

# Treating, Containing, Mobilizing

## *The Role of Médecins Sans Frontières in the West African Ebola Epidemic Response*

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The 2014–2016 Ebola epidemic in West Africa, 67 times the size of the largest previously recorded Ebola outbreak, with 28,639 cases and 11,316 deaths,<sup>1</sup> stunned the world, revealing the global health community's collective shortcomings in the face of a virulent and deadly disease. The epidemic also changed Médecins Sans Frontières (MSF), one of the key responders to the crisis, driving the medical humanitarian organization beyond its standard emergency operational role. Responding to the Ebola crisis in Guinea, Liberia, and Sierra Leone, as well as the spillover into Nigeria, Mali, and Senegal, was one of the largest emergency operations in MSF's 44-year history.<sup>2</sup> The cost was high: 28 MSF staff were infected in the outbreak, and 14 died.

The demands of this emergency drove MSF beyond its usual operational scope to training other organizations; assuming a leading role in strategic decisions at national levels; participating in clinical trials of experimental drugs, vaccines, and diagnostic tests with scientific partners; and taking part in lessons-learned workshops and conferences with governments, multilateral institutions, and academic groups. This was an evolution based on pragmatism, linked to four main factors: the deterioration of the epidemiological situation that overwhelmed capacity on the ground; few expert actors with limited capacity; technical and political failures at

<sup>1</sup> Jonathan Corum, *A history of Ebola in 24 outbreaks*, New York Times (Dec. 29, 2014) (noting 425 cases in Uganda in 2000); World Health Organization, West Africa epidemic numbers, Ebola situation report (Feb. 3, 2016).

<sup>2</sup> MSF responded to the Ebola epidemic in the three most affected countries—Guinea, Sierra Leone, and Liberia—and also responded to the spread of cases to Nigeria, Senegal, and Mali, as well as a separate epidemic in Democratic Republic of Congo in 2014. In total, the organization spent more than 96 million euros on tackling the epidemic.

local and international levels; and the moral and professional necessity to conduct trials of new therapies to find more efficient medical treatment beyond the supportive care provided in past outbreaks.

MSF's independent and flexible funding, preparedness to mitigate risks, and logistics capacity, combined with previous experience with filovirus outbreaks, positioned the organization as one of the first responders. However, due to the unprecedented scale of the outbreak and limited resources, MSF was faced with new, complex, and difficult strategic decisions. The typical six-pillar approach<sup>3</sup> to managing an Ebola outbreak was under strain from the onset, due the size and geographical spread of the epidemic. Pragmatic changes and alternative, often suboptimal, solutions had to be found each time a conventional strategy failed. In previous outbreaks, MSF had only ever needed to operate one, or exceptionally two, Ebola management centers (EMCs) at a time. During this epidemic, the organization set up and managed 15 EMCs and transit centers in the three most-affected countries, operating up to 8 simultaneously.

In this chapter, we examine the evolving role of MSF as the epidemic spread. Ultimately, the Ebola epidemic created vast shifts in the global health landscape, revealing strengths and, more commonly, weaknesses in various sectors of the global health community. MSF was not unaltered by this crisis and as a result underwent change as an organization.

## From Misdiagnosis to Mistrust

Had the virus not gone undetected in the first phase of the epidemic, the outbreak may not have spiraled out of control. A lack of detection is consistent with past experience with Ebola outbreaks. It often takes considerable time for the first cases to be confirmed. The past eight large outbreaks took on average 2 months to be recognized and investigated.<sup>4</sup> Symptoms are easily mistaken for those of other diseases such as cholera and malaria, and experts able to correctly diagnose Ebola and other hemorrhagic fevers were few, even among organizations experienced in Ebola outbreaks, such as MSF, the World Health Organization (WHO), and the US Centers for Disease Control and Prevention (CDC).

<sup>3</sup> In the past, partners in Ebola collaborated in tandem to control Ebola outbreaks with a formula that evolved into six core pillars: (1) isolate and care for patients, (2) make burials safe, (3) engage communities, (4) conduct disease surveillance, (5) trace contacts, and (6) re-establish healthcare systems. Engaging in one without another will fail to bring Ebola under control, particularly neglecting to gain the trust of the affected communities. Figure 2.1 illustrates the extensive presence of MSF personnel and facilities in the three most affected countries:

<sup>4</sup> Corum, *supra* note 1.

# Map of the region



Figure 2.1 West African Ebola Outbreak: MSF Activities in Liberia, Sierra Leone & Guinea.

This outbreak reportedly began with a child in Guinea's forest region who died on December 28, 2013.<sup>5</sup> At the end of January, a joint MSF and Guinea Ministry

<sup>5</sup> Almudena Mari Saez et al., *Investigating the zoonotic origin of the West African Ebola epidemic* 7(1) EMBO Molecular Medicine, 17–23 (2014), available at <http://embomolmed.embopress.org/content/early/2014/12/29/emmm.201404792>.

of Health team investigated five cases of severe diarrhea in the young child's village of Meliandou. The clinical and epidemiological evidence presented from these five cases did not suggest the Ebola virus, which was also unknown in the region. It was concluded it was not cholera and that further cases would be followed up by the Ministry of Health.

However, on March 14, the Guinea Ministry of Health reported an outbreak of a "mysterious disease" in the same region. This time the symptoms described in the report matched closely those of a viral hemorrhagic fever (VHF) and were brought to the attention of MSF specialists in Europe. Suspecting Ebola, MSF emergency teams with VHF experience were deployed to the region.

In the previous 20 years, MSF had accumulated experience in dealing with Ebola outbreaks, since its first intervention in the Democratic Republic of Congo in 1995. Since then, the organization had deployed in Ebola outbreaks in nine countries, alongside the usual Ebola international partners. This new outbreak, however, would be unlike the others. WHO published formal notification of an outbreak of the Ebola virus disease in Guinea on March 23, 2014. In the following months, the operational setup on the ground was guided primarily by the classical approach. In support of the national authorities, the US CDC sent in a team of Ebola experts, the Red Cross conducted safe burials, UNICEF supported the Ministry of Health in social mobilization, WHO headquarters provided logistical and technical support to the regional and country offices that led the response, and MSF teams opened EMCs and worked with the other organizations.

