

## VIEWPOINT

# The Ebola Outbreak, Fragile Health Systems, and Quality as a Cure

**Andrew S. Boozary, MD, MPP**

Department of Health Policy and Management, Harvard School of Public Health, Boston, Massachusetts.

**Paul E. Farmer, MD, PhD**

Division of Global Health Equity, Brigham and Women's Hospital, Boston.

**Ashish K. Jha, MD, MPH**

Department of Health Policy and Management, Harvard School of Public Health, Boston, Massachusetts; Division of General Internal Medicine, Brigham and Women's Hospital, Boston; and Harvard Medical School, Boston.



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## Corresponding

**Author:** Ashish K. Jha, MD, MPH, Department of Health Policy and Management, Harvard School of Public Health, 677 Huntington Ave, Boston, MA 02115 (ajha@hsph.harvard.edu).

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**In September 2014**, the United Nations Security Council unanimously approved a resolution establishing the UN Mission for Ebola Emergency Response (UNMEER) with 134 cosponsors—the most support for any resolution since the founding of the United Nations in 1946. This commitment, however, comes many months into an outbreak that has already become one of the most devastating health crises of the 21st century. And the need is immense: the World Health Organization (WHO) now reports more than 5300 infections and 2600 deaths across Guinea, Liberia, and Sierra Leone,<sup>1</sup> with broad consensus that the true burden of disease is far greater.

Yet if the Ebola virus surfaced in Boston or Toronto, there is little doubt that their health systems, despite shortcomings, could effectively contain and then eliminate the disease with far lower case-fatality rates than those reported now in West Africa. Why the disparity when there is no proven drug or vaccine available? The answer lies not with the virus, but in the collective failure to ensure the availability of adequate health care staff, resources, and systems required for the delivery of high-quality health care

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Rid and Emanuel<sup>2</sup> made a compelling ethical case for action, and Gostin and colleagues<sup>3</sup> urged a substantially accelerated international response to halt this Ebola outbreak. However, for that response to be effective and sustainable, it needs to be thoughtfully crafted—not only to provide critical aid in the short term, but also to invest in creating systems that provide enduring security.

## Staff

The scarcity of health care workers in western Africa poses a serious challenge. Even before the outbreak, Liberia's 4.3 million people were served by just 51 physicians<sup>2</sup>—fewer than many clinical units in a typical major US teaching hospital. Many more physicians are needed, but focusing on physicians will not be enough. Successful integration of prevention and treatment efforts requires a comprehensive strategy, including com-

munity health workers, who can encourage sick patients to come to health care institutions, and nurses, who provide lifesaving supportive care, such as intravenous rehydration and electrolyte management, in an environment that is safe for both practitioners and patients.<sup>4</sup> With patients increasingly turning their frustration toward health care workers, an essential component of any strategy must include ensuring and in some cases restoring trust. A key to this goal should be to recruit and train local workers, many of whom will be from the most affected communities. Survivors, likely immune, can play a role in this regard and in communicating the importance not only of isolation but also of early diagnosis.

## Health Care Resources

The Ebola epidemic is a battle of basic medical care, and future epidemics in these and other countries with poorly developed health care systems are likely to require similar services. While experimental therapeutics have garnered significant attention, vaccines or monoclonal antibodies that have yet to enter clinical trials are no panacea for the current outbreak.

However, appropriate supportive care can help reduce many unnecessary deaths.<sup>5</sup> Currently, the lack of basic health care resources—such as protective gloves and gowns, intravenous fluids, and straightforward protocols and guidelines—has limited front-line health workers who risk their lives to care for those affected with Ebola. The

health systems of high- and middle-income countries are awash in basic health care materials and guidelines, and there is no good reason these fundamental health care resources cannot be provided to front-line workers in West Africa to save lives.

Lacking the necessary health care resources, the current approach is to warehouse patients in depleted hospitals or public buildings repurposed as isolation centers. Many affected patients who arrive at such facilities in Liberia receive no intravenous rehydration and extremely limited monitoring of hematocrit and liver and kidney function. Other affected patients wait, and may die, outside the closed gates of overwhelmed facilities. Is it any wonder, then, that so many individuals are losing confidence in the ability of their health systems to care for them?

## Systems

In 1967, an outbreak of Marburg hemorrhagic fever—a disease closely related to Ebola—occurred in Germany and Yugoslavia. At the time, almost nothing was known

about the virus, and the health systems of both countries were still recovering from the destruction of World War II. Despite these challenges, the case-fatality rate associated with the outbreak was 23%.<sup>6</sup> Nearly half a century later, the case-fatality rate for Ebola across West Africa is 2- to 3-fold higher. Is this all because of a lack of health care staff and resources? It is more than that. Fundamentally, this high mortality is related to lack of adequate systems in which the health care staff and resources can be effectively deployed.

The problems of inadequate systems reach far beyond West Africa. Despite a recent global movement to expand access to health care, the Ebola outbreak is a cogent reminder to carefully consider 2 simple questions: What kind of care are people going to access? Is that care worth having, and can it be made better? A focus on accountability, especially for quality, is critical. Over the past decade, many countries have committed to spend more money on health care, but spending more is not enough. There has been little effort to understand the quality of care that such spending buys and how that care might be made better. While some might see tradeoffs between interventions to stem the Ebola epidemic and investments in health systems for the long run, these 2 notions can coexist. Indeed, building systems that provide high-quality care in this crisis can be used to provide effective disease management and chronic care once the epidemic has subsided.

Quality is often thought to be as nebulous but involves 3 main components: care that is safe, effective, and delivered in ways that respect the dignity of individuals in the context of their own "local moral worlds."<sup>7</sup> An insufficient focus on quality by many global health initiatives has, at times, created distrust—and that distrust fuels epidemics like Ebola. Some have suggested that quality cannot be a priority when countries are poor and

underinvesting in health care. However, it is precisely when resources are insufficient that useful health care spending becomes even more critical.

Evidence from settings such as Rwanda suggests that safer, more effective, and more respectful care need not be more expensive.<sup>8</sup> This has specific implications for the global response to the Ebola epidemic. Ensuring that systems are built or rebuilt centered on basic principles of quality assessment and improvement is imperative. Moreover, this must be done in ways that build trust with the local communities by treating patients with dignity. When people receive care that is unsafe or ineffective, or they are not treated with respect, it is little surprise they avoid further care.<sup>9</sup> Preventing such "betrayals of trust" through a systematic focus on quality is crucial, for both the current epidemic and the next.<sup>10</sup>

## Conclusions

Ebola represents a pressing global health crisis, but more are certain to follow. The outcomes of the next several months will reveal the capacity to forge effective partnerships across borders and disciplines, and the extent of the commitment to value all human lives equally. By responding to the crisis with a surge of stopgap solutions, it is possible (although unlikely) that such an approach could eventually stem the epidemic and end the morbidity and mortality for this current outbreak. Alternatively, responding to Ebola with a broader approach that involves meaningful investments in the provision of health care staff, resources, and systems could succeed now and help create sustainable models for the future. If the approach involves reengineering health systems around the patient, there remains an opportunity to bring lasting progress for those who need it most.

## ARTICLE INFORMATION

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