

# When Pestilence Prevails...Physician Responsibilities in Epidemics

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## Abstract

The threat of bioterrorism, the emergence of the SARS epidemic, and a recent focus on professionalism among physicians, present a timely opportunity for a review of, and renewed commitment to, physician obligations to care for patients during epidemics. The professional obligation to care for contagious patients is part of a larger "duty to treat," which historically became accepted when 1) a risk of nosocomial infection was perceived, 2) an organized professional body existed to promote the duty, and 3) the public came to rely on the duty. Physicians' responses to epidemics from the Hippocratic era to the present suggests an evolving acceptance of the professional duty to treat contagious patients, reaching a long-held peak between 1847 and the 1950's. There has been some professional retrenchment against this duty to treat in the last 40 years but, we argue, conditions favoring acceptance of the duty are met today. A renewed embrace of physicians' duty to treat patients during epidemics, despite conditions of personal risk, might strengthen medicine's relationship with society, improve society's capacity to prepare for threats such as bioterrorism and new epidemics, and contribute to the development of a more robust and meaningful medical professionalism.

## Introduction

Recent events raise anew the threat of epidemic disease to society. The use of anthrax for bioterror and the outbreak of a new contagious disease, Severe Acute Respiratory Syndrome (SARS), provide an opportunity to reexamine and perhaps restore physicians' sense of duty to treat patients during epidemics as a core obligation of professionalism. Whether caused naturally or by an act of terrorism, epidemics can place physicians in the situation of caring for patients despite some, perhaps unquantifiable, infectious risk to themselves. The professional obligation to face this risk has been referred to as part of a larger "duty to treat" (Arras 1988; Daniels 1988). Contemporary ethical standards address physician duties in "emergency" situations and for some specific infections, but they have offered less guidance on the general issue of treating patients during epidemics. Indeed, the evolution of professional ethics in this regard suggests an historical waxing and waning of this particular professional duty to treat. A

critical reexamination of physician and societal responses to epidemics in the past can shed light on the appropriate contemporary obligations of physicians.

## Part I: History of the Duty to Treat in Epidemics

It is well known that physicians' historic behavior in epidemics has been erratic (Zuger and Miles 1987). However, lack of a consistent tradition does not mean that a coherent history does not exist. In fact, there are several evolving features of medical care that led gradually to professional acceptance of the duty to treat - and there are coherent, albeit short-sighted, reasons for its later decline. We propose that three features of medical care are necessary for physician acceptance of the duty to treat in epidemics: [1] physician recognition of infectious risk, [2] an organized professional identity, and [3] a public expectation of the duty. These three features are important for different reasons, which we will explore below. In brief, discussion of a duty to accept risk is meaningless in the absence of the perception of risk. Second, a coherent professional identity is necessary to separate professional duties from personal choices and thus to promote profession-wide acceptance of the duty (as distinct from an individual's personal moral or religious beliefs leading to assumption of a duty to treat). Finally, and most important, public expectation of the duty implies reliance on physicians to perform according to a social contract, for which physicians as a group are rewarded and, by extension, the breach of which is anticipated to lead to rescinding of professional prerogatives granted the group by society.<sup>1</sup>

For much of its history Western medicine had none, or only one, of these three features. Classical Greek and Roman physicians were probably unable to formulate a duty to treat potentially contagious patients. While Hippocrates and Scribonius Largus each address a general obligation to care for sick patients, including slaves and those who cannot pay, they do not mention infectious risk to physicians (Sharp 1988). The reason for this is probably that treating physicians did not perceive patients to be "infectious" (Pelling 1997; Geraghty and Wynia 2000). Thucydides alluded to the risks of care during the Peloponnesian War, "physicians...died themselves the most thickly, as they visited the sick most often," (Thucydides),

<sup>1</sup> One factor that might support acceptance of a duty to treat may be notable for its absence: it is not necessary that physicians be able to offer a cure to incur a duty to treat. For most of history, physicians could not offer curative therapies for epidemic diseases, yet there has been the possibility of alleviating suffering and preventing spread. These possibilities alone, as we shall see, have been enough to trigger a duty to treat.

but the Hippocratic notion of epidemics was based only on environmental factors and the individual constitutions of patients; there is not a single mention of person-to-person transmission of disease in Hippocrates' treatise, *Epidemics* (Hippocrates 1939). Thus, while some medical historians have argued persuasively that physicians in this ancient time lacked an organized profession to articulate shared duties (Jonsen 2000) in the absence of perceived infectious risk the point - in regard to a duty to treat contagious patients - is moot.