In the past, filovirus outbreaks primarily took place in remote areas where the six-pillar approach was simpler to implement. A key challenge of this outbreak from the onset was not the absolute number of cases, which until June remained similar to previous outbreaks, but the dispersal of small numbers of cases over a wide geographical area. This multiplied the human resources, logistics, and laboratory capacity required in each individual location to bring the epidemic under control.

For MSF teams, the unusual epidemiological profile was a red flag from the end of March: unconnected chains of transmission in multiple locations, epidemiological spread to a major urban center—Guinea's capital, Conakry—and alerts in neighboring Liberia.<sup>6</sup> On March 31, 2014, MSF declared the outbreak unprecedented due to "an epidemic of a magnitude never before seen in terms of the distribution of cases."<sup>7</sup> With their warning having little effect, MSF felt alone in voicing concern

<sup>6</sup> On March 31, Ebola was confirmed in Liberia in Foya, near the border of Sierra Leone and Guinea. An MSF team set up isolation units and trained health staff in Foya and Monrovia, but cases soon dwindled. By mid-May there had been no cases for more than 21 days, the maximum incubation period of the virus. New cases would re-emerge in Liberia in June.

<sup>7</sup> MSF, Guinea: Mobilisation against an Unprecedented Ebola Epidemic (Mar. 31, 2014), available at <http://www.msf.org/article/guinea-mobilisation-against-unprecedented-ebola-epidemic>.

publicly and calling for greater action. Indeed, this warning of March 31 would initially draw criticism from other health actors.<sup>8</sup>

Ebola had been silently spreading in the region for 3 months; in time, it would be fueled by population mobility, mistrust of authorities, fear of the unknown disease, unsafe burial practices, poor surveillance systems, weak national health systems, and a lack of commitment at the higher levels of the affected governments that left the ministries of health stranded. The biogeography of the epidemic exacerbated this already precarious situation, with the virus surfacing at the junction of three countries where borders are porous. The region is characterized by high population mobility, in part due to poverty where people regularly move in search of work, as well as frequent visits to extended family members dispersed across national borders.<sup>9</sup>

Previous Ebola outbreaks demonstrated the importance of earning the acceptance of the community because, without it, the risk rises that the sick are hidden or that mistrustful communities assail or threaten health workers. In the West African outbreak, social mobilization was a shared responsibility among various health actors under the coordination of the ministries of health and UNICEF. From March to July 2014, gaining trust from the communities proved to be the most crucial, yet the weakest, link. To stop the spread of the virus, substantial empowerment and investment in the affected communities, based on clear understanding of their culture and traditions, is required. Conducting safe burials, for example, must be based on an understanding of the community's practices and beliefs around death. Recent violent conflicts and poor health infrastructure made trust-building even more difficult than before.

Prior to the Ebola outbreak, the dysfunctional health services in all three fragile states, as well as inadequate infrastructure, "contributed to a profound distrust of the authorities who were unable to provide basic services, of which health was only one."<sup>10</sup> The reasons for the deficiencies range from recent protracted civil wars in Sierra Leone and Liberia to corruption, including in the health sector, a lack of investment in healthcare, and poor health services with critical shortages of qualified medical staff and fragile drug supply systems. It is, then, unsurprising that there was little trust in the healthcare system when Ebola struck.

<sup>8</sup> Saliou Samb, *WHO says Guinea Ebola outbreak small as MSF slams international response*, Reuters (Apr. 1, 2014), available at <http://www.reuters.com/article/us-guinea-ebola-idUSBREA301X120140401>.

<sup>9</sup> World Health Organization, *Factors that contributed to undetected spread of the Ebola virus and impeded rapid containment* (Jan. 2015), available at <http://www.who.int/csr/disease/ebola/one-year-report/factors/en/>.

<sup>10</sup> ICG, *The politics behind the Ebola crisis*, Africa Report N°232 (Oct. 28, 2015), available at <http://www.crisisgroup.org/en/regions/africa/west-africa/232-the-politics-behind-the-ebola-crisis.aspx>.

Once the virus was confirmed, many affected communities rejected proposed control measures out of fear and disbelief.<sup>11</sup> Unable to comfort their sick, accompany them to the hospital, or mourn or bury their family members, those in the affected communities instead witnessed foreigners in spacesuits who appeared in their villages and took away their loved ones, only half of whom returned. At the peak of the epidemic, people were often neither informed when their relatives died nor given the chance to bury them.

Public health messages at the onset of the outbreak proved disastrous. Poorly crafted messages such as “Ebola kills up to 9 out of 10 people” and “there is no treatment or vaccine” discouraged communities from seeking care in Ebola treatment centers and led to intentional hiding of cases. Top-down communications from the aid community, including MSF, and insufficiently engaging or relying on the local community to put in place control measures were critical mistakes.<sup>12</sup>

In Guinea, the distrust was compounded by past political manipulations linked to ethnicities, which magnified the resistance against control measures and led to direct violence against aid actors, including MSF, with rocks thrown at ambulances and forced temporary closures of EMCs. In the forest region, communities are still divided after secular conflicts that generated distrust in the national authorities.<sup>13</sup> Control measures recalled previous episodes of authoritarianism by a central state disrespectful of local cultures and were met with resistance.<sup>14</sup> In Sierra Leone and Liberia, as well as Guinea, several communities refused to believe that the Ebola outbreak was real, “judging it to be part of a government conspiracy to secure new funding from Western donors.”<sup>15</sup>

<sup>11</sup> Historically communities affected by filovirus outbreaks have reacted out of fear, disbelief, and hostility. This was the case for MSF in Kikwit, Democratic Republic of Congo, in 1995; at the border of Gabon and Congo in 2001–2002; in Congo again in 2003; and in Angola in 2005. Phillipe Calain and Marc Poncin, *Reaching out to Ebola victims: coercion, persuasion or an appeal for self-sacrifice?*, 147 Soc. Sci. Med. 126–133 (2015), available at <http://www.sciencedirect.com/science/article/pii/S0277953615302021>.

