Comparing the 2009 A(H1N1) pandemic and 2014 Ebola virus disease of viruses, surprises in outbreak responses and global health work

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Abstract

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Part II

Lessons learned from the A(H1N1) pandemic and 2014 Ebola virus disease

A multidisciplinary point of view
Comparing the 2009 A(H1N1) pandemic and 2014 Ebola virus disease
Of viruses, surprises in outbreak responses and global health work

Mathilde Bourrier

Introduction
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The chapter contends that this comparison makes sense despite the massive differences between the two epidemics. Numerous controversies plagued both responses. Coordination failure, failure of foresight, power plays, group interests, complacency, difficulty in articulating expertise and political decisions, and many more factors played a role in the difficulties that responders faced. However, in retrospect, what could explain the most the magnitude of both crises has more to do with the unrealistic perception of how global health is organized than any of these factors that undoubtedly played their part.
When path dependency matters: on viruses and their conventional wisdoms

The fear of influenza: a common disease with pandemic potential

Despite it already having been around for hundreds of years, the influenza virus A(H1N1) remains somewhat of a mystery for specialists of this disease and for public health professionals. The flu (or influenza) is a disease caused by a virus that attacks the respiratory system and reverberates throughout the body. It normally lasts between three and seven days and can impede a person in his or her daily activities. The virus’s composition changes constantly, and it is endemic. This is why we can catch a new flu every year. There exist three types of the influenza virus: A, B and C. Type A is the most dangerous. It has already provoked several deadly pandemics, such as the notorious Spanish flu pandemic of 1918 (Kolata, 1999), which killed more than 50 million people. In 1968, it was the Hong Kong flu’s turn to cause a pandemic. The type A virus transforms in very little time, which makes it all the more difficult to combat. In effect, the body has to build up an immune response specific to each new strain of influenza in circulation. The type A virus causes a pandemic about three or four times per century. The type B virus brings about much less serious complications. Its epidemics are localized and are less subjected to modifications than the type A virus. Finally, the type C virus, for which the symptoms present themselves as being similar to the common cold, is also less subject to mutations than the type A virus.

Influenza experts make a distinction between zoonotic, seasonal epidemic and pandemic flu. They have paid critical attention to their most-feared linkages for decades. Influenza attracts mass public health efforts and is the subject of a global surveillance network, the Global Influenza Surveillance and Response System, GISRS. This network has become well established since its inception in 1951, with its stars, its battles and its objectives – a “world in itself” (Kolata, 1999; Dehner, 2012; Caduff, 2014; MacPhail, 2014; Aranzazu, 2013, 2016). The pandemic form of flu has been mobilizing actors around the manufacturing of pandemic plans since the beginning of the 2000s (Zylberman, 2013; Bastide, 2017, Brender & Gilbert, 2018). The WHO, in consultation with the Strategic Advisory Group of Experts on Immunization (SAGE) and the GISRS, with advice from the International Health Regulations (IHR) emergency committee is responsible for decisions concerning the composition of the seasonal flu vaccine twice a year for both hemispheres. The vaccine is not perfect, and, given its hybrid formulation, is more or less effective against the viruses that circulate in a given season. If the seasonal flu can count on the development of two vaccines per year, the pandemic flu, which is by definition unforeseeable, suffers from the catastrophic representation of the Spanish flu pandemic of 1918 and from heightened fears emanating from Asia,
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where there was a resurgence of avian bird flu H5N1 (type A) in February 2003 in Hong Kong. Avian bird flu is only slightly contagious but has become endemic among domestic poultry in certain countries.\(^2\) It has proven to be quite often (in 60 percent of cases) lethal when humans are infected.

The source of the 2009 virus can be traced to pig farms in the district of Santa Cruz in Mexico and not to poultry farms. In a large majority of cases, the symptoms were hardly distinguishable from an ordinary, benign seasonal flu. Most of the time, those who became ill got better on their own without requiring medical attention. However, in acute cases, some people needed specialized medical attention, such as respiratory assistance or the use of antivirus medication (oseltamivir and zanamivir). But, the virus also infected and killed young people in good health. From the beginning, it attacked segments of the population that were healthy and young and caused higher mortality among children and young adults than the seasonal flu (Brammer et al., 2011). This observation would come to have a persistent influence on the evaluation of risks by global public health authorities (Fraser et al., 2009; Flahault & Zylberman, 2010). Experts were reminded of elements from the Spanish flu epidemic, where it was young adults who paid the heaviest price. In this context, the WHO wasted no time in declaring a Public Health Emergency of International Concern (PHEIC) on April 25, 2009, as was prescribed by the provisions of the IHR, which had been revised in 2005.

In effect, the virus circulated quickly: the United Kingdom and Spain, as traditional entry points of airlines from the American continents, were strongly afflicted. In the span of several weeks, the WHO declared a pandemic on June 6, 2009 (it would come to be declared as over by the WHO on August 10, 2010). This virus implanted itself very rapidly and mutated in an extraordinary manner. The initial strain, called “California”, has since become a part of the cocktail used in the manufacturing of the seasonal flu vaccine. The type A viruses are feared by public health experts, particularly in a context where the flu has become endemic. The potential for linkage between the two types of viruses is not impossible. Uncertainties concerning flu virus’s circulation, contagiousness, recombination and transmission remain significant despite the number of researchers engaged in research on these flu viruses: “The natural history of influenza is still largely unknown” (Flahault & Zylberman, 2010, 331).

Without a doubt, the 2009 influenza virus A(H1N1) suffered from social misrepresentation from the beginning. The collective reference, for both populations and public health experts alike, came from the Spanish flu, which was also of porcine origin ("Swine flu") and killed between 50 million and 100 million people worldwide, according to some recent calculations (Johnson & Mueller, 2002; Taubenberger & Morens, 2006; Wilson, 2011). Against all expectations, