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Recommended Citation
Alison Agnew, A Combative Disease: The Ebola Epidemic in International Law, 39 B.C. Int'l & Comp. L. Rev. 97 (2016), http://lawdigitalcommons.bc.edu/iclr/vol39/iss1/5

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A COMBATIVE DISEASE: THE EBOLA EPIDEMIC IN INTERNATIONAL LAW

ALISON AGNEW*

Abstract: In early 2014, a devastating epidemic of Ebola broke out across Guinea, Liberia, and Sierra Leone, which then spread to other countries and led to the deaths of more than 11,000 people. In response, the affected countries declared states of emergency, the World Health Organization (WHO) declared the epidemic to be a public health emergency of international concern, and the United Nations (UN) determined the epidemic was a threat to international peace and security. Though these actions helped confront the spread of Ebola, the WHO’s and UN’s responses were too slow and too inefficient to effectively combat the disease. To end this epidemic and to address future epidemics, the WHO and UN must be strengthened with more robust enforcement capabilities and increased funding. Further, the international community must recognize that Ebola is as much a threat to international peace and security as an act of war. Thus, states should react to disease outbreaks just as they would react to an act of war by utilizing the principle of self-defense pursuant to Chapter VII of the United Nations Charter.

INTRODUCTION

Beginning in March 2014, an outbreak of Ebola ripped through West Africa, spreading quickly from rural villages to urban centers and across the globe.¹ Though the outbreak began in Guinea, it travelled rapidly to Liberia and Sierra Leone.² Guinea, Liberia, and Sierra Leone were the African states most severely affected—in part because they have weak health systems, lack human capital and infrastructure, and only recently emerged from long periods of instability.³ To assist the affected states, volunteers and healthcare workers from other countries provided manpower and resources to help contain the dis-

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² See Roache et al., supra note 1, at 2–3; WHO Fact Sheet No. 103, supra note 1.

³ See WHO Fact Sheet No. 103, supra note 1.
ease.\(^4\) As a result, a few cases of Ebola spread to countries outside of Africa, including the United States, the United Kingdom, Italy, and Spain.\(^5\)

Although other states and international organizations observed the growing epidemic, many were slow to respond with assistance.\(^6\) On August 8, 2014, approximately five months after the outbreak began, the World Health Organization (WHO) declared the epidemic to be a “public health emergency of international concern” and released its first roadmap to respond to the crisis.\(^7\) The United Nations (UN) also took broad steps to combat the outbreak.\(^8\) In September 2014, the UN Security Council (UNSC) passed a Resolution calling on UN member states to provide assistance, urging the WHO to accelerate its response, and encouraging Guinea, Liberia, and Sierra Leone to expedite the establishment of health systems that would better respond to such diseases.\(^9\)

The UNSC determined that the Ebola epidemic is a threat to international peace and security, and the UN created a new mission to tackle the crisis.\(^10\) Though the WHO and UN have taken many positive steps to combat the Ebola outbreak, these responses have not been sufficient to contain the epidemic.\(^11\)

This Note proceeds in three parts. Part I provides background on the Ebola virus disease, the ongoing Ebola epidemic in West Africa that began in 2014, and the legal mechanisms available to the WHO and UN in this situation. Part II explores the domestic responses of the three states most affected by the epidemic, the responses of the WHO and UN, and several shortcomings of these reactions. Part III argues that the WHO’s legal solutions need to be bolstered with stronger enforcement capabilities and greater funding to address this and future disease epidemics. Moreover, Part III contends that states should be

\(^4\) See Lauren Z. Asher, Note, Confronting Disease in a Global Arena, 9 CARDOZO J. INT’L & COMP. L. 135, 142 (2001); Roache et al., supra note 1, at 3–6.


\(^6\) See Roache et al., supra note 1, at 5–6.


\(^8\) See G.A. Res. 69/1, ¶¶ 1, 3 (Sept. 19, 2014); S.C. Res. 2177, pmbl. (Sept. 18, 2014).

\(^9\) See S.C. Res. 2177, supra note 8, pmbl., ¶ 1.

\(^10\) See G.A. Res. 69/1, supra note 8, ¶¶ 1, 3; S.C. Res. 2177, supra note 8, pmbl.

\(^11\) See Lena H. Sun et al., Out of Control: How the World’s Health Organizations Failed to Stop the Ebola Disaster, WASH. POST (Oct. 4, 2014), http://www.washingtonpost.com/sf/national/2014/10/04/how-ebola-sped-out-of-control/ [http://perma.cc/6QD6-M3SX]; Roache et al., supra note 1, at 8–10. Although the number of active Ebola cases in the affected states has decreased dramatically since March 2014, new cases are still being intermittently reported. See Ebola Situation Report, supra note 5; WHO Fact Sheet No. 103, supra note 1.
permitted to act quickly and zealously under the authority of the UNSC and general principles of self-defense. A disease is as much a threat to international peace and security as an act of aggression, so the international community should treat it as one.

I. BACKGROUND

A. The Ebola Virus Disease

Ebola virus disease, or Ebola hemorrhagic fever, first appeared in 1976 during two outbreaks in remote villages in the Sudan and the Democratic Republic of the Congo.\(^{12}\) Ebola is a severe disease that is transmitted from the organs and bodily fluids of wild animals to humans.\(^{13}\) It spreads between humans through direct contact with the bodily fluids of an infected person or through direct contact with surfaces or materials contaminated with these bodily fluids.\(^{14}\) Though moderately contagious, Ebola is highly infectious because a very small amount of the virus can cause illness.\(^{15}\) Humans are not infectious until they develop symptoms, which can take up to twenty-one days and can include fever, vomiting, diarrhea, and hemorrhaging.\(^{16}\) The average fatality rate for Ebola cases is approximately 50\%, and no licensed vaccines are currently available.\(^{17}\) Isolating and treating infected persons in even rudimentary treatment centers and tracing an infected person’s contact with others can greatly reduce the spread of disease.\(^{18}\)

\(^{12}\) Sylvain Baize et al., Emergence of Zaire Ebola Virus in Guinea, 371(15) NEW ENG. J. MED. 1418, 1418 (2014); WHO Fact Sheet No. 103, supra note 1. Since 1976, there have been twenty-eight outbreaks of Ebola in Africa. WHO Fact Sheet No. 103, supra note 1. Earlier major outbreaks occurred in the Democratic Republic of the Congo, Sudan, and Uganda. Id.; see also David P. Fidler et al., Emerging and Reemerging Infectious Diseases: Challenges for International, National, and State Law, 31 INT’L LAW. 773, 778 (1997) [hereinafter Fidler et al., Emerging and Reemerging Infectious Diseases] (describing 1995 outbreak of Ebola in Democratic Republic of the Congo and its successful local containment).

\(^{13}\) See WHO Fact Sheet No. 103, supra note 1. Ebola is often spread to humans from infected animals such as chimpanzees, gorillas, monkeys, fruit bats, antelope, and porcupines. See id.

\(^{14}\) Id.

\(^{15}\) See Ebola Fast Facts, supra note 5.

\(^{16}\) See WHO Fact Sheet No. 103, supra note 1.


Ebola frequently is spread within communities from infected people to healthcare workers or from an infected person to family members through traditional burial ceremonies.\(^1\) In traditional burial ceremonies, family members and mourners often come into direct contact with the body of the deceased as they cleanse and prepare the body for burial, which can transmit Ebola from the infected person to the mourners.\(^2\) Healthcare workers may become infected when they come into close contact with patients without personal protection or without utilizing proper infection control mechanisms.\(^3\)

B. The Current Ebola Epidemic in West Africa

The current outbreak of Ebola is the longest, “largest[,] and most complex” outbreak of the disease ever, with “more cases and deaths in this outbreak than all others combined.”\(^4\) This is at least partially because Ebola spread quickly across three contiguous states that did not have prior experience with Ebola and lacked adequate healthcare infrastructure and workers.\(^5\) As of November 11, 2015, there have been 28,635 cases of Ebola and 11,314 deaths globally, representing a fatality rate of approximately 40%.\(^6\)

The first patient suspected of contracting Ebola in the current epidemic was a two-year-old in Guinea who died in December 2013.\(^7\) The child’s family members then contracted Ebola via contact with the deceased during the burial ceremony, and mourners carried the disease to nearby villages.\(^8\) A health worker from the region where the first case arose also spread the disease

\(^{1}\) See id.; Roache et al., \textit{supra} note 1, at 3–4; \textit{WHO Fact Sheet No. 103, supra} note 1.


\(^{3}\) See Roache et al., \textit{supra} note 1, at 3; \textit{WHO Fact Sheet No. 103, supra} note 1.

\(^{4}\) See \textit{Ebola Situation Report, supra} note 5.


\(^{6}\) See Baize et al., \textit{supra} note 12, at 1421–23; Roache et al., \textit{supra} note 1, at 2–3. The source of this outbreak is not yet known. See Baize et al., \textit{supra} note 12, at 1424. One possible explanation is that the outbreak stemmed from fruit bats in West Africa carrying Ebola. See \textit{id}. It is suspected that the virus had been transmitted for months before the outbreak became apparent. See \textit{id}.