<sup>12</sup> ICG, *supra* note 10; World Health Organization, Report of the Ebola interim assessment panel—July 2015 (2015), available at <http://www.who.int/entity/csr/resources/publications/ebola/report-by-panel.pdf?ua=1>.

<sup>13</sup> Julianne Anoko, Communication with rebellious communities during an outbreak of Ebola virus disease in Guinea: an anthropological approach, Ebola Response Anthropology Platform (2015), available at [http://www.ebola-anthropology.net/case\\_studies/communication-with-rebellious-communities-during-an-outbreak-of-ebola-virus-disease-in-guinea-an-anthropological-approach/](http://www.ebola-anthropology.net/case_studies/communication-with-rebellious-communities-during-an-outbreak-of-ebola-virus-disease-in-guinea-an-anthropological-approach/).

<sup>14</sup> Mathieu Fribault, *Ebola in Guinea: historic violence and regimes of doubt*, 11 Anthropologie & Santé: Revue Internationale Francophone d'Anthropologie de la Santé (2015). French available at <http://anthropologiesante.revues.org/1761>.

<sup>15</sup> Adam Kamradt-Scott et al., *Civil-military cooperation in Ebola and beyond*, 387(10014) Lancet 104–105 (2016), available at <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2815%2901128-9/abstract>.

## Conflicting Messages

Though the surveillance data were poor from the outset, the worrying geographical spread of cases should have been sufficient to raise serious concern. Yet the national authorities in Guinea and Sierra Leone, as well as WHO, minimized the severity of the crisis, in part for political reasons.<sup>16</sup> Guinea's president predicted "rapid and final success" against the epidemic in late March 2014 and stated that the situation was "well under control" a month later.<sup>17</sup> Health officials in Guinea, and later also in Sierra Leone, were instructed to report only confirmed Ebola cases, leaving out suspected and probable cases, in an effort to artificially limit the numbers and the magnitude of the epidemic.<sup>18</sup> Fear of driving away investors and economic concerns compelled the government to downsize the perception of the outbreak's severity. These concerns were understandable: neighboring countries either closed their borders or restricted travel, while foreign workers from private companies left.<sup>19</sup>

National authorities in Guinea resisted, with some annoyance, MSF's March 31 declaration on the unprecedented nature of the outbreak. In May 2014, the president publicly accused the organization of spreading panic as a fundraising ploy.<sup>20</sup> The MSF representative was summoned to the president's office and informed that only WHO had the authority to communicate public messages on the outbreak, and that MSF was to fall in line with its assessments.<sup>21</sup> When it became clear that the outbreak was out of control, the national governments reversed course. They

<sup>16</sup> Maria Cheng and Raphael Satter, *Emails: UN health agency resisted declaring Ebola emergency*, AP (Mar. 20, 2015), available at <http://bigstory.ap.org/article/2489c78bff86463589b41f3faaea5ab2/emails-un-health-agency-resisted-declaring-ebola-emergency>. A note on IHR: Today's global health system, and the International Health Regulations in particular, rely on the state acting in good faith in epidemics. However, MSF's field experience in numerous infectious disease outbreaks demonstrates that states have little incentive to declare disease outbreaks, react to them with full force, or call for assistance in case their capacity is overstretched. An important lesson Ebola demonstrated on a much wider scale is that countries experiencing an outbreak must find incentives in the system, not economic or political punishment.

<sup>17</sup> Adam Nossiter, *Ebola now preoccupies once-skeptical leader in Guinea*, New York Times (Nov. 30 2014), available at [http://www.nytimes.com/2014/12/01/world/africa/ebola-now-preoccupies-once-skeptical-leader-in-guinea.html?\\_r=2](http://www.nytimes.com/2014/12/01/world/africa/ebola-now-preoccupies-once-skeptical-leader-in-guinea.html?_r=2).

<sup>18</sup> Paul Schemm, *WHO reduces Ebola death toll in Sierra Leone*, Yahoo.com (June 25, 2014), available at <http://news.yahoo.com/reduces-ebola-death-toll-sierra-leone-160340050.html>.

<sup>19</sup> Suerie Moon et al., *Will Ebola change the game? Ten essential reforms before the next pandemic. The report of the Harvard-LSHTM Independent Panel on the Global Response to Ebola*, 386(10009), *Lancet* 2204–2221 (Nov. 28, 2015).

<sup>20</sup> Boubacar Diallo, *Ebola en Guinée: Quand Alpha Conde s'en prend à MSF, l'ONG de son "ami-jumeau"* Bernard Kouchner, *Africaguinee.com* (May 12, 2014), French available at <http://www.africaguinee.com/articles/2014/05/12/ebola-en-guinee-quand-alpha-conde-s-enprend-msf-l-ong-de-son-ami-jumeau-bernard>.

<sup>21</sup> Personal experience of author M. Poncin, then emergency coordinator in Guinea.

then sought MSF's assessments of the outbreak and response, particularly after an August 2014 visit by MSF international president Dr. Joanne Liu to the 3 countries and meetings with those countries' presidents.