As contagion became a recognized threat, historians have documented that physician performance in the face of this risk was decidedly mixed. Throughout the plagues of Europe many physicians stayed with their patients (Amundsen 1977), but many others fled cities and avoided treating plague victims (Zuger and Miles 1987; Sharp 1988). Even medical heroes fled; both Galen and Sydenham famously fled plagues in their respective eras, following the prescription then commonly given to patients - *cito, longe, tarde*: "leave fast, go far, and return slowly" (Jonsen 2000). The important trend to note, in this otherwise erratic time, is that those who stayed, generally did so for religious reasons. (Sometimes they stayed for money. Though some contemporary chroniclers complained that no amount of money could prompt physicians to treat the ill, others note that quacks abounded, offering "cures" to the desperate (Amundsen 1977).) That is, the many physicians who cared for plague victims, often for free, did so not to conform to professional norms, but out of a sense of Christian charity and for personal salvation. John of Burgundy wrote a tractate on the plague (ca. 1365) concluding with, "I have composed and compiled this work not for a price but for your prayers, so that when anyone recovers from the diseases discussed above, he will effectively pray for me to our Lord God" (Amundsen 1977). Other physicians were hired specifically as "plague doctors" (Fox 1988), suggesting that the public also did not perceive a profession-wide duty for physicians to continue caring for patients during epidemics.

Very few doctors seem to have expressed any sense of profession-wide duties, but exceptions exist. At the Great Plague of London, in 1666, while many upper-class physicians fled with their rich patients, one humble but now much-quoted apothecary, William Boghurst, wrote that:

Every man that undertakes to be 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. (Jonsen 2000)

In time, Boghurst's noble sentiment, endorsing specific role-based obligations, would grow to attain widespread prominence.

In 1793, a Yellow Fever epidemic struck Philadelphia, prompting the American physician-statesman, Benjamin Rush to address a letter to his wife that describes the type

of contractual obligation gradually becoming attached to the doctor-patient relationship. If he were to become ill, he wrote, "it would be as much your duty not to desert me in that situation, as it is mine not to desert my patients" (Zuger and Miles 1987). This analogy to marriage - the physician-patient relationship as a contract, with an explicit vow of fidelity - was to become formalized in 1847 with the founding of the American Medical Association around a new *Code of Medical Ethics*.

### Duties in Codes

Codes of ethics are a key means of establishing professional identity, which both set and reflect appropriate patient and societal expectations of physicians as a group. Thus, the evolution of the duty to treat in epidemics as it appears in codes is of special interest.

The 1847 AMA *Code of Ethics* was the first nationally promulgated and widely accepted code of ethics for physicians (Baker, Caplan et al. 1999; Burns 1999). Written mainly by Isaac Hays and John Bell, it was largely based on Thomas Percival's *Medical Ethics*, (Percival 1803) which itself was heavily influenced by the writings of John Gregory and Thomas Gisborne (Jonsen 2000). But the AMA *Code* was revolutionary because it succeeded where others had failed: in setting profession-wide, explicit standards for ethical behavior. As Baker and colleagues note, "medicine's moral mandate, the duty of caring for the sick - which had been vested in the character and honor of the individual practitioner from the time of the Hippocratic Oath through the teachings of Bard, Gregory, and Rush - was now, for the first time ever, to be a collective rather than an individual responsibility" (Baker, Caplan et al. 1999). Hence, the advent of the AMA's Code - among its many effects - served formally to enshrine the potential for *professional* obligations, distinct from matters of personal choice, charity, or religion.