\(^{7}\) See Baize et al., \textit{supra} note 12, at 1422–23; Roache et al., \textit{supra} note 1, at 2–3.
to nearby areas in Guinea in February 2014.27 Most of the transmission of Ebola during this outbreak occurred among family members; after infection control mechanisms were put into place in April 2014, the transmission of Ebola in hospitals and during funerals decreased substantially.28

The WHO first confirmed the outbreak on March 22, 2014; by the end of that month, at least one hundred people had already contracted Ebola and eighty people had died.29 Guinea, Liberia, and Sierra Leone have been affected most severely by the outbreak, and although the number of new cases reported has significantly decreased and stabilized, Guinea continues to report new cases.30

The socioeconomic consequences of the Ebola epidemic have been devastating.31 The World Bank anticipates that Guinea, Liberia, and Sierra Leone will experience $1.6 billion of lost economic growth in 2015.32 In Liberia, the economy has lost many more jobs than have been replaced—approximately half of Liberian households are under- or unemployed, and women have been hit particularly hard.33 Workers in Sierra Leone are similarly underemployed, and individuals with non-farming businesses have lost significant amounts of revenue.34

27 See Baize et al., supra note 12, at 1421.
29 See Baize et al., supra note 12, at 1421–23; Roache et al., supra note 1, at 2–3.
32 See Worst-Affected Countries ‘Crippled’ by Economic Impact of Ebola, supra note 31. In terms of gross domestic product, the World Bank expects Guinea to lose $540 million, Liberia to lose $180 million, and Sierra Leone to lose $920 million. See id.
33 See Press Release, World Bank, Ebola Hampering Household Economies across Liberia and Sierra Leone (Jan. 12, 2015), http://www.worldbank.org/en/news/press-release/2015/01/12/ebola-hampering-household-economies-liberia-sierra-leone [http://perma.cc/6DKL-7P9D] [hereinafter Press Release, World Bank]. Women are particularly susceptible to being out of work because they are disproportionately employed in the non-farm self-employment sector, which has been impacted greatly. See id. Approximately 60% of women are not currently working, compared to 40% of men. Id.
34 See Press Release, World Bank, supra note 33.
The disease has also spread outside of the most affected countries. In July 2014, a Liberian government official died of Ebola in Nigeria. Later that month, two U.S. aid workers were infected with Ebola while treating patients. These events sparked widespread panic around the world about the cross-border and cross-continental spread of Ebola. In July 2014, the United States Centers for Disease Control and Prevention (CDC) heightened its warning level and cautioned U.S. residents to abstain from non-essential travel to Guinea, Liberia, and Sierra Leone. Many other organizations followed suit and withdrew their employees from the area. Despite pervasive fear that Ebola might become a more globalized epidemic, only thirty-six cases and fifteen deaths have been reported in countries outside Guinea, Liberia, and Sierra Leone.

C. The WHO’s Responsibilities and the International Health Regulations

The WHO was established in 1948 as a specialized agency of the UN to promote and protect the health of all people, with the objective of attaining the highest possible level of health. The WHO’s constitution asserts that “[h]ealth is the state of complete physical, mental[,] and social well-being and not merely the absence of disease,” and it stresses that health is a fundamental

35 See Ebola Fast Facts, supra note 5; Ebola Situation Report, supra note 5.
37 See Liberian Doctor Dies of Ebola, supra note 36; Ebola Fast Facts, supra note 5.
40 See, e.g., U.S. State Dep’t, Liberia Travel Warning, NEWSROOM, Jan. 21, 2015, 2015 WLNR 2464728 (issuing travel warning advising against non-essential travel to Liberia and ordering departure of family members of State Department employees on August 7, 2014); Ebola Fast Facts, supra note 5 (stating that the Peace Corps removed all volunteers from Guinea, Sierra Leone, and Liberia on July 30, 2014).
41 See Zorn, supra note 38; Ebola Situation Report, supra note 5. Eight cases and six deaths were reported in Mali and twenty cases and eight deaths were reported in Nigeria. Ebola Situation Report, supra note 5. One case was reported in Senegal. Id. The United Kingdom, Italy, and Spain each reported one case of Ebola, with no deaths, and four cases have been reported in the United States, with one death. Id.
human right critical to attaining peace and security.\footnote{See Constitution of the WHO, supra note 42, pmbl.; Fidler, Fighting the Axis of Illness, supra note 42, at 110.} To achieve its objective, the WHO is tasked with coordinating authorities for international health work, encouraging collaboration with the UN and other organizations, providing technical assistance to member states, promoting research and healthcare advances, and establishing and monitoring the implementation of norms and standards.\footnote{See Constitution of the WHO, supra note 42, art. 2; About WHO: The Role of WHO in Public Health, WHO, http://www.who.int/about/role/en/ (last visited Nov. 5, 2015) [http://perma.cc/L24Y-W7CN].} In general, the WHO has adopted a medical philosophy in which it views its “legislative role as neither active nor even reactive, but merely observational.”\footnote{David Bishop, Note, Lessons from SARS: Why the WHO Must Provide Greater Economic Incentives for Countries to Comply with International Health Regulations, 36 GEO. J. INT’L L. 1173, 1199–1200 (2005) (quoting Allyn Lise Taylor, Making the World Health Organization Work: A Legal Framework for Universal Access to the Conditions for Health, 18 AM. J.L. & MED. 301, 343 (1992)).}


The IHR began with the adoption of the International Sanitary Regulations in 1951, which sought to “ensure the maximum protection against the international spread of disease with minimum interference with world traffic.”\footnote{Fidler, Emerging Trends, supra note 46, at 286; see Fidler et al., Emerging and Reemerging Infectious Diseases, supra note 12, at 777.} In 1969, these regulations were renamed the International Health Regulations and were amended to focus on smallpox, plague, cholera, and yellow
fever. Following several epidemics of diseases not previously included, the IHR were again revised in 2005 and entered into force in 2007. The revised IHR are no longer limited to specific diseases and mark a shift away from legally binding rules toward increased reliance on global information networks and self-reporting by states.

The 2005 IHR require member states to notify the WHO of events that may constitute a “public health emergency of international concern.” The revised IHR define a public health emergency as an event that constitutes a public health risk to other states through the international spread of disease that potentially requires a coordinated international response. States are also required to have an implementation plan to meet the IHR core capacity standards and to ensure that their health surveillance and response capacities meet functional criteria. Specifically, states are required to meet certain minimum capacity requirements for international points of entry in order to prevent the export and import of disease. Although all WHO member states have agreed to the principles contained in the IHR, the IHR only require that states self-report public health events and their progress on developing core capacities.

52 See Fidler, Emerging Trends, supra note 46, at 286; Editorial, What Lessons for the IHR?, supra note 48.
55 Giorgetti, supra note 54, at 1369; Notification and Other Reporting Requirements Under the IHR (2005): IHR Brief No. 2, WHO, http://www.who.int/ihr/publications/ihr_brief_no_2_en.pdf?ua=1 [http://perma.cc/9VNR-GR5J] [hereinafter IHR Brief No. 2]. States individually determine whether a particular national outbreak is a “public health event” that might trigger classification as a public health emergency of international concern. See IHR Brief No. 2, supra. States consider four factors: (1) the seriousness of the event’s public health impact; (2) the unusual or unexpected nature of the event; (3) the risk of international disease spread; and (4) the risk that other countries will impose travel or trade restrictions. Id.
56 See IHR Brief No. 1, supra note 54. These “core capacities” include detecting events involving disease, assessing reported events, immediately notifying the WHO of disease events, reporting all essential information to the WHO, and creating and maintaining a “public health emergency contingency plan.” Timothy Miano, Understanding and Applying International Infectious Disease Law: U.N. Regulations During an H5N1 Avian Flu Epidemic, 6 CHI.-KENT J. INT’L & COMP. L. 26, 36 (2006).
57 See Editorial, What Lessons for the IHR?, supra note 48; IHR Brief No. 1, supra note 54.
Additionally, the IHR provide a dispute resolution system wherein states first seek to settle a dispute through negotiation or other peaceful means; if that fails, the parties may refer the dispute to the WHO’s Director-General. This system, however, is voluntary, and no final settlement is guaranteed; as a result, it is rarely used and does not provide for realistic conflict resolution. There are currently no binding mechanisms to enforce the IHR or to ensure their successful implementation.

If an event is determined to be a “public health emergency of international concern,” the Director-General of the WHO may consult with experts and issue temporary recommendations aimed at preventing the international spread of disease and avoiding interference with international trade and travel. As with the other provisions of the IHR, the Director-General’s recommendations are not binding.