It was not until the end of May 2014 that the outbreak in Sierra Leone was confirmed, though it had been silently spreading for months and then went on to reignite the epidemic in Liberia.<sup>22</sup> Prior to this date, not all suspicions of cases were followed up, including alerts MSF had sent to the Sierra Leone authorities in March, and weak surveillance missed the presence of the virus long before its official confirmation. As in Guinea, Sierra Leone's minister of health and sanitation in Freetown was upset by MSF's alarms and instructed MSF to stop its dismaying communication.<sup>23</sup>

The first Ebola cases in Sierra Leone from the end of May were referred to Kenema Government Hospital, a Ministry of Health-run facility experienced in treating Lassa, another viral hemorrhagic fever. Over the following weeks, the rapid increase in cases strained the hospital's capacity. The subsequent chaotic situation in Kenema during the summer of 2014 was illustrative of the dramatic evolution of the outbreak and the dangers of managing an Ebola center without adequate infection control. More than 40 health workers succumbed to the virus in Kenema, while "shoddy supplies, little support and infighting exacerbated the chaotic situation," according to an Associated Press investigation.<sup>24</sup>

In late June 2014, MSF opened a 32-bed EMC in Sierra Leone's Kailahun district, near the Guinean border; the center was quickly overwhelmed with patients and had to be expanded to 65 beds. MSF received little clear information about or overview of the epidemiology of the outbreak, due in part to a lack of effective collaboration with other actors on the ground.<sup>25</sup> The delayed recognition of the outbreak meant the intervention came too late, while the high numbers of patients meant that the MSF team had to prioritize patient care and reduce critical outreach activities. Controlling the epidemic by preventing the spread of the virus and breaking disparate transmission chains through contact tracing, surveillance, or community mobilization proved nearly impossible.

In contrast to Guinea and Sierra Leone, authorities in Liberia recognized the seriousness of the epidemic immediately, but by then available support was dwindling. MSF received nearly daily phone calls from the Liberian Ministry of Health

<sup>22</sup> Kevin Sack, Sheri Fink, and Adam Nossiter, *Ebola's Deadly Escape*, New York Times, (Dec. 29, 2014).

<sup>23</sup> Internal MSF email dated April 4, 2014, from MSF head of mission in Sierra Leone to MSF headquarters, following an Ebola National Task Force meeting in Freetown.

<sup>24</sup> Maria Cheng, Raphael Satter, and Krista Larson, *AP investigation: bungling by UN agency hurt Ebola response*, AP (Sept. 20, 2015), available at <http://bigstory.ap.org/article/3ba4599fdd754cd-28b93a31b7345ca8b/ap-investigation-bungling-un-agency-hurt-ebola-response>.

<sup>25</sup> MSF, *Pushed to the Limit and Beyond*, Geneva, Médecins Sans Frontières (2015), available at <http://www.msf.org.uk/article/ebola-pushed-to-the-limit-and-beyond-msf-report>.

requesting support in June, but, already overstretched in Guinea and Sierra Leone, the organization did not have sufficient Ebola-experienced personnel to respond to the extent required.

The lack of national leadership in the early phase was coupled with that of the world's public health guardian, the World Health Organization. After initially disputing MSF's March 31 declaration, WHO on April 8 held a press conference acknowledging that the epidemic was "one of the most challenging outbreaks ever faced." However, translating this recognition into robust action did not follow on the scale required.

WHO ultimately failed in its leadership role in guiding, supporting, and facilitating international, regional, and national epidemic management for a variety of reasons, many inherent to the structure of the organization itself.<sup>26</sup> National guidance for the authorities was deficient, while practicalities were not ensured, such as regular payment of surveillance teams and provision of necessary logistical means (e.g., transport and training) to carry out their duties. Considering the regional dimension of the outbreak and the population mobility, a strong surveillance system across borders was needed, but collaboration and communication between the countries was poor or nonexistent, and imported cases in new areas were not investigated thoroughly.

WHO inaction was also a product of political and economic pressures. Internal documents from early June 2014 show that the organization's leadership feared a declaration of public health emergency could be seen as a "hostile act" and "could anger the African countries involved, hurt their economies or interfere with the Muslim pilgrimage to Mecca."<sup>27</sup> In early July, the WHO assistant director-general, Dr. Keiji Fukuda, stated at a press conference that the outbreak was serious, but that all actions to deal with an Ebola epidemic were being implemented, and the epidemic was "not out of control."<sup>28</sup> This statement directly contradicted another warning MSF issued days earlier. Following its teams' estimation of active transmission of the virus in more than 60 locations, MSF publicly declared that the outbreak was "out of control," the organization was at its maximum capacity, and a

<sup>26</sup> Moon et al, *supra* note 19; WHO, Report of the Ebola interim assessment panel—July 2015, available at <http://www.who.int/entity/csr/resources/publications/ebola/report-by-panel.pdf?ua=1>; Laurie Garrett, *Ebola's lessons: how the WHO mishandled the crisis*, Foreign Affairs (Aug. 18, 2015), available at <https://www.foreignaffairs.com/articles/west-africa/2015-08-18/ebolas-lessons?campaign=Garrett>; National Academy of Medicine, *The Neglected Dimension of Global Security: A Framework to Counter Infectious Disease Crises*, Commission on a Global Health Risk Framework for the Future (2016), available at <http://www.nap.edu/catalog/21891/the-neglected-dimension-of-global-security-a-framework-to-counter>.

<sup>27</sup> Cheng and Satter, *supra* note 16.

<sup>28</sup> Boubacar Diallo, *Ebola en Afrique de l'Ouest: "l'épidémie n'est pas hors de contrôle," selon l'OMS*, *Africaguinee.com* (July 10, 2014), available at <http://www.africaguinee.com/articles/2014/07/10/ebola-en-afrique-de-l-ouest-l-epidemie-n-est-pas-hors-de-contrôle-selon-l-oms>.

massive deployment of resources was needed on the ground.<sup>29</sup> With such conflicting messages, it is little wonder that the initial international response was slow and confused. National governments typically take greater heed of the assessments of the UN than of nongovernmental organizations (NGOs); this explains in part why MSF's warnings went unheard.

MSF's "out of control" declaration followed a stark message sent by the field team in Guinea to MSF headquarters in June. It warned that at the moment when cases were on the rise across the country, the MSF teams were exhausted, gaps in human resources were increasing, and operational standards were being undermined with increased risk-taking, causing fear of potential staff contamination.<sup>30</sup>

It was not until July 2014 that WHO set up a meeting between the three national heads of government and established a regional coordination body in Conakry. While this commenced global reporting of cases, it resulted in little improvement for provision of care for patients or epidemic containment. The coordination between international and national partners remained weak and inefficient, at both national and regional levels. According to MSF: "decisions on setting priorities, attributing roles and responsibilities, ensuring accountability for the quality of activities, and mobilizing the resources necessary were not taken on the necessary scale."<sup>31</sup> By late July, more than 1,400 people had been infected and 800 deaths had been recorded, yet MSF remained one of the very few international aid organizations caring for infected people for most of this period, running four EMCs, as well as smaller transit units.