The 1847 AMA *Code* was organized by relationships: physician-patient, physician-physician, and physician-public. Each relationship was addressed as generating both duties and reciprocal rights. The third section, addressing physician-public relations, espoused a new obligation, not found in earlier English codes:

When pestilence prevails, it is [physicians'] duty to face the danger, and to continue their labors for the alleviation of suffering, even at the jeopardy of their own lives. (Baker, Caplan et al. 1999)

Remarkably, neither Percival nor the Royal College of Physician's ethical code, released in 1543 during a London Plague epidemic, had addressed physician responsibilities in epidemics. Thus, the new language of the AMA *Code* was groundbreaking, stark, and strict, especially since mere alleviation of suffering was recognized as the best possible outcome.

Finally, cementing acceptance of the duty to treat throughout the profession, Historian John Haller notes that both doctors and the public quickly became well aware of

the revolutionary nature of this Code, as "Doctors from Massachusetts to Texas drew from the code for innumerable speeches and lectures before their societies, graduating medical classes and public lyceums...[and some] enthusiastically claimed the code to be the most noble production of man since the Declaration of Independence" (Haller 1981).

As of 1847 therefore, all three features of medical care were clearly present for physicians to accept a duty to treat - risks were present and recognized, an organized body spoke for the entire profession, and the public was aware of the AMA's *Code*. Public reliance on physician adherence to this duty became firmly entrenched as this statement in the Code remained for 130 years and through 3 major revisions. It was even strengthened in 1912, when language was included to address financial compensation:

When an epidemic prevails, a physician must continue his labors for the alleviation of suffering people, without regard to the risk to his own health or to financial return. (Baker, Caplan et al. 1999)

Perhaps of greatest importance, in terms of strengthening public and physician expectations regarding the duty, is that this duty was widely recognized as being far from hypothetical. As one example, between 1920 and 1940 it was common for 10% or more of a new medical school class to develop clinical (that is, active) tuberculosis, from which many would succumb (Myers 1965; Sepkowitz 1994; Snider 1997). Among pulmonologists, having spent time as a patient in a tuberculosis sanatorium appears to have been a near-ubiquitous experience into the 1950s (Snider 1997). Through such experiences, and over many generations, public belief in physicians' duty to treat became quite strong. Though very recent (post-September 11, 2001) data are not yet available, even in 1991, 72% of Americans still believed in the "doctor's obligation to treat all sick people," which had been first established more than 140 years earlier (Roper 1991). The duty thus became an integral part of social expectations, forming an important component of the medical profession's social contract and stimulating, in return, public respect, admiration, and prestige for the medical profession.

#### **Autonomy, Antibiotics, and a Weakened Duty to Treat**

Two major factors appear to have led to a waning acceptance of the duty to treat potentially contagious patients in more recent years. First, as early as 1912 concerns about government and corporate intrusions into medical practice were on the rise (Stevens 1999) and would continue to build through the war years and numerous health reform battles (Campion 1984). In response to these concerns, language was first added to the 1912 AMA Code (which was also renamed the *Principles of Medical Ethics*) to make clear the AMA commitment to protecting professional autonomy. Into Chapter I, section 4, was inserted the simple phrase, "A physician is free to choose whom he will serve" (Baker, Caplan et al. 1999). This sentiment

remains, virtually unchanged, in the contemporary *Code*, and stands as a counterpoint to the professional duty to treat (Council on Ethical and Judicial Affairs 2002).

Second, by the 1950s the era of massive epidemics was perceived to be ending in America. The major remaining infectious epidemic of the time, polio, did not pose a significant risk to adults (Hyslop and DeJace 1992), while antibiotics and vaccines were revolutionizing medical practice. Even tuberculosis had become reliably treatable and physicians, for the most part, no longer perceived a significant risk of life-threatening infection during patient care (Fox 1989; Snider 1997). Hence, a duty to treat during epidemics could, and did, come to be seen as irrelevant to modern physicians.