D. The United Nations’ Powers Under Chapter VII

The UNSC was established in 1946 and consists of five permanent member states—the United States, the United Kingdom, China, France, and Russia—and ten non-permanent members elected for two-year terms. Under Chapter VII of the UN Charter, the UNSC has primary responsibility for determining the existence of threats to peace and is authorized to take action in order to “maintain or restore international peace and security.” Historically,
the UNSC has engaged in a broad range of diplomatic, legal, and military activities.\textsuperscript{66} Binding UNSC Resolutions primarily have addressed issues of peace and security by responding to acts of aggression and the use or buildup of arms, authorizing military interventions and peacekeeping missions, and imposing sanctions.\textsuperscript{67}

Recently, the UNSC has begun to use its powers to address non-traditional threats, marking an expansion of what it means to “maintain or re-store international peace and security.”\textsuperscript{68} The UNSC has only once before treated a disease outbreak as an issue of global security: in the early 2000s, the UNSC used its powers to address the spread of HIV/AIDS in Africa.\textsuperscript{69} The UNSC held a meeting in January 2000 in which it acknowledged that HIV/AIDS posed a serious threat to global security, jeopardized economic strength, and interfered with peacekeeping efforts.\textsuperscript{70} The UNSC believed internal conflict and local violence exacerbated the spread of the disease, thereby endangering international peace; although it ultimately stopped short of classifying HIV/AIDS as a “threat to international peace and security,” it specifically incorporated HIV/AIDS prevention into the mandates and training of peacekeeping operations.\textsuperscript{71} In 2011, the UNSC reiterated the need for coordinated international action to minimize the impact of the HIV/AIDS epidemic and the

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\footnote{66}{See Bosco, supra note 64, at 3.}
\footnote{67}{See id. at 3–4; Anna Hood, Ebola: A Threat to the Parameters of a Threat to Peace?, 16 MELB. J. INT’L L. 29, 32 (2015). The UNSC has typically determined that a threat to peace exists only when there is “an armed conflict or the prospect of one arising in the short to medium term.” See Hood, supra, at 36.}
\footnote{69}{See Burci & Quirin, supra note 49. See generally S.C. Res. 1308 (Jul. 17, 2000) (recognizing impacts of HIV/AIDS on all sectors of society and encouraging international cooperation to prevent the spread of disease).}
\footnote{70}{See U.N. SCOR, 55th Sess., 4807th mtg. at 2, U.N. Doc. S/PV.4087 (Jan. 10, 2000). In the meeting, the President of the UNSC, Al Gore, stated:}
\end{footnotes}
importance of incorporating HIV-related awareness, training, and treatment into peacekeeping operations.72

States parties to the UN may also take advantage of the principle of self-defense so as to act in the international sphere in accordance with UN Chapter VII.73 Pursuant to traditional principles of international law, states are permitted to use self-defense when it is necessary, the threat is immediate, and the response is proportionate to the threat.74 States typically are permitted to act in self-defense when a threat is “instant, overwhelming, leaving no choice of means, and no moment for deliberation.”75 Because states may use self-defense to confront traditional threats to peace like armed conflict, self-defense may also serve as an effective approach to confronting non-traditional threats to peace, such as disease.76

II. DISCUSSION

A. The Affected States’ Responses

In response to the Ebola epidemic, Guinea, Liberia, and Sierra Leone—aided by the global community—have taken many steps to contain the epidemic and reduce disease incidence.77 Guinea, Liberia, and Sierra Leone instituted travel bans and curfews, instructed communities on burial techniques that guard against the transmission of Ebola, and attempted to treat and isolate infected persons.78 The affected states’ responses, however, were hampered by delayed assistance from international donors, systematically weak healthcare,

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74 See U.N. Charter art. 51; Bethlehem, supra note 73, at 772–73, 775; Van den hole, supra note 73, at 96–97, 99–104. Article 51 of the UN Charter provides, “Nothing in the present Charter shall impair the inherent right of individual or collective self-defence.” U.N. Charter art. 51. The guiding principles for self-defense under customary international law are necessity and proportionality. See Eustace Chikere Azubuike, Probing the Scope of Self Defense in International Law, 17 Ann. Surv. Int’l L. 129, 145–46, 162–63 (2011). To use self-defense, a state must show that the action is “necessary to protect itself or its citizens” and that “the action is proportional to the attack being defended” in both seriousness and scope. Id. at 145–46.
75 Van den hole, supra note 73, at 96–97 (citing Letter of Mr. Webster to Mr. Fox (Apr. 24, 1841), in British and Foreign State Papers 1840–41, at 1137–38 (29th ed. 1857)).
77 See Hodge, supra note 31, at 596; Roache et al., supra note 1, at 4–6.
and poor infrastructure—particularly as years of civil war and political instability impeded the creation of functional healthcare systems.  

Throughout the epidemic, healthcare facilities have been hot spots for the transmission of Ebola. Although even the most rudimentary healthcare facilities can help isolate infected patients from the uninfected community, patients in poorly equipped facilities can spread the disease to healthcare workers and to people visiting the treatment centers. Healthcare workers are particularly susceptible to contracting Ebola from their patients because many facilities do not have proper protective equipment and infection controls, workers have not been trained appropriately, and safe and sterile units in which to isolate infected patients are in short supply. Additionally, symptomatic patients who are fearful of the disease often avoid going to hospitals for treatment, thereby spreading Ebola throughout the community.

Further exacerbating the ineffectiveness of their healthcare systems, the affected states generally lack the necessary human capital to successfully respond to the outbreak and face a severe, pre-existing shortage of healthcare workers and doctors. Not including those who have died from the Ebola epidemic, Liberia and Sierra Leone had 90 and 136 doctors, respectively, to care for a combined population of approximately 10 million. Guinea has fewer than one thousand doctors to serve its population of approximately eleven million. The spread of Ebola has taken a severe toll on these states’ already inadequate human capital: as of November 4, 2015, 881 health workers have been infected with Ebola in Guinea, Liberia, and Sierra Leone, and 513 have died of the disease. As a result, Guinea, Liberia, and Sierra Leone are forced

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79 See Gostin, supra note 78; Roache et al., supra note 1, at 3–6; WHO Fact Sheet No. 103, supra note 1.
80 See Gostin, supra note 78; Roache et al., supra note 1, at 3.
81 See Editorial, What Worked in Controlling the Ebola Outbreak in West Africa, supra note 18; Faye et al., supra note 28, at 320; Gostin, supra note 78; Roache et al., supra note 1, at 3–5.
82 See Gostin, supra note 78; Roache et al., supra note 1, at 3–4.
83 Gostin, supra note 78. The Ebola outbreak has also influenced the incidence of other diseases. See Hodge, supra note 31, at 596. Persons suffering from non-Ebola diseases, such as malaria or chronic conditions, and pregnant mothers have actively avoided seeking treatment for fear of contracting Ebola at health centers, thereby increasing the overall disease burden and mortality rate. See id.
84 See Gostin, supra note 78.
to rely on medical professionals from other states to supplement their extreme shortage of healthcare workers.88

Without strong healthcare systems capable of responding to the epidemic, Guinea, Liberia, and Sierra Leone took steps to isolate communities and to contain the spread of disease, which effectively militarized the outbreak.89 Guinea, Liberia, and Sierra Leone each declared national states of emergency, thereby permitting extreme measures.90 States instituted curfews, closed schools, restricted travel, and established community quarantines (cordon sanitaire) to prevent anyone from leaving.91 In some states, armed troops were used to establish blockades and limit travel.92 As the disease spread to urban areas, states introduced additional quarantines and lockdowns, which, in turn, sparked violence and unrest.93 These extreme quarantines and lockdowns by the military and police generally have not been successful in reducing the spread of Ebola.94 Rather, these measures militarized the situation and “end[ed] up driving people underground and jeopardizing the trust between people and health providers.”95

The imposition of states of emergency and quarantines also severely affected food supplies in West Africa.96 Travel restrictions and quarantines limited the importation of food into the affected countries, and agricultural pro-

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88 See Gostin, supra note 78; Roache et al., supra note 1, at 5–6.
89 See Roache et al., supra note 1, at 5.
90 See Hodge, supra note 31, at 596–97.
91 See Roache et al., supra note 1, at 4–5; Ebola Fast Facts, supra note 5; see also Hodge, supra note 31, at 596–97 (detailing emergency measures taken by Guinea, Liberia, and Sierra Leone beginning July 30, 2014).
92 See Roache et al., supra note 1, at 4; see, e.g., McNeil, supra note 23 (explaining that Sierra Leone, Guinea, and Liberia instituted cordons sanitaires by drawing lines around infected areas and not permitting anyone to leave, a tactic last used in Poland and Russia in response to typhus in 1918); Adam Nossiter, Sierra Leone to Impose 3-Day Ebola Quarantine, N.Y. TIMES (Sept. 6, 2014), http://www.nytimes.com/2014/09/07/world/africa/sierra-leone-to-impose-widespread-ebola-quarantine.html [http://perma.cc/KVZ6-28RG] (describing three-day quarantine enforced by military and police with door-to-door searches for residents infected with Ebola).
96 See Hodge, supra note 31, at 596; Press Release, World Bank, supra note 33.
duction has slowed as agricultural laborers continue to be unable to work because they are taking care of sick family members.97

B. The WHO’s Response to the Ebola Epidemic

On August 8, 2014, five months after the outbreak officially began, the WHO declared the Ebola epidemic to be a “public health emergency of international concern,” which triggered the WHO and IHR response mechanisms.98 Under the IHR, an emergency committee convened to address the outbreak, the WHO distributed a roadmap with guidelines for controlling the epidemic, and the Director-General of the WHO issued temporary, non-binding recommendations.99 The WHO recommended that health ministers in states with active cases take strong leadership roles in coordinating response measures; put into place infection prevention mechanisms, case management tools, and communication strategies; and scale up activities for healthcare facilities, workers, and supplies.100

Consistent with the IHR’s goal of preventing the spread of disease while minimizing interference with travel, the WHO recommended that states with active cases conduct exit screenings of all persons at international airports and ports, prevent the international travel of persons with Ebola or those who have had contact with an infected person, and isolate and restrict travel to those suspected of having Ebola.101 The WHO, however, urged that there should be no general ban on international trade or travel.102 Such a ban would cause economic hardship in the affected states, thereby increasing the risk of emigration of people from affected states and of spreading Ebola internationally.103 The

97 See Hodge, supra note 31, at 596. For example, 80% of farmers who had completed their harvests for 2014 reported that the harvest was smaller than in previous years because the Ebola outbreak prevented farmers from working in groups. See Press Release, World Bank, supra note 33.
98 IHR Brief No. 1, supra note 59; see Roache et al., supra note 1, at 2–3; Statement on the 1st Meeting of the IHR Emergency Committee, supra note 7.
99 See Ebola Response Roadmap, supra note 7; Statement on the 1st Meeting of the IHR Emergency Committee, supra note 7.
100 Id.
101 Id.
102 See id.

Despite the WHO’s non-binding recommendations and its work coordinating responses with local health ministries and international organizations, the WHO has not been entirely effective in containing the spread of Ebola.\footnote{105 See Gostin, supra note 78; Roache et al., supra note 1, at 8, 10.} Although the WHO sent what limited resources and experts it had to the affected countries, the WHO lacks the ability to forcibly mobilize health workers or equipment, and its response was delayed and disorganized to the detriment of the affected countries and other organizations.\footnote{106 See Constitution of the WHO, supra note 42, at art. 2; Hoffman, supra note 59, at 240 (noting the IHR’s lack of enforcement capability); Heal Thyself: The Ailing International Health Authority Needs a Stronger Organization, ECONOMIST (Dec. 13, 2014), http://www.economist.com/news/leaders/21636039-ailin國際健康權威需要更好的組織-heal-thyself [http://perma.cc/HLM3-HTAD] [hereinafter Heal Thyself]; Roache et al., supra note 1, at 8–9.} In addition, the WHO has not effectively addressed the affected states’ domestic health systems.\footnote{107 See Gostin, supra note 78.} The inadequate healthcare systems in Guinea, Liberia, and Sierra Leone constitute a violation of the IHR’s requirements that states develop the capacities to “detect, assess, report, and respond to global health emergencies.”\footnote{108 See Hoffman, supra note 59, at 240; Bishop, supra note 45, at 1218–23.} Yet because the IHR are not binding, there are no legal or globally enforceable consequences through which the WHO can address these violations.\footnote{109 See Gostin, supra note 78; Heal Thyself, supra note 106. Member dues account for approximately 20% of the overall WHO budget. Danielle Renwick & Toni Johnson, The World Health Organization, COUNCIL ON FOREIGN REL. http://www.cfr.org/public-health-threats-and-pandemics/world-health-organization-/p20003 (last updated Oct. 7, 2014) [http://perma.cc/2D79-C438].}

Moreover, the WHO lacks the funding to implement thoroughly a global response to a disease like Ebola.\footnote{110 See Gostin, supra note 78; Heal Thyself, supra note 106. For 2014 and 2015, approximately 77% of the WHO’s budget comprised voluntary donations from member states and non-governmental organizations. See Jeremy Youde, Can the World Health Organization Lead? Do We Want It To?, WASH. POST (Aug. 8, 2014), http://www.washingtonpost.com/blogs/monkey-cage/wp/2014/08/08/can-the-world-health-organization-lead-do-we-want-it-to/ [http://perma.cc/JQC7-ZGBZ].} Article 44 of the IHR requires member states to pay dues, but those dues do not fully cover the costs of running the WHO.\footnote{111 See Gostin, supra note 78; Heal Thyself, supra note 106.} The WHO supplements these dues with voluntary contributions from other sources, but this funding scheme makes it difficult for the WHO to plan for the long term or to establish sufficient funding reserves.\footnote{112 See Gostin, supra note 78; Heal Thyself, supra note 106. For 2014 and 2015, approximately 77% of the WHO’s budget comprised voluntary donations from member states and non-governmental organizations. See Jeremy Youde, Can the World Health Organization Lead? Do We Want It To?, WASH. POST (Aug. 8, 2014), http://www.washingtonpost.com/blogs/monkey-cage/wp/2014/08/08/can-the-world-health-organization-lead-do-we-want-it-to/ [http://perma.cc/JQC7-ZGBZ].} The WHO does not have funding dedicated to building durable healthcare capacities in developing countries, and high-income states obligated to provide financial and
technical assistance under the IHR have failed to do so. As a result, the WHO’s response to the epidemic was slow and disorganized, and it was unable to coerce higher-income states to assist the affected states.

Recognizing many of the shortcomings of the WHO’s response to the Ebola epidemic, delegates from the World Health Assembly approved several actions intended to strengthen the WHO and IHR in May 2015. Accordingly, the WHO will institute an emergency program to respond to disease outbreaks swiftly and flexibly, and it will establish a $100 million contingency fund that can be tapped quickly in emergency situations. In addition, the World Health Assembly launched a committee to review the IHR. Specifically, the committee will examine the effectiveness of the IHR in preventing and responding to the Ebola outbreak, the utility of the WHO’s temporary recommendations, and the viability of the IHR’s core capacity requirement; it will provide additional recommendations to improve the transparency, efficiency, and functionality of the IHR. The review committee held its first meetings in August 2015, and the committee is expected to present its recommendations in May 2016.

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113 See Gostin, supra note 78; Heal Thyself, supra note 106. Currently, fundraising to respond to specific disease outbreaks only occurs once the outbreak is already underway, and no long-term response funds have been established. See Gostin, supra note 78; Sheri Fink, W.H.O. Members Endorse Resolution to Improve Response to Health Emergencies, N.Y. TIMES (Jan. 25, 2015), http://www.nytimes.com/2015/01/26/world/who-members-endorse-resolution-to-improve-response-to-health-emergencies.html [http://perma.cc/H9KE-CKBJ].

114 See Gostin, supra note 78; Heal Thyself, supra note 106; Roache et al., supra note 1, at 8–9.


118 See The Review Committee, supra note 117.

C. UN’s Response to the Ebola Epidemic

The UNSC has dealt directly with infectious disease outbreaks only twice in its history: first in reaction to the spread of HIV/AIDS in the early 2000s and now in response to the Ebola epidemic in West Africa.\textsuperscript{120} The UNSC’s unprecedented action marks the first time that a disease outbreak has risen to the level of a “threat to international peace and security,” which indicates an expansion of the UNSC’s mandate and demonstrates the increasing severity of cross-border public health problems and their global ripple effect.\textsuperscript{121}

On September 18, 2014, six months after the outbreak officially began, the UNSC passed a Resolution declaring the Ebola epidemic a “threat to international peace and security.”\textsuperscript{122} The Resolution called on UN member states to provide assistance to Guinea, Liberia, and Sierra Leone; pushed states to lift travel restrictions that isolated the affected countries; urged the WHO to accelerate its response; and encouraged Guinea, Liberia, and Sierra Leone to establish better functioning health systems.\textsuperscript{123}

In addition, the UN General Assembly created the UN Mission for Ebola Emergency Response (UNMEER).\textsuperscript{124} Neither a peacekeeping nor a political mission, UNMEER was established to provide a unified operational structure for UN actors to respond to the outbreak.\textsuperscript{125} UNMEER’s primary goals included containing the spread of disease through case management and safe burial services, treating infected patients, ensuring that essential services were provided to affected communities, and generally preventing the spread of Ebola.\textsuperscript{126} On July 31, 2015, UNMEER ended its operations and transferred its functions to the WHO because it had “achieved its core objective of scaling up the response on the ground and establishing unity of purpose among responders . . . .”\textsuperscript{127}

Although the UNSC’s Resolutions were an unprecedented attempt to combat the spread of disease, the UN’s response was delayed and did not spark

\textsuperscript{120} See Burci & Quirin, supra note 49 (referring to S.C. Res. 1308, supra note 69).
\textsuperscript{121} See Boon, supra note 68; Burci & Quirin, supra note 49. See generally Hood, supra note 67 (discussing rationales for expanding definition of threats to peace and security).
\textsuperscript{122} See S.C. Res. 2177, supra note 8, at pmbl.; Roache et al., supra note 1, at 2–3.
\textsuperscript{123} See S.C. Res. 2177, supra note 8, at pmbl., ¶¶ 1, 4, 12.
\textsuperscript{124} See G.A. Res. 69/1, supra note 8, ¶¶ 1, 3; Burci & Quirin, supra note 49.
\textsuperscript{125} See G.A. Res. 69/1, supra note 8, ¶¶ 1, 3; Burci & Quirin, supra note 49.
as significant a global reaction as was necessary to eliminate the spread of Ebola.128

III. ANALYSIS

In an era of globalization, the transmission of a disease like Ebola is truly an international problem.129 As the spread of Ebola from Guinea to Liberia, Sierra Leone, and the rest of the world has shown, diseases spread easily across state borders as people travel and engage in trade.130 It is also evident that Guinea, Liberia, and Sierra Leone do not have adequate resources and infrastructure to contain the outbreak.131 Epidemics like Ebola clearly demonstrate that “microbes do not recognize borders . . . .”132 Instead, Ebola acts like a “nonstate actor[ ] with transnational power,” defying the political boundaries of sovereign states.133 Individual states, acting alone, cannot protect people from the spread of infectious diseases.134 Current non-binding international recommendations and resolutions, such as the IHR and Chapter VII of the UN Charter, merely “allow[] ideas to exist under the guise of law, without bite.”135 As a result, collective international action bolstered by strong enforcement mechanisms is needed to address the global spread of disease.136

Instead of the current non-binding tools, the IHR should be made binding on states and strengthened with mandatory enforcement capabilities and greater incentives for compliance.137 The WHO should be given more funding, and it should be reorganized to respond to disease outbreaks more effectively and to facilitate the adoption of long-term health solutions in developing countries.138 Lastly, states should acknowledge that diseases such as Ebola can be as dangerous as other threats to global security; thus, states should use the

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128 See Fink, supra note 113; Sun et al., supra note 11; Burci & Quirin, supra note 49; Ebola Situation Report, supra note 5. In fact, the UNSC Resolution did not come until after healthcare workers from Europe and the United States became infected. See Gostin, supra note 78; Ebola Fast Facts, supra note 5.