## From Global Fear to Political Action

By early August 2014, Liberia, Sierra Leone, and Guinea had all declared a state of national emergency in recognition of the severity of the crisis. The health authorities and governments were struggling under the weight of the epidemic, and coordination remained weak.

In epidemics or emergency response, MSF does not generally intervene actively at the national level in developing strategies or coordinating other actors because this is the role of national authorities with the support of the United Nations. The ministries of health are MSF's usual counterpart in the field, although they are often one of the less influential ministries in government.

<sup>29</sup> MSF, Ebola in West Africa: epidemic requires massive deployment of resources (June 21, 2014), available at <http://www.msf.org/article/ebola-west-africa-epidemic-requires-massive-deployment-resources>.

<sup>30</sup> Internal MSF email of author M. Poncin, then emergency coordinator in Guinea, to MSF headquarters, dated June 11, 2014.

<sup>31</sup> MSF, *supra* note 25.

As the outbreak burgeoned, national governments asked MSF for further support, and by midsummer the organization began occupying the unusual role of technical adviser, particularly in Guinea and Liberia, on control strategies and coordination with other actors. For example, the MSF team in Guinea shared its concerns with the minister of health and the president in August on the poor functioning of national and international coordination, and suggested possible actions for managing the crisis and establishing prompt and appropriate response measures.<sup>32</sup> The recommendations contributed to the establishment in September of a new and more efficient national coordination cell, an illustration of what has been described as “MSF’s role of the ship’s bow, guiding the international efforts.”<sup>33</sup>

Such input and liaison with higher levels of government were atypical for MSF, and its involvement was far from ideal; the organization lacked experience in external coordination, and its standard periodic rotations of coordination staff often meant that advising individuals held their positions too briefly to build proper relationships with their national counterparts. This evolution during the epidemic was ultimately linked to three main factors: the organization’s past experience with the virus, WHO technical and political missteps that failed to give direction or coordinate with other actors, and the fact that the epidemic was labeled a health rather than a humanitarian crisis, meaning “that the surge capacity, emergency funding, and coordination structures typical of a large-scale disaster response were not triggered, and the formal cluster system was not activated across the board.”<sup>34</sup>

The outbreak spiraled further out of control in August, with case numbers increasing dramatically in Liberia and Sierra Leone. Although conditions for such a declaration had been met at least 2 months earlier,<sup>35</sup> it was not until August 8, 2014, that WHO declared the outbreak to be a “public health emergency of international

<sup>32</sup> Formal MSF letter sent by email to the minister of health, August 25, 2014.

<sup>33</sup> François Grünewald, *Ebola: comment le virus est sorti de la clairière*, 40 *Humanitaire* 32–43 (2015), available at <http://humanitaire.revues.org/3135>.

<sup>34</sup> DuBois et al, *The Ebola response in West Africa: exposing the politics and culture of international aid*, Working and Discussion Paper, ODI (Oct. 2015), available at <http://www.odi.org/publications/9956-ebola-response-west-africa-exposing-politics-culture-international-aid>.

<sup>35</sup> The epidemic more than met the following criteria examples for a PHEIC: high case fatality; significant public health risk; cases reported among health staff; event in an area of high population density; inadequate human, financial, material, and technical resources; insufficient laboratory and epidemiological capacity; lack of drugs or vaccines; existing surveillance system inadequate to detect new cases in a timely manner; occurrence of the event itself unusual for the area; international travel (in the subregion); highly mobile population; and the event causing requests for more information by foreign officials and international media. From the annex of “Examples for the application of the decision instrument for the assessment and notification of events that may constitute a public health emergency of international concern” (*International Health Regulations*, 2nd ed. Geneva: World Health Organization 44–46 (2005)).

concern” under the International Health Regulations, at which point more than 1,000 people had died.

The world began to take the crisis seriously. Multiple reasons have been theorized as to why the international awakening was slow in the many expert panels and academic articles dedicated to the subject, but two seemed clear from MSF’s perspective. On July 25, the virus had reached Nigeria via an air passenger from Liberia, sparking fears that Ebola would spread in Africa’s most populous nation.<sup>36</sup>

The second reason, and undoubtedly the most convincing one for wealthy countries, was the realization that Ebola could travel and become an international security threat. At the end of July, two US nationals from the US aid group Samaritan’s Purse became infected in Monrovia, and the organization suspended all operations in Liberia. The subsequent evacuation of these individuals to the United States for treatment raised global awareness of the threat Ebola posed. The suspension of Samaritan’s Purse EMCs, the only two available in Liberia, was also a wake-up call for MSF. In the absence of any others to take them over, MSF “decided to push beyond its threshold of risk, and took over the two centers, sending coordinators without Ebola-experience and staff with only two days of Ebola training.”<sup>37</sup> Given the explosion of cases in the region, it was clear that deploying further MSF teams would not be sufficient and that further support from other organizations was necessary.

Ebola-specific expertise was scarce when the outbreak began, including in MSF, with only approximately 10 viral hemorrhagic fever specialists and 30 staff with previous Ebola experience. The virus itself was also the cause of much of the initial inertia. The deadly and contagious disease with distressing symptoms and no proven treatment provoked an “atmosphere of fear unparalleled in a sector well-used to danger.”<sup>38</sup> Fear spread more quickly than the infections and was a major impediment for international aid agencies. MSF was also not immune; organizational reluctance to deploy inexperienced staff delayed mobilization of the organization’s full capacity.

In recognition of the growing shortage of qualified staff in all sectors, and its critical need for confrères in the fight against the epidemic, MSF opened its Ebola training centers for external organizations focusing on medical management and infection and prevention control measures for safely running EMCs. More than 1,000 MSF staff and personnel from external organizations were trained at the MSF centers in Europe, with thousands more trained on-site in the affected countries. This had a knock-on effect with other organizations, which scaled up their activities and went on to train others in turn.

