethical norms to serve as models for healthcare providers during disasters: fairness, duty to care, duty to steward resources, transparency, consistency, proportionality, and accountability.[10,17] We agree that these principles should drive all healthcare decisions, and they are consistent with the American Medical Association Code of Ethics.[20] The Code notes that "[a] physician shall, while caring for a patient, regard responsibility to the patient as paramount,"[20] and it advocates for the allocation of limited resources based on likelihood of greatest benefit, minimizing potential bias in provision of care, and making triage decisions based on medical need.[20] These tenets were developed and refined by physicians, and they are designed to portray how a reasonable physician, with the appropriate level of medical training, should approach clinical decisions. In essence, they encapsulate the traditional definition of standard of care.

CONCLUSION

The concept of standard of care is a foundational guide for clinical decision-making, and it is an essential concept in medical malpractice law. However, the notion of standard of care appears more ambiguous when a crisis scenario overwhelms the resources of a healthcare system, and the demand for care exceeds the capacity to provide it. Varying definitions of a crisis standard of care exist, but most focus on modifications to existing standards of care to accommodate resource scarcity, population health, and physician protection for prioritizing these principles. However, these efforts can create a complex series of responsibilities and standards that vary between states. We assert that the traditional definition of standard of care is a sufficient guide for crisis care, because it encompasses choices that a reasonable physician with a similar level of training would make in the same or similar circumstances.

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COMMENT

The authors of this paper believe that the generally accepted legal definition of the standard of care (what a reasonably prudent physician would do under the same or similar circumstances) adequately covers physician liability for decisions and actions taken during extraordinary emergency conditions when usual medical resources are overwhelmed, whether by disasters causing excessively large numbers of injuries or illnesses, or by destruction of medical facilities or operating capacity. Under these circumstances, the usual medical ethical dilemma is choosing altered triage criteria appropriate to the circumstances and limited resources, wherein some patients who might benefit from medical treatment are provided different, less, or no treatment, because of limited availability.

The authors reject the idea of devising special criteria for special crisis circumstances to lessen a physician's legal liability for providing or withholding care that would be considered below the standard of care under normal circumstances. They reason that the accepted legal definition's qualification "under the same or similar circumstances" is adequate protection for the physician, proportionately balances patient and physician risks, and ensures that "population health" does not lessen the primary focus on the interest of the individual patient. They also argue that crisis situations are too variable to formulate a simple directive that covers all possibilities without creating confusion.

The legal definition of standard of care does not shield a physician from agonizing or extraordinary decisions under crisis circumstances, or from later second-guessing by critics after the crisis decisions, but it may be the best by being the simplest solution to a complex ethical predicament.

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