129 See David Fidler, Return of the Fourth Horseman: Emerging Infectious Diseases and International Law, 81 MINN. L. REV. 771, 773–74 (1997) [hereinafter Fidler, Return of the Fourth Horseman]; Giorgetti, supra note 54, at 1348.

130 See Asher, supra note 4, at 141–43; Roache et al., supra note 1, at 2–3, 4–5.

131 See Gostin, supra note 78, at 1; Roache et al., supra note 1, at 2–3, 4–5.

132 Fidler, Return of the Fourth Horseman, supra note 129, at 774.

133 Id. at 774–75, 811–12.

134 See id. at 774–75; Giorgetti, supra note 54, at 1350–51.

135 Asher, supra note 4, at 144–45.

136 See Fidler, Return of the Fourth Horseman, supra note 129, at 774–75; Giorgetti, supra note 54, at 1350–51.

137 See Hoffman, supra note 59, at 238–39, 240; Asher, supra note 4, at 166–70; Bishop, supra note 45, at 1218–23.

138 See Bishop, supra note 45, at 1211–13; Gostin, supra note 78; Heal Thyself, supra note 106.
principles of war under Chapter VII to guide their response to this non-
traditional threat to international peace and security.139

A. Improving the Effectiveness of the IHR’s and WHO’s Capacity to
Respond to the Ebola Epidemic

In order to combat the spread of Ebola, the currently non-binding mecha-
nisms of the IHR and WHO need to be strengthened and made binding on
member states.140 Given the interconnectedness of the IHR and WHO, both
must be improved in tandem because changing one without the other will have
only a limited effect on the cross-border spread of disease.141

1. Strengthening the International Health Regulations

When revised in 2005 to more broadly address global health crises, the
IHR shifted away from being a binding legal mechanism and moved toward
establishing non-binding global information networks and self-reporting re-
quirements.142 For example, the IHR require that states monitor and report po-
tential disease outbreaks and that states have strong domestic healthcare sys-
tems.143 In response to the current Ebola outbreak, the WHO issued temporary,
non-binding recommendations to guide states in their response to the epidem-
ic.144 These self-reporting requirements and temporary recommendations,
however, have not been implemented effectively, resulting in a gap between
states’ individual responses and the global community’s response.145 Many
states do not have the research, workforce, or surveillance capabilities required
under the IHR.146 In fact, as of 2013, no African state had fully implemented
the IHR’s core capacity requirements, even though forty-three of the forty-six
African states had performed assessments of their required core capacities.147

139 See U.N. Charter ch. VII; Bethlehem, supra note 73, at 771–72; Asher, supra note 4, at 135.
140 See Hoffman, supra note 59, at 240; Asher, supra note 4, at 166–70; Bishop, supra note 45, at
1218–23.
141 See Bishop, supra note 45, at 1175.
142 See Fidler, Emerging Trends, supra note 46, at 288–89; Editorial, What Lessons for the IHR?,
supra note 48.
143 See IHR Brief No. 1, supra note 54; IHR Brief No. 2, supra note 55.
144 See Statement on the 1st Meeting of the IHR Emergency Committee, supra note 7; Statement
on the 4th Meeting of the IHR Emergency Committee, supra note 103.
145 See Ann Marie Kimball & David Heymann, Ebola, International Health Regulations, and Safety,
146 Hoffman, supra note 59, at 239.
147 Kimball & Heymann, supra note 145. The IHR had an implementation deadline in June 2012,
but many states did not meet that deadline and instead requested an extension to continue building
their domestic capacities. See Hoffman, supra note 59, at 239.
A major obstacle to the proper implementation of the IHR is a lack of funding.148 Although the IHR require that states provide financial resources and support to develop and maintain strong domestic health systems, developed countries largely have failed to comply with the requirement that they assist other states, and the WHO currently does not have funding dedicated to building strong domestic health systems.149 As will be discussed in Part III.A.2, increasing the WHO’s funding and requiring states to contribute to a capacity-building fund would help to implement the IHR more effectively.150

In order to be a more operative tool in combating epidemics such as Ebola, the IHR also need to include stronger enforcement mechanisms for when states fail to react, act inappropriately, or otherwise do not meet the IHR’s capacity-building requirements.151 At present, the IHR do not include any mandatory enforcement capabilities, meaning that states that have fallen below the core capacity requirements have neither the opportunity nor the incentive to meet these unenforceable standards.152 In fact, a Review Committee established by the WHO to evaluate the IHR after the H1N1 flu pandemic in 2009 concluded that one of the “most important structural shortcomings of the IHR is the lack of enforceable sanctions” and other enforcement mechanisms.153

The IHR include “soft” mechanisms to encourage compliance such as relying on peer pressure from other member states and a dispute resolution system, but neither functions as a mandatory or binding requirement.154 Without

148 See Gostin, supra note 78; Heal Thyself, supra note 106.
149 See Gostin, supra note 78; Kimball & Heymann, supra note 145. Developed countries are legally obligated to assist developing countries in achieving the core capacity requirements; the IHR, however, do not provide clarification for how governments are supposed to collaborate in practice. See Hoffman, supra note 59, at 239–40.
150 See Hoffman, supra note 59, at 239–40; Kimball & Heymann, supra note 145.
151 See Hoffman, supra note 59, at 240; Giorgetti, supra note 54, at 1359; Asher, supra note 4, at 166–67. As Steven Hoffman, a professor of public health and law, explains, there can be extreme consequences when there are no enforcement mechanisms:

[U]nresolved disagreements can delay or prevent global action during health security emergencies, . . . possibly leading to unnecessary death, environmental damage, illness or financial collapse, in addition to the economic, psychological, and social costs associated with uncertain and fear. Disagreements over IHR compliance could also affect friendly relations among states . . . if a state’s health security interests were perceived to be sufficiently threatened.

See Hoffman, supra note 59, at 240.
152 See Giorgetti, supra note 54, at 1373–75; Asher, supra note 4, at 165–170; Gostin, supra note 78.
154 Giorgetti, supra note 54, at 1373–74, 1374 n.142; see also Hoffman, supra note 59, at 240 ("[T]he fundamental absence of any formal mechanism that can be expected to promote compliance.").
enforcement tools, states’ obligations to report epidemics quickly, develop national capacities, and assist other states are easily shirked.\textsuperscript{155} Moreover, without any binding mechanism to compel compliance, politics rather than law will determine the resolution of disputes.\textsuperscript{156}

One possible enforcement solution is a more detailed dispute resolution procedure with a codified list of IHR violations so that states can be more aware of what constitutes an enforceable violation.\textsuperscript{157} Once the IHR have been clarified, the dispute resolution system could be improved to guarantee that disputes are actually resolved and that the system is utilized more effectively.\textsuperscript{158} The IHR could establish an advisory entity to help states reach mutually agreeable resolutions.\textsuperscript{159} For example, states could seek advice from an independent legal expert about issues of IHR interpretation, or states could submit their disputes to a compulsory mediation organization, complete with professional, trained mediators.\textsuperscript{160}

To encourage states to meet the core capacity standards under the IHR, a supervisory committee of experts could be established to oversee states’ progress toward implementing the requirements.\textsuperscript{161} If a state falls behind or violates the IHR, the committee could make recommendations to assist the state in meeting the requirements or impose negative consequences.\textsuperscript{162} Some academics suggest that sanctions by individual states could be used to ensure compliance: states would be permitted to impose sanctions or trade restrictions to pressure other states that have violated the IHR or have not met their IHR ob-