In addition to facing the tangible threat of danger in the field, MSF international staff encountered extreme reactions on their return home. They were often shunned

<sup>36</sup> The Nigerian government utilized a dedicated public health emergency operations center previously set up for polio, while extensive contact tracing efforts helped avoid a widespread epidemic.

<sup>37</sup> MSF, *supra* note 25.

<sup>38</sup> DuBois et al., *supra* note 34.

by their family and friends, uninvited to gatherings, or banished from staying at or visiting the family home. The communities in the affected countries ostracized locally hired staff, resulting in other difficulties in addition to the mental health effects of the grueling tasks required to manage the crisis.<sup>39</sup>

Fear also compelled many countries to impose trade and travel measures that “lacked scientific and public health justifications and few bothered to explain their actions,” in contravention of the International Health Regulations.<sup>40</sup> Some governments restricted the movements of healthy returning aid workers, justifying strict quarantine measures to mitigate public anxiety rather than applying measures based on science and evidence.<sup>41</sup> Airlines refused to fly to the region, with few notable exceptions. MSF conducted information-sharing sessions with SN Brussels Airlines staff to help assuage fears in an effort to keep the flights; to the organization’s relief, this effort was successful.

Medical evacuations of infected staff were another deep concern, with fears that MSF would not be able to recruit international staff if there was no option to evacuate them if they fell ill. MSF spent precious time lobbying for the European Union to pool resources and put planes on standby in West Africa or Europe, but “the proposals ran into arguments over who would provide the aircraft, who would foot the bill, and most contentious, who would take overall control.”<sup>42</sup>

With the WHO declaration and Ebola’s new threat to wealthy nations, the outbreak became worldwide daily news. MSF participated in hundreds of media interviews per day, regularly calling for more assistance. Still, mass international support was not deployed in August or September 2014.

The number of new Ebola cases in Liberia skyrocketed by August, rising from fewer than 10 in June to more than 1,000 in the space of 2 months. The six-pillar approach crumbled due to the spread and volume of cases; MSF staff in the field and in headquarters scrambled to adjust their treatment and control options to the exploding epidemic. In Monrovia, MSF had to construct the largest EMC in history, with a capacity of 250 beds.<sup>43</sup> Despite this scale-up, the center was almost

<sup>39</sup> Helene Cooper, *They helped erase Ebola in Liberia. Now Liberia is erasing them*, New York Times (Dec. 9, 2015), available at <http://www.nytimes.com/2015/12/10/world/africa/they-helped-erase-ebola-in-liberia-now-liberia-is-erasing-them.html>.

<sup>40</sup> David Heymann et al., *Global health security: the wider lessons from the West African Ebola virus disease epidemic*, 385(9980) *Lancet* 1884–1901 (May 9, 2015).

<sup>41</sup> Kaci Hickox, *Caught between civil liberties and public safety fears: personal reflections from a health-care provider treating Ebola*, 11 *J. Health & Biomedical Law* 9–23 (2015).

<sup>42</sup> Sheri Fink, *Ebola crisis passes, but questions on quarantine persist*, New York Times (Dec. 2, 2015), available at [http://www.nytimes.com/2015/12/03/health/ebola-crisis-passes-but-questions-on-quarantines-persist.html?\\_r=0](http://www.nytimes.com/2015/12/03/health/ebola-crisis-passes-but-questions-on-quarantines-persist.html?_r=0).

<sup>43</sup> Prior to the West Africa epidemic, a 40-bed center was the largest the organization had built to respond to an Ebola outbreak.

immediately overwhelmed, and it could be opened for only 30 minutes each morning to fill the beds vacated by those who had died the night before.

The vastly insufficient bed numbers across Monrovia led MSF to distribute tens of thousands of family and home disinfection kits to provide some protection for household contacts of Ebola patients. The organization also dispensed antimalarial tablets to more than 650,000 people in Monrovia, with the dual aim of preventing malaria and reducing the pressure on EMCs from people incorrectly assuming they had Ebola. These were imperfect solutions as the organization attempted to adapt its operational strategy to respond to the reality on the ground.

## The Option of Last Resort

On September 2, 2014, Dr. Joanne Liu, MSF international president, briefed the UN member states in New York on the status of the outbreak, stating that “the world had been losing the battle against Ebola for the past six months,” emphasizing that the medical teams on the front line were exhausted, and calling for the deployment of civilian and military units with biological warfare expertise.<sup>44</sup>

This call was uncharacteristic for MSF, and the decision was made with reservations because, to guard its independence and ensure humanitarian access to patients, the organization maintains a deliberate distance from armed forces. In the case of the Ebola epidemic, the call was exceptional and based on the belief that the military would have the means and the know-how to intervene on the scale required and could stem the tide of the epidemic while aid agencies trained to deploy. The organization was cautious to clarify it was not making a request for armed stabilization, and that military assets and personnel should not be used for law enforcement, quarantine, containment, or crowd control measures—which could further destabilize the region and force more infected people underground. Fortunately, these concerns did not materialize in the subsequent military response.<sup>45</sup>

The statement of Dr. Liu to the UN was followed by another on September 18, 2014. Via videoconference from Monrovia, MSF’s Liberian team leader, Jackson K. P. Naimah, addressed the emergency session of the UN Security Council, illustrating the severity of what was faced on the ground, stressing that the visibly ill

<sup>44</sup> Specifically, MSF called for field hospitals with isolation wards to be scaled up, trained personnel to be sent out and care for patients, mobile laboratories to be deployed, and air bridges to be established to move personnel and materials to and within West Africa. MSF, United Nations Special Briefing on Ebola (Sept. 2, 2014), available at <http://www.doctorswithoutborders.org/news-stories/speechopen-letter/united-nations-special-briefing-ebola>.