Between 1912 and 1957, the *Principles* with its 48 sections and 5,000 words was also thought to have become cumbersome and inflexible (Campion 1984). In a massive revision, the 1957 edition shifted its organizational structure to 10 basic principles of only 500 words, followed by Reports and Opinions that were (and still are) intended to be interpretations of the Principles, addressing specific issues as they arise (Pearson, Buie et al. 1958; Campion 1984). Predictably for its time, with organized medicine feeling challenged by the potential power of health insurers and government, the 10 principles of 1957 strongly asserted physician autonomy and the sanctity of the individual patient-physician relationship and downplayed the profession's social obligations. In fact, the 1957 *Principles* contained a statement on professional autonomy that referred to a weaker duty to treat, using the term "should" instead of "must," and limiting it to ill-defined "emergencies" and situations of abandonment:

A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. (Pearson, Buie et al. 1958)

The 1957 Principles also contained a new Principle 10, endorsing physician "participation in activities which have the purpose of improving both the health and well-being of the individual and the community" (Baker, Caplan et al. 1999). According to a special issue of JAMA in 1958, explaining the revisions to the Code, Principle 10 was specifically intended to encompass the statement on the duty to treat (Pearson, Buie et al. 1958). However, since the statement on epidemics was now relegated to being a mere interpretive note on a principle, it received very little subsequent attention. Indeed, recent historians have incorrectly asserted that the statement on epidemics disappeared in 1957 (Zuger and Miles 1987; Arras 1988; Sharp 1988; O'Flaherty 1991; Halevy and Brody 1994). In fact, the statement was removed in 1977, when it and several other statements were quietly "withdrawn" from the Code under the explanation that they were "historical anachronisms"

(Council on Ethical and Judicial Affairs 1977). As alluded to above - and recalling that in 1972 the US Surgeon General had declared it time to "close the book" on infectious diseases (World Health Organization 1980) and by 1977 the profession was preparing to celebrate the global eradication of smallpox (Kassebaum 1995) - consideration of duties in epidemics probably did appear anachronistic.

Hence, for nearly 35 years, between 1957 and September 11, 2001, only one challenge caused any discussion of the professional duty to treat contagious patients: the arrival of the Human Immunodeficiency Virus (HIV) epidemic in the 1980s.

### **The challenge of HIV**

Though it was thoroughly debated in the 1980s, the challenge of HIV to physicians' duty to treat in epidemics is worth reviewing here because it highlights and explains some important weaknesses in current ethical standards. In the 1980s, uncertainty about risk of transmission and the lack of effective treatments for HIV brought the age of antibiotic security to a sudden halt. Caught somewhat by surprise, organized medicine, the general public, and individual physicians alike struggled with what physician responsibilities toward HIV infected patients should be. Unfortunately, despite the 130-year history of a clear written commitment to alleviate suffering during epidemics, its loss in 1977 and the existence of 2 full generations of physicians who had not faced the risk of significant epidemics, led to mixed arguments among medical professionals (Pellegrino 1987; Annas 1988; Arras 1988; Daniels 1988; Emanuel 1988; Fox 1988; Freedman 1988; Dunne 1989; O'Flaherty 1991). In December 1986, an initial statement by the AMA that treating HIV-positive patients was required only if the physician was "emotionally able" to do so, was widely ridiculed (Freedman 1988). In a remarkable demonstration of both the social construction of professional ethics and the power of continuing public expectations regarding the duty to treat, the "emotional inability" clause was overridden by a new statement only a year later. In December 1987, the AMA's Council on Ethical and Judicial Affairs stated, "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 [HIV] seropositive" (Freedman 1988; Patterson 1989).

Note, however, that one key to understanding this history is that professional consensus emerged around *non-discrimination* as the fundamental basis on which to support a duty to treat HIV-infected patients (Freedman 1988; Patterson 1989; Bobinski 2001). The public also adopted this understanding, which was made explicit in the Americans with Disabilities Act of 1990 (US Department of Justice 2002; Halevy and Brody 1994). A second key is that, at the same time, the profession came to recognize that the risk of transmission of HIV through routine medical contacts is very low (Bragdon 1994), which reduced the impact of statements aimed solely at a duty to treat HIV-infected patients, as against a broader duty to treat all

potentially contagious patients. Thus, though HIV shook the medical profession and created real fear among practitioners and the general public, by addressing only HIV and by couching its obligations in terms of non-discrimination, the profession largely avoided re-endorsing a broad duty to treat during epidemics. Still, a few important organizations did reaffirm the history of medical ethics from 1847 to the 1950s. In 1986, the American College of Physicians and the Infectious Diseases Society of America published a joint position paper, stating that: "Denying appropriate care to sick and dying patients for any reason is unethical...health care workers...must provide high-quality, nonjudgmental care to their patients, even at the risk of contracting a patient's disease" (Health and Public Policy Committee 1986).