\textsuperscript{155} See Giorgetti, supra note 54, at 1373–74; IHR Brief No. 1, supra note 54.
\textsuperscript{156} See Hoffman, supra note 59, at 242. Hoffman notes that, without enforcement, “[p]olitics is allowed to reign supreme—which historically has been detrimental to progress in public health—with weaker states left particularly disadvantaged and all states left vulnerable.” Id. Experts from the CDC have also criticized the WHO, explaining that “political considerations often overruled technical expertise at the United Nations agency.” See Stephanie Nebhaye, After Ebola, WHO to Set Up Contingency Fund, Develop ‘Surge Capacity,’ REUTERS (Jan. 27, 2015), http://www.reuters.com/article/2015/01/27/us-health-ebola-who-idUSKBN0L02M020150127 [http://perma.cc/CJP6-HKGD]. Politics are particularly at play when disputes between a state and the WHO are referred to the World Health Assembly, where there is a majority-rule system that “prioritizes politics and national self-interest over legal and scientific considerations.” See Hoffman, supra note 59, at 242.
\textsuperscript{157} See Asher, supra note 4, at 165–66.
\textsuperscript{158} See Hoffman, supra note 59, at 243–48; Asher, supra note 4, at 165–66; Bishop, supra note 45, at 1218–19.
\textsuperscript{159} See Hoffman, supra note 59, at 243–44.
\textsuperscript{160} See id. at 243. Hoffman also has suggested that a formalized adjudication mechanism could be established, either through a separate judicial body, a dispute resolution board, an ad hoc judicial body, or by reference to the International Court of Justice. See id. at 244–45. Such an adjudication mechanism would ensure that disputes are resolved and provide some consistency; these mechanisms, however, are less effective at resolving disputes over the interpretation of the IHR requirements or encouraging state compliance with the IHR requirements. See id. at 244–46.
\textsuperscript{161} See id. at 243–44.
\textsuperscript{162} See id.
ligations. Although sanctions may have some effect on compliance in the long run, they are not an appropriate tool to respond to disease epidemics such as Ebola. If the international community imposed sanctions on an affected state, the state would suffer double economic harm: the economic consequences of the sanctions as well as the socioeconomic consequences of an Ebola epidemic that reduces workforce productivity, foreign investment, and gross domestic product. This double harm would further hinder the state’s ability to respond to and recover from a disease epidemic. Accordingly, sanctions should not be relied upon to force states’ compliance with the IHR.

In addition to providing enforcement mechanisms, the IHR must provide more incentives for states to comply voluntarily. States parties to the IHR are much more apt to comply with the IHR when the advantages of compliance far outweigh the advantages of noncompliance. The WHO should consider providing affirmative economic incentives for states that comply with the IHR—as opposed to negative economic sanctions for noncompliance. For example, a compensation fund could be established to help reimburse affected states for property damaged due to a disease outbreak. The fund could be created subject to a corresponding repayment program so that affected states repay the money loaned to them. Another option could be to establish a fund to compensate individuals quarantined during a disease outbreak for lost income. Such a fund, however, would likely be very expensive to establish and administer. Given how broadly the quarantines were instituted in parts of Guinea, Liberia, and Sierra Leone and how difficult it would be to measure lost income among the affected population, this option, in all likelihood, is not viable.

The WHO should also provide greater incentives and assistance for improvements to domestic disease surveillance mechanisms, particularly for

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163 See Asher, supra note 4, at 168. For example, member states could be permitted to impose sanctions if, contrary to the IHR, a state instituted strict travel bans to contain a disease epidemic.

164 See id. at 169–70; Press Release, World Bank, supra note 33.

165 See Asher, supra note 4, at 169–70; Press Release, World Bank, supra note 33.

166 See Asher, supra note 4, at 169–70; Press Release, World Bank, supra note 33.

167 See Asher, supra note 4, at 169–70; Press Release, World Bank, supra note 33.

168 See Bishop, supra note 45, at 1217–23.

169 See Asher, supra note 4, at 150; Bishop, supra note 45, at 1217.

170 See Asher, supra note 4, at 168; Bishop, supra note 45, at 1217.

171 See Bishop, supra note 45, at 1219–20.

172 See id.

173 See id. at 1220–22.

174 See id.

175 See id. at 1222; Hodge, supra note 31, at 596; Press Release, World Bank, supra note 33. Moreover, such a fund would create myriad free-rider problems. See Bishop, supra note 45, at 1222. For example, the fund might encourage people to stop working even if they were not symptomatic or encourage people to relocate to a community that was quarantined in order to receive the benefits. See id.
states like Liberia, Guinea, and Sierra Leone that lack resources.\footnote[176]{See Bishop, \textit{supra} note 45, at 1217; Gostin, \textit{supra} note 78.} Developed countries must assist developing countries with establishing and implementing domestic capacities, particularly by sharing technologies and providing funding.\footnote[177]{See Bishop, \textit{supra} note 45, at 1217, 1223.} One way to incentivize developed countries to contribute money to developing nations is to ensure that the developed countries receive a return on their investment.\footnote[178]{See \textit{id.} at 1211–13.} Although spending money on health issues is expensive for any state, one unit of health expenditure in a developing state like Guinea, Liberia, or Sierra Leone will generate a disproportionately higher level of success than such an expenditure in a developed country because developing states have such a low public health baseline.\footnote[179]{See \textit{id.} at 1212; Gostin, \textit{supra} note 78.} Moreover, experts in international health have shown that money spent for “promotive, protective, and primary care services” in developing states leads to large improvements in public health measures and can generate benefits for other states, such as containing disease to a small region.\footnote[180]{See \textit{Bishop, supra} note 45, at 1212.}

The IHR also could make the receipt of certain funding conditional upon developing states’ meeting certain benchmarks in improving their disease surveillance and public health systems.\footnote[181]{See \textit{id.} at 1212–13.} Thus, developed states would receive results from their spending and developing states would have reason to make reforms in order to receive funding.\footnote[182]{See \textit{Bishop, supra} note 45, at 1212.} This incentive, however, should be used sparingly—only limited amounts of funding should be conditioned upon states’ performance because developing states rely heavily on outside funding to achieve health goals.\footnote[183]{See \textit{id.} at 1212–13.} Moreover, conditional funding would not be appropriate during an active disease epidemic such as Ebola due to the need for funding that can be rapidly mobilized to affected states.\footnote[184]{See \textit{id.}; Roache et al., \textit{supra} note 1, at 6–7; \textit{The Global Health Regime}, COUNCIL ON FOREIGN REL., http://www.cfr.org/health/global-health-regime/p22763#p2 (last updated June 19, 2013) [http://perma.cc/ZEJ7-VMXH].}

Finally, the monitoring and self-reporting requirements under the IHR need to be modified to encourage compliance by the international community.\footnote[185]{See Asher, \textit{supra} note 4, at 160–62, 166; Editorial, \textit{What Lessons for the IHR?}, \textit{supra} note 48. As one author has pointed out, “The problem is that reports, without action, are not enforcement.” Asher, \textit{supra} note 4, at 168.} Instead of unreliable self-reporting, the IHR should require the independent monitoring of states’ implementation of the IHR.\footnote[186]{See Asher, \textit{supra} note 4, at 161–62, 166; Editorial, \textit{What Lessons for the IHR?}, \textit{supra} note 48.} An outside non-governmental organization could be established to survey and monitor member states’ progress

\footnote[186]{See Asher, \textit{supra} note 4, at 160–62, 166; Editorial, \textit{What Lessons for the IHR?}, \textit{supra} note 48.}
in meeting the IHR standards and then report that progress to the WHO.187 If a state fails to meet the IHR requirements based on these assessments, then more formalized enforcement mechanisms could be initiated.188

2. Strengthening the World Health Organization

At present, surveillance and detection of potential health crises is a purely domestic problem.189 As one academic has noted, “no matter what the [WHO] mandates, it will always be limited by the sovereignty of its member states.”190 The WHO, for example, is not able to assist a state in responding to an infectious disease epidemic unless the state invites the WHO to provide such assistance.191 The WHO should be restructured and given greater resources so that it is more readily able to intervene when disease breaks out.192

First and foremost, the WHO needs to be given a larger and more flexible budget.193 Currently, the WHO’s budget consists of assessed contributions from member states as well as voluntary contributions.194 Its reliance on voluntary contributions, however, limits the WHO’s autonomy, particularly given that “the amount of funding allocated to the WHO serves as a measure of the degree of confidence donors have in the Organization and a gauge of the WHO’s performance and credibility in the world.”195 If donors are not feeling

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189 See Fidler, Return of the Fourth Horseman, supra note 129, at 811; Bishop, supra note 45, at 1202.
190 Bishop, supra note 45, at 1176.
191 See id. at 1202; Fidler, Return of the Fourth Horseman, supra note 129, at 811.
192 See Bishop, supra note 45, at 1212–22; Gostin, supra note 78; Heal Thyself, supra note 106.
193 See Bishop, supra note 45, at 1212–13; Heal Thyself, supra note 106; Youde, supra note 112. Although the WHO has control over how its mandatory dues are spent, the use of the voluntary contributions—which represent a majority of the WHO’s overall budget—is determined by the donors, not the WHO. See Youde, supra note 112. Thus, the WHO is heavily reliant on funding it cannot control, and the WHO has little recourse if a donor state’s interests do not align with those of the WHO. See id.
194 See Heal Thyself, supra note 106; Youde, supra note 112.
195 Bishop, supra note 45, at 1203. As the author explains:

The limitations in the WHO’s funding structure have resulted in an inherent dichotomy in the fight against infectious disease: in order to effectively combat infectious disease, the WHO is reliant on member states for both funding and disease outbreak information. Because the WHO has no mechanism to force member states to pay their financial dues and cannot compel states to allow WHO officials into their territory to fight illness, the Organization is extremely cautious in the way it deals with nations that do not comply with the IHR . . . . If the WHO did begin confronting nations in an effort to promote the WHO’s programs, member states would be disinclined to participate, and the WHO could be eliminated altogether.