<sup>45</sup> Andre Heller Perache, “*To put out this fire, we must run into the burning building*”: a review of MSF’s call for biological containment Teams in West Africa, 64 Humanitarian Exchange (June 2015), available at <http://odihpn.org/magazine/to-put-out-this-fire-we-must-run-into-the-burning-building%C2%92-a-review-of-msf%C2%92s-call-for-biological-containment-teams-in-west-africa/>.

were being turned away from MSF's center for lack of space, and requesting urgent help.<sup>46</sup>

The UN Security Council, having determined that the epidemic constituted a threat to international peace and security, passed Resolution 2177 urging member states to provide more resources to combat the outbreak. The global community mobilized, with commitments of resources by the United States, the United Kingdom, France, the African Union, Cuba, China, the European Union, Russia, the World Bank, the International Monetary Fund, and others.

The UN Mission for Ebola Emergency Response (UNMEER) was created to coordinate the UN agencies' response, bypassing both WHO and the traditional UN body for emergency coordination, the Office for the Coordination of Humanitarian Affairs (OCHA). Despite acknowledgment that UNMEER provided better UN internal coordination and a cross-border view of the crisis, critical views have emerged about its expense, its slowness to deploy, its distance from the affected countries with its coordination based in Ghana, and how it bypassed the existing coordination mechanisms and deprioritized non-Ebola assistance and protection activities.<sup>47</sup> Indeed, as the WHO Ebola Interim Panel Assessment asserts, UNMEER was not the appropriate model for managing the large-scale emergency, and the establishment of a UN mission would not be recommended for future emergencies with health consequences.<sup>48</sup>

Although WHO was not charged with coordinating the UN response, positive changes on the ground developed, notably with the replacement of the country representatives, the deployment of more experienced staff to manage their Ebola activities, and direct operational support in surveillance and contact tracing in the affected countries.

Globally, political attention was raised and resources pledged in September 2014, but it was not until October that widespread international aid slowly began to be deployed in the affected countries, "taking months for funding, personnel, and other resources to reach the region."<sup>49</sup> By this stage, there had been around 9,000 cases, half of which had been treated by MSF. The slow response resulted in needless suffering and cost many lives. A report by the UK government quotes research indicating that as many as 12,500 cases of Ebola could have been prevented if interventions had been delivered 1 month earlier.<sup>50</sup>

<sup>46</sup> MSF addresses UN Security Council emergency session on Ebola, (Sept. 18, 2014), available at <http://www.msf.org/article/msf-addresses-un-security-council-emergency-session-ebola>.

<sup>47</sup> DuBois et al., *supra* note 34.

<sup>48</sup> World Health Organization, *supra* note 12.

<sup>49</sup> Moon et al., *supra* note 19.

<sup>50</sup> *Ebola's legacy: UK deficits and their global lessons*, 387(10017) *Lancet* 403 (Jan. 30, 2016), available at <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2816%2900209-9/fulltext?rss=yes>.

More than 5,000 military personnel were deployed by the United States, the United Kingdom, France, China, Canada, and Germany, the majority of whose efforts were limited to support, coordination, and logistics for the work of NGOs and the local authorities instead of hands-on clinical care for Ebola patients. However, their deployment was “key to convincing several non-governmental organizations to maintain or establish operations in the affected countries.”<sup>51</sup> In particular, the establishment of three medical facilities in each of the capital cities to treat local and foreign healthcare workers was reassuring for NGOs to deploy their staff and bolstered local healthcare workers and authorities.

The level and approach of international support differed across the three countries. In Guinea, MSF remained the only aid organization running EMCs until November 2014. MSF lobbied the French government in Conakry and Paris to step up its efforts and ultimately signed an agreement with the French Red Cross to assist it in setting up an Ebola center in Macenta, the epicenter of the epidemic at that time.<sup>52</sup> MSF constructed the center, trained the French Red Cross international and national staff, and provided support by ordering supplies through the MSF Supply Center. Supporting other NGOs in this way was yet another first for the organization.

## The Long Road to Zero

The epidemic finally turned a corner toward the end of 2014, and case numbers began declining in the region. Strong community mobilization, particularly in Liberia, has been found to have been a major contributing factor to this decrease.<sup>53</sup> However, the outbreak persisted, with several challenges, particularly related to operational coordination among the multitude of actors, regional cooperation across borders, and contact tracing and surveillance, with new cases emerging without known links to existing cases.

Ongoing misconceptions about the virus and intense stigma continued, with some people suspected to have Ebola still avoiding treatment or reporting cases. Throughout the outbreak, health workers not only faced the risk of contamination but also were recurrently rejected by the communities they aimed to assist, sometimes experiencing direct violence. Assaults persisted into 2015 in Guinea and even

<sup>51</sup> Kamradt-Scott et al., *supra* note 15.

<sup>52</sup> Radio France International, *Ebola: à Macenta, un centre “quatre étoiles” contre l’épidémie* (Nov. 15, 2014), French available at <http://www.rfi.fr/afrique/20141115-ebola-macenta-guinee-msf-croix-rouge-girardin>.

<sup>53</sup> Sharon Alane Abramowitz et al., *Community-centered responses to Ebola in urban Liberia: the view from below*, 9(4) PLoS Negl Trop Dis. (2015), available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4391876/>.

extended into 2016 during the resurgence of cases in Sierra Leone.<sup>54</sup> Yet national health workers on the ground continued to “show immense courage and professionalism in dealing with such challenges despite minimal levels of support.”<sup>55</sup>

Difficulties in adapting to the rapid changes and new hot spots of the outbreak were observed, with international resources continuing to be allocated where they were no longer the priority. In Monrovia, for example, more EMCs were being built in December despite an already adequate isolation capacity and a drop in cases in the capital. Yet new cases were appearing elsewhere in the country, and in some locations patients still had to travel up to 12 hours by road to reach an Ebola center and a functioning laboratory.<sup>56</sup> The bulk of the direct care of patients and work with the communities was carried out by local people, government authorities, and NGOs.

From December 2014 onward, MSF focused on improving its quality of care and activities across the three countries. Innovations were piloted such as improvements to the design of EMCs, the use of electronic, tablet-based patient data management in the high-risk zone, and further development of protocols for pregnant women. It was also in this period that the first Ebola experimental treatment trial in West Africa began, at MSF’s center in Guéckédou, Guinea, on December 17.