### **Part II: Facing Today's Challenges**

What can this history teach us to help address today's threats to society and the profession? Though anthrax is not contagious, the anthrax attacks demonstrate the real threat that bioterrorism poses. The SARS outbreak demonstrates the risk, especially to health care workers, of naturally-occurring outbreaks (Bradsher 2003). At least 10 ambulances were crushed in the World Trade Center attacks (Finkelstein 2001). In the Tokyo sarin gas attack, more than one-third of treating health care personnel became ill from cross-contamination (Department of Health and Human Services 1996). Health care workers are common second-wave victims of Ebola outbreaks (Sepkowitz 1996) and have been the most common secondary victims of SARS (Reilley, Herp et al. 2003). While there are only 56 documented cases of health care workers becoming infected with HIV due to needle-stick injuries in the US, countless more have contracted Hepatitis B or C, drug-resistant tuberculosis, and other potentially deadly infections (Centers for Disease Control 2001). Simply put, today it is clear that epidemics will continue to occur and that being a health care worker can sometimes be risky.

But exactly how the modern profession will respond to the next contagious epidemic is not known. In recent simulation exercises for bioterrorism, such as TOPOFF (plague) and Dark Winter (smallpox), military and public health strategists have assumed that some health professionals will not show up for work if faced with infectious risk (Johns Hopkins Center for Civilian Biodefense 2001; Inglesby, Grossman et al. 2001). Facing SARS, the vast majority of health professionals continued to care for patients, many quite heroically (Reilley, Herp et al. 2003), yet at least one hospital in China had difficulty maintaining services due to absenteeism driven by fear (Altman 2003). Some hospitals in New York have formally announced that they will turn away victims of bioterror attacks (Herrick 2003). And relatively few physicians volunteered to receive smallpox vaccination, despite high-level government requests (Connolly 2003). On the other hand, some experts point to the large number of professional volunteers in the wake of the World Trade Center attacks as an indication that many physicians still take this

duty seriously (Annas 2001).

Written statements on the topic vary. The ACP-ASIM ethics manual has long stated that, "Historically, the ethical imperative for physicians to provide care has overridden the risk to the treating physician, even during epidemics" (Ethics and Human Rights Committee 2002), but the duty to treat is notably absent from the internists' more recent Charter on Medical Professionalism, released in February 2002 (Medical Professionalism Project 2002). Many professional association statements remain focused on specific infectious diseases; for instance, the American College of Surgeons (ACS) states, "Surgeons have the same ethical obligations to render care to [HIV and viral hepatitis] infected patients as they have to care for other patients" (American College of Surgeons 1991). On the other hand, in recent months the AMA and many state and specialty medical societies (including both the ACS and ACP-ASIM) have endorsed a new *Declaration of Professional Responsibility*, which broadly states, "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" (American Medical Association 2002).

In our view, today's concerns over bioterrorism and naturally occurring epidemics necessitates a reaffirmation of the duty to treat in the clearest possible terms. The medical profession should re-embrace a general duty to treat such as was articulated in the 1912 *Principles of Medical Ethics*: "When an epidemic prevails, a physician must continue his [or her] labors for the alleviation of suffering people, without regard to the risk to his [or her] own health or to financial return" (Baker, Caplan et al. 1999).