Id. at 1203–04.
The WHO should increase the dues from member states—despite their consistent resistance—so that it can implement its programs regularly, make long-term plans, and avoid leaving affected states without recourse due to budgetary constraints. The Ebola epidemic has exposed the systemic vulnerabilities in West Africa; WHO member states must acknowledge the organization’s need for increased funding to respond to such epidemics. The transmission of Ebola from Africa to Europe and the United States has also demonstrated that the risk of the international spread of disease is very high. Developed states can protect themselves by assisting developing states in responding to the epidemic and by providing further funding. In addition to the incentives identified above, the WHO may be able to attract more funding from donor states by consolidating its organization and operations and by spending money in a more cost-efficient manner. The WHO could streamline its operations and its bureaucracy to reduce overhead costs or partner with other technical organizations to allocate responsibilities more efficiently. In the long run, the WHO should focus its spending on capacity building, disease surveillance, and sanitation efforts to prevent disease epidemics before they occur.

In addition to increasing its budget, the WHO should broaden its mission to encompass more proactive intervention into public health emergencies. The WHO, as a specialized agency of the UN, claims that it is not intended to be the “first responder” in health emergencies, but rather that it acts in an observational capacity. But if the affected states are too weak to respond to disease outbreaks and the WHO does not act as a first responder, then there will be a significant delay in the international community’s ability to react to disease epidemics. Instead of limiting itself to being an observer, the WHO

196 See id. at 1203; Heal Thyself, supra note 106.
197 See Bishop, supra note 45, at 1203–04; Editorial, What Lessons for the IHR?, supra note 48; Heal Thyself, supra note 106; Youde, supra note 112.
198 See Bishop, supra note 45, at 1217, 1223; Sun et al., supra note 11; Youde, supra note 112.
199 Ebola Situation Report, supra note 5; Roache et al., supra note 1, at 5–6.
200 See Bishop, supra note 45, at 1212–13; Ebola Situation Report, supra note 5.
201 See Bishop, supra note 45, at 1211–18.
202 See id. at 1213–14; Giorgetti, supra note 54, at 1375–76.
203 See Bishop, supra note 45, at 1213–14.
204 See Giorgetti, supra note 54, at 1374; Bishop, supra note 45, at 1199; Heal Thyself, supra note 106.
205 Fink, supra note 113; see Giorgetti, supra note 54, at 1374; Bishop, supra note 45, at 1199–1200. The current Director-General of the WHO has explicitly stated, “We are not the first responder.” Fink, supra note 113. As a result of decreases in the WHO’s budget and a reprioritization of issues, the WHO’s response capabilities have been scaled back over the past few years. See id.
206 See Bishop, supra note 45, at 1199–1200; Gostin, supra note 78; Roache et al., supra note 1, at 4, 10.
should revise its mandate so that it can respond more quickly and take preventative action: “Instead of doing the job of governments, it should focus on the things [governments] cannot manage alone, such as helping poor countries set up health systems, disseminating the best medical research and policies, and combating global epidemics.” Once the WHO has been backed by strong enforcement mechanisms, given greater funding, and reinvigorated with a modified mandate, politics can largely be left out of the international community’s response to global disease epidemics.

B. Responding to Ebola Under the UN’s Chapter VII Powers

As the UNSC acknowledged in its September 2014 Resolution, the Ebola epidemic poses a serious threat to international peace and security, and therefore, the international community should respond to the epidemic as such a threat.

The impacts of the Ebola epidemic are as dangerous as an act of aggression by a state actor: “Statistically, disease is a more formidable killer than war, with the power to completely destabilize governments.” Like war, disease epidemics reduce workforce capacity and productivity, threaten food security, erode government legitimacy, and create power vacuums that allow other states to take over control or territory. Moreover, disease epidemics can impede economic growth by reducing life expectancy, removing productive individuals from the workforce, imposing costs of prevention and treatment, and negatively impacting investments in a state’s businesses and infrastructure. As discussed in Parts I.B. and II.A., even though the health situation has improved significantly in Guinea, Liberia, and Sierra Leone during 2015, the socioeconomic consequences of the Ebola epidemic have been devastat-

207 Heal Thyself, supra note 106.
208 See Hoffman, supra note 59, at 240, 242; Bishop, supra note 45, at 1199–1200; Gostin, supra note 78. As noted in a recent New York Times editorial, “One big question, which can only be answered in practice, is whether the [WHO’s] 194 member states will set aside their typical politicking on behalf of national self-interests and allow it to function as the global health leader it ought to be.” Editorial, Reform After the Ebola Debacle, N.Y. TIMES (Feb. 10, 2015), http://www.nytimes.com/2015/02/10/opinion/reform-after-the-ebola-debacle.html [http://perma.cc/DLS6-ZCVY].
210 Asher, supra note 4, at 135; see Keita, supra note 209. Ibrahim Boubacar Keita, the President of Mali, stated, “Ebola has taught [West Africa] that infectious disease is equally capable of ignoring borders and destabilizing regions as any armed conflict.” Keita, supra note 209.
211 See UNITED NATIONS ENV’T PROGRAMME, AFRICA ENVIRONMENT OUTLOOK 2, 392–95 (2006), http://www.unep.org/dewa/Africa/publications/AEO-2/content/pdf/AEO2_Our_Envior_Our_Wealth_English.pdf [http://perma.cc/JEY7-D8ZD] [hereinafter AFRICA ENVIRONMENT OUTLOOK]; Hodge, supra note 31, at 596; Asher, supra note 4, at 135 n.3; Bishop, supra note 45, at 1206–07.
212 See Bishop, supra note 45, at 1206–07; Keita, supra note 209.
The combination of economic stagnation, restricted trade and travel, and a depleted workforce have destabilized the region and jeopardized its recovery, much like in a war zone. As a result, the global community should respond to Ebola in a manner similar to the way in which it responds to acts of aggression by state actors or other non-traditional threats to peace and security. As states respond swiftly and strongly to threats of war, the international community should respond to threats from infectious diseases at an early stage by notifying the WHO quickly, seeking the assistance of other states, and responding effectively to domestic conditions.

States should be guided by the principles of self-defense when responding to the Ebola epidemic. Self-defense is typically permitted when action is necessary and proportional to the threat at hand. The global community should utilize this standard as a benchmark to determine when global action is required to intervene in a global health crisis. To determine whether action is necessary, states could utilize the monitoring and information collection systems already established by the WHO and adopt an early-warning system. Using the information collected by the WHO and other non-governmental organizations, the affected states would be able to take action or seek assistance from others at an earlier stage. In effect, this would be analogous to permitting states to use force preemptively to respond to potential security threats. Though the use of force preemptively is not always a widely accepted form of self-defense, a preventative response to a potential disease outbreak—if implemented properly—could positively impact disease containment and access.

215 See Keita, supra note 209; Snyder, supra note 76.
216 See Azubuikere, supra note 74, at 167; Asher, supra note 4, at 166; Bishop, supra note 45, at 1223; Roache et al., supra note 1, at 4.
217 See Bethlehem, supra note 73, at 775–77; Snyder, supra note 76.
218 See Van den hole, supra note 73, at 96–97.
219 See id.
220 See Giorgetti, supra note 54, at 1375–76; Snyder, supra note 76.
221 See Giorgetti, supra note 54, at 1375–76; Snyder, supra note 76.
222 See Van den hole, supra note 73, at 72; Snyder, supra note 76. A state acting preemptively will use force “to repel an attacker before an actual attack has taken place . . . .” Van den hole, supra note 73, at 72. In the disease context, a response under the UNSC would be triggered before a disease outbreak becomes a full-blown epidemic. See id.; Roache et al., supra note 1, at 2–3; Burci & Quirin, supra note 49.
to emergency healthcare equipment and facilities while avoiding the negative consequences of a delayed response.223

As states’ self-defense measures in reaction to traditional security threats must be proportional, so too must states’ responses to disease outbreaks.224 Preemptive responses should be focused on triggering the IHR’s mechanisms early and on efficiently mobilizing resources, manpower, equipment, and knowledge.225 Treating a disease outbreak like a security problem and responding to it like an act of war, however, creates a risk of militarizing a disease outbreak; this in turn instills fear, deters symptomatic individuals from seeking treatment, and has damaging socioeconomic consequences.226 As a result, states should avoid harsh responses such as instituting lockdowns, travel bans, or strict quarantines.227 To avoid militarizing the Ebola epidemic, this “war” should be fought primarily by those states and organizations with medical expertise and experience in combating disease epidemics, rather than military forces.228

Moreover, states should act in collective self-defense in responding to future epidemics.229 In general, the international community approves the use of


224 See Bethlehem, supra note 73, at 775; Van den hole, supra note 73, at 102–04; Statement on the 4th Meeting of the IHR Emergency Committee, supra note 103.

225 See Asher, supra note 4, at 166; Gostin, supra note 78; Sun & Fairfield, supra note 223.

226 See Hodge, supra note 31, at 596; Sun et al., supra note 11; Roache et al., supra note 1, at 4; Statement on the 4th Meeting of the IHR Emergency Committee, supra note 103.