Four months earlier, in August, an advisory panel convened by the director-general of WHO confirmed that using Ebola products not yet tested on humans was ethical given the nature of the epidemic. Research and development efforts were swiftly put into motion under WHO coordination. MSF contributed to the design of clinical protocols and, for the first time in the midst of an emergency, partnered with research institutions, WHO, ministries of health, and pharmaceutical companies to trial experimental treatments and vaccines.

In 2015, trials for the experimental treatments favipiravir and convalescent plasma took place in MSF’s centers in Guinea, as did trials for the drug brincidofovir in Liberia. The trial of the rVSV-EBOV vaccine started in Guinea in March 2015, led by WHO, MSF, the Norwegian Institute of Public Health, and the Guinean health authorities. In July 2015, promising results of the vaccine trial were published in the *Lancet*, with the interim review stating 100% efficacy.<sup>57</sup> More research and analysis are needed, but the vaccine proffered long-awaited good news for those who might be exposed to the disease (i.e., contacts of infected patients and front-line workers).

<sup>54</sup> BBC, *Ebola outbreak: Sierra Leone clashes over market closure* (Jan. 26, 2016), available at <http://www.bbc.com/news/world-africa-35409690>.

<sup>55</sup> Marc Poncin, *Ebola healthcare workers: a hazardous and isolating job*, HPN (June 8, 2015), available at <http://odihpn.org/blog/ebola-healthcare-workers-a-hazardous-and-isolating-job/>.

<sup>56</sup> MSF, *Ebola response: where are we now?* (Dec. 2014), [https://www.doctorswithoutborders.org/sites/usa/files/ebola\\_briefing\\_paper\\_12.14.pdf](https://www.doctorswithoutborders.org/sites/usa/files/ebola_briefing_paper_12.14.pdf).

<sup>57</sup> Ana Maria Henao-Restrepo et al., *Efficacy and effectiveness of an rVSV-vectored vaccine expressing Ebola surface glycoprotein: interim results from the Guinea ring vaccination cluster-randomised trial*, 386 (9996) *Lancet*, 857–866 (Aug. 29, 2015), available at [http://www.thelancet.com/pdfs/journals/lan-cet/PIIS0140-6736\(15\)61117-5.pdf](http://www.thelancet.com/pdfs/journals/lan-cet/PIIS0140-6736(15)61117-5.pdf).

Most MSF efforts in 2015 focused on keeping up the momentum required to reach zero cases in the region, with constant vigilance. A newfound challenge was discovered among the more than 17,000 survivors of the virus: Ebola may lie dormant and hide in parts of the body such as the eyes and testicles, long after leaving the bloodstream. Though the risk of re-emergence or transmission to others has been rare, many continue to experience health problems after they survived the disease. Memory loss, joint pain, eye inflammation, and mental health problems including depression and post-traumatic stress disorder have all been diagnosed in the MSF-run survivor clinics in Liberia, Guinea, and Sierra Leone, where medication is prescribed, mental health support is provided, and patients are referred to specialists for severe problems such as loss of vision. This unprecedented outbreak has revealed that perhaps the six-pillar approach might be updated with a seventh—care and follow-up of survivors as an integral component of Ebola outbreak management.

## Conclusion

The 2014–2016 Ebola epidemic was among the largest responses in MSF's history, with more than 4,000 national staff and 1,300 international staff deployed to care for patients and help contain the outbreak. More than 10,300 patients were admitted to the MSF EMCs, of which 5,226 were confirmed Ebola cases, representing one-third of all WHO-confirmed cases.<sup>58</sup> The organization was compelled to take on responsibilities beyond its usual first responder mandate, with both successes and failures.

MSF's patient-driven medical and emergency focus in the Ebola outbreak saw the organization choose to prioritize patient care over other critical containment activities when the outbreak was spiraling out of control. But when reaching out to provide urgent care for patients in the initial months, MSF did not sufficiently consider the role the local communities should have taken to halt the epidemic.

Indeed, the isolated expertise of the organization meant that its medical-clinical approach dominated much of the early response. Because those involved with MSF are seen as "treatment specialists first and foremost seeing a world of patients requiring treatment," its calls for increased bed capacity had an influence on the subsequent priorities set by donors who advanced the construction of EMCs and deprioritized community engagement and other non-Ebola activities needed in the overall humanitarian response.<sup>59</sup> Instead of perceiving the local population simply

<sup>58</sup> As of February 1, 2016, a total of 28,592 suspect, probable, and confirmed Ebola cases were registered in Guinea, Liberia, and Sierra Leone; of these, 15,206 were confirmed Ebola cases. WHO, *supra* note 1.

<sup>59</sup> DuBois et al., *supra* note 34.

as patients or as a population that needed to understand and abide by the containment measures, the global health community should have considered the communities as direct stakeholders much earlier on as a critical means to end the outbreak.

In the international response mobilization, political leaders of the Global North also overlooked the affected communities and were quick to take action to protect their own citizens and interests but had been late to intervene in favor of those suffering in West Africa in the months before. The Ebola epidemic has been cited as a striking example of how national security matters currently prevail over public health achievement.<sup>60</sup> Securitizing health, with the protection of wealthy states as its key motivator, is gaining influence in the quotidian debates around global health security. Concerns grow that international responses in the future will be triggered only when an epidemic is perceived as an international health threat, rather than based on the health needs of those caught in an epidemic.

Though the patient-centered focus has drawbacks in its rather narrow view of a humanitarian response, MSF takes the solidarity approach over the security approach. The organization sees health security as the commitment to secure and improve the health of all without discrimination (i.e., that “the value of health cannot be dependent on its utility to the security of the wealthy”).<sup>61</sup> As was done during the Ebola epidemic, MSF will continue to use its voice and credibility to encourage that patients remain at the center of any epidemic response.

From MSF’s point of view, if the global management of infectious diseases is to succeed in the future, then the global health security framework must strike a better balance between guaranteeing national security, on one side, and the provision of care to those suffering the disease, on the other.

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