Several bases of the duty to treat have been proposed that, taken together, provide a strong justification for such a re-affirmation (Council on Ethical and Judicial Affairs 1988; Annas 1988; Arras 1988; Daniels 1988; Emanuel 1988; Freedman 1988; Sharp 1988; Dunne 1989). We will briefly mention only a few of these here, but note that arguments in support of the duty to treat have been based on both ethical and pragmatic grounds, and include appeals to virtue, the moral principle of beneficence, patients' rights, and social utility. As one very recent example, Clark argues that health care professionals receive special training, which increases the general obligation to render aid to others in need because this training not only increases the value of the aid, it may also reduce the risk associated with providing it (Clark 2003). For society, physicians' re-embracing the duty to treat might also avoid some of the confusion and contradictions seen at the beginning of the HIV epidemic, which might already be reemerging around SARS and the bioterror threat (Altman 2003; Herrick 2003). Most importantly, it would encourage physicians, and those interested in becoming physicians, to consider carefully their relationship to the profession, its ethical underpinnings, and the social contract inherent in our codes of ethics. While deciding on one's professional ethics is necessarily individual, it is not entirely personal - after all, patients must assume that all

physicians adhere to certain core ethical beliefs. Consideration of this emotionally charged ethical obligation ahead of time will aid in the development of a professional identity and reduce the tendency to appeal to personal morality (or self-interest) to intuit one's way through difficult professional situations. Finally, the profession should recognize that there may be a penalty for failure to collectively re-affirm the duty. Put simply, contemporary society expects a unified professional identity from its medical practitioners, including acceptance of the duty to treat; in the absence of such professionalism, both care for patients in crisis and medicine's claim to exclusive power in society might crumble as the profession fragments.

Unfortunately, each of these arguments in favor of a duty to treat has limitations and none can provide specific guidance as to the exact degree of risk to be undertaken (that is, where does duty give way to heroism, and heroism to martyrdom?). We suggest that two main factors should contour the duty to treat. First is an expectation of some reciprocal social obligations. For example, in preparation for epidemics communities should: 1) take all reasonable precautions to prevent illness among health care workers and their families; 2) provide for the care of those who do become ill; 3) reduce or eliminate malpractice threats for those working in high-risk emergency situations; and 4) provide reliable compensation for the families of those who die while fulfilling this duty. Second, the duty should be attenuated, but not eliminated, by the physician's responsibility not to become a patient him or herself. Risks must be balanced against one's capacity to do good in the future, and while heroism is to be commended, martyrdom is not often called for.

Of course, in addition to these two considerations there will be additional personal obligations that physicians will inevitably weigh against the duty to treat, such as to family and self, but in our view these should be secondary. A minimal standard that calls for treating patients in the face of a moderate degree of unavoidable risk seems reasonable as a starting position. Certainly, physicians who refuse to treat patients in undefined but probably relatively low-risk situations should be called to task on grounds of breaching professional ethics. At the other end of the spectrum, clarification on how to handle predictably very high risk situations, whether certain physicians might be designated to take on additional risk (and what the rewards for this might be), what level of expertise is called for in caring for certain illnesses, and related issues, calls for open dialogues within and between the profession and society.

In the end however, these attenuating factors are necessarily vague and incomplete caveats to the larger objective; after all, seeking a reasonable standard of protection and avoiding illness that would preclude future good work cannot entail the complete elimination of risk to the physician. This is particularly evident in the case of a new or uncharacterized disease (such as SARS) for which initial risks and methods of protection are unclear. In such situations, the duty to treat must be maintained by pre-existing ethical rules, buttressed by social expectations and wide-

spread discussion and acceptance among physicians of our shared moral imperative to care for people who are suffering. Like other public service professions, including the fire and police forces, some risk is simply part of the job description for medical professionals.

### Summary

For much of history, conditions were not right for professional acceptance of a duty to care for contagious patients - infectious risks were not recognized, the profession was not organized, and the public did not expect it. But between 1847 and 1977 such a duty existed, was clearly articulated and acted upon, and the public came to rely on it - and the profession was rewarded for its devotion. Unfortunately, duties during epidemics were largely ignored in the thrill of the antibiotic and vaccine era, and eventually subsumed in deference to growing concerns over professional autonomy. The duty to treat in epidemics was partly replaced with some related obligations: weaker duties in emergencies and of non-abandonment in the 1950s, and the legal standard of non-discrimination in the 1980s. But these do not add up to the previously articulated strong duty to treat in epidemics, particularly because they do not clearly specify an obligation to accept personal risk. Given current concerns about bioterrorism and emerging infections, the time is ripe for professional reaffirmation of the duty to treat patients during epidemics. ☺

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