227 See Nossiter, supra note 92; Karen Greenberg, America’s Response to Ebola Looks Disturbingly Similar to the War on Terror, MOTHER JONES (Nov. 12, 2014), http://www.motherjones.com/politics/2014/11/4-lessons-war-terror-apply-ebola-fight [http://perma.cc/TKG7-2PW6]; Roache et al., supra note 1, at 4–5. To contain the spread of Ebola, several countries tried to prevent individuals from travelling by air. See Greenberg, supra; Roache et al., supra note 1 at 4; Statement on the 4th Meeting of the IHR Emergency Committee, supra note 103. Under the IHR, states are permitted to hold a passenger suspected of carrying a disease for non-invasive tests, observation and quarantine, medical treatment or to deny entry altogether. Alexandra R. Harrington, Germs on a Plane!: Legal Protections Afforded to International Air Travelers and Governments in the Event of a Suspected or Actual Contagious Passenger and Proposals to Strengthen Them, 22 J.L. & HEALTH 295, 306 (2009). The WHO, however, has explicitly encouraged states not to engage in such practices, which interfere with the flow of key goods and services, generate animosity, and impede the affected states’ recovery from the epidemic. See Bishop, supra note 45, at 1217–18; Statement on the 4th Meeting of the IHR Emergency Committee, supra note 103.

228 Greenberg, supra note 227. One way to accomplish this may be by further integrating health considerations into the missions of peacekeeping operations and including disease awareness in peacekeepers’ community outreach efforts. See Snyder, supra note 76. The UNSC explicitly incorporated its previous response to the HIV/AIDS epidemic in the mission of peacekeeping units, and a similar tactic could be employed with the current Ebola epidemic. See Burci & Quirin, supra note 49; Snyder, supra note 76.

229 See U.N. Charter art. 51; Azubuike, supra note 74, at 174–76; Van den hole, supra note 73, at 78; Roache et al., supra note 1, at 6–7.
collective self-defense in two scenarios: when a state is a member of an established collective defense alliance, or when a state requests that another state intervene on its behalf. Similar mechanisms could be established for states to respond to disease outbreaks like Ebola. States could come together in advance agreements to assist one another in responding to disease outbreaks. Much like the North Atlantic Treaty Organization (NATO), states could treat a disease threat to one state as a disease threat to all member states, thereby requiring rapid intervention by other member states. Such advance agreements to combat disease epidemics should require states to assist an affected state, in contrast to the current systems that are unable to compel action even when assistance has been requested. Furthermore, similar to what has occurred in the current Ebola epidemic, an affected state may make a formal request for assistance, which would permit other states to intervene on the affected state’s behalf and take any measures necessary and proportionate to the disease threat.

In the same way that states safeguard against armed attacks by maintaining critical infrastructure and stockpiling equipment, states should similarly shore up their domestic defenses against diseases like Ebola and receive assistance to build up domestic health capacities. One way to accomplish this

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230 See Azubuike, supra note 74, at 174–75. On the one hand, a state may act in collective self-defense to aid another state if the “victim state” has been attacked and has requested assistance from the other state. See id. at 174. On the other hand, states may enter into self-defense treaties that create an obligation on all members to assist each other in the event of an attack against a member. Id. at 175.


232 See Azubuike, supra note 74, at 175–76.

233 See North Atlantic Treaty art. 5, Apr. 4, 1949, 63 Stat. 2241, 34 U.N.T.S. 243. In order to maintain collective security, a NATO member state is required to respond to a threat directed toward another member state:

The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defense recognized by [the UN Charter] will assist the Party or Parties so attacked by taking . . . such action as it deems necessary . . . .

Id.

234 U.N. Charter chap. VII; WHO Const., supra note 42, at art 2; Bishop, supra note 45, at 1203–04.

235 See Azubuike, supra note 74, at 174–75; Cooper, supra note 231; Roache et al., supra note 1, at 6–7. In the context of war, a state that has been “attacked” must request assistance from another state to trigger collective self-defense. See Azubuike, supra note 74, at 174.

236 See Fidler, Return of the Fourth Horseman, supra note 129, at 828–29; Sun et al., supra note 11; Roache et al., supra note 1, at 3–4. See generally JOHN D. MOTEFF, CONG. RESEARCH SERV., RL30153, CRITICAL INFRASTRUCTURES: BACKGROUND, POLICY, AND IMPLEMENTATION (2010),
goal is for the UNSC to implement an early warning system to detect potential health and security situations and to spur early action. A special adviser could be established to collect information, assess potentially dangerous situations, and bring them to the attention of the UN Secretary-General, who then would make recommendations to member states. Such a system at the UN would complement and give strength to the WHO’s disease-tracking systems that are already in place but currently unable to formally recommend that the UNSC take action on a particular issue.

Although self-defense and the UNSC’s powers may be potent tools to mobilize international health interventions and to prevent widespread socio-economic devastation, these tools are limited by the fact that they are not aimed at controlling disease, but rather at a traditional state aggressor. First, there are no easily identifiable targets toward which states can direct action—“enforcement action in this case cannot be directed against particular ‘targets,’ and the practical value of enforcement actions squarely placed under Chapter VII seems questionable.”

Second, the traditional tools that states often use to respond to a threat to international peace and security would be less effective in the context of a disease outbreak. When attempting to stave off an act of aggression by a state actor, states acting in accordance with UN Chapter VII may impose sanctions on a state; use force against another state, if authorized; send in peacekeeping troops; or take other measures. These measures, however, would not be entirely effective against Ebola. For example, sending troops into a health crisis may worsen the situation on the ground and spread fear among the population. Although sanctions may encourage states to comply with international

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237 See Snyder, supra note 76.
238 See U.N. Secretary-General, Letter dated July 13, 2004 from the Secretary-General addressed to the President of the Security Council, U.N. Doc. S/2004/567 (July 13, 2014) (outlining special adviser’s responsibilities); Snyder, supra note 76.
239 See Snyder, supra note 76.
240 See Burci & Quirin, supra note 49.
241 Id.
242 See BOSCO, supra note 64, at 3–4; Burci & Quirin, supra note 49; Snyder, supra note 76.
243 See BOSCO, supra note 64, at 3–4; Snyder, supra note 76. Chapter VII gives the UNSC and its member states the power to employ any “such action . . . as may be necessary to maintain or restore international peace and security.” U.N. Charter art. 42.
244 See Burci & Quirin, supra note 49; Greenberg, supra note 227; Snyder, supra note 76.
law, imposing sanctions alone likely would not contain the spread of Ebola and may lead to negative socioeconomic consequences.246

Ultimately, to effectively fight Ebola like a war, states must balance the need to respond to disease threats swiftly and proportionately and to maintain readiness to defend against such “attacks” with the need to avoid reacting too strongly through use of extreme measures or brute force that create fear and isolate the affected states.247

CONCLUSION

The Ebola epidemic began in Guinea in March 2014 and spread quickly to Liberia, Sierra Leone, and across the globe. After more than a year, the epidemic has taken the lives of more than 11,000 people, and more deaths are likely to occur before the epidemic is fully contained. Guinea, Liberia, and Sierra Leone have been affected severely because chronic poverty has impeded the development of robust health systems, the states have recently emerged from long periods of civil war and instability, there is an extreme dearth of experienced healthcare workers and medical infrastructure, and rampant distrust of government has kept populations in fear. The socioeconomic consequences for the affected states have been overwhelming: the epidemic has reduced workforce productivity; interfered with trade, travel, and investment; and impeded economic growth.

In response to the epidemic, Guinea, Liberia, and Sierra Leone instituted quarantines and states of emergency, but these efforts were not fully effective. Their responses have been hindered by the states’ systematically weak healthcare systems and a drastic shortage of equipment. Consequently, international organizations and individual states stepped in to assist. The WHO declared the epidemic to be a public health emergency of international concern and made recommendations under the IHR. These IHR mechanisms, however, are not mandatory and have often been undermined by the WHO’s limited funding. In addition, the UN declared the Ebola epidemic to be a threat to international peace and security and established an emergency response mission for West Africa.

Although the responses of the WHO and UN were important steps to combat the spread of Ebola, additional and more rapid collective action—supported by strong enforcement capabilities and adequate funding—is needed to effectively address the global spread of disease. The IHR should be backed equipment. See Sun et al., supra note 11; Roache et al., supra note 1, at 7. Although troops may be helpful in mobilizing resources and coordinating logistics, sending foreign troops may simultaneously contribute to the destabilization of the situation on the ground. See Brumfiel, supra.

246 See Asher, supra note 4, at 168–70; Press Release, World Bank, supra note 33.
247 Greenberg, supra note 227; see Fidler, Return of the Fourth Horseman, supra note 129, at 828–29; Sun & Fairfield, supra note 223; Roache et al., supra note 1, at 4; Snyder, supra note 76.
by mandatory enforcement mechanisms that incentivize compliance with IHR requirements and lead to the guaranteed resolution of disputes. The IHR also should encourage developed countries to assist developing countries in maintaining domestic healthcare capacities and allow for third-party observers to ensure that states meet the IHR’s core capacity requirements. The WHO should be strengthened by allowing it to more readily intervene on behalf of states and by giving it a more active role in fighting the global spread of disease. To do so, the WHO will need a larger and more flexible budget with special funds established for emergency responses and developing domestic healthcare systems.

Since 2014, the effects of the Ebola epidemic have been as destabilizing as a war, prompting the UN Security Council to declare Ebola a threat to peace and security. Just as states respond swiftly and strongly to threats of war, the international community should respond swiftly and strongly to threats from infectious diseases like Ebola. States’ responses should be guided by principles of self-defense and the guidelines of Chapter VII of the UN Charter. In addition, states should act in collective self-defense against disease threats and maintain operational readiness to confront future disease epidemics without over-militarizing the situation on the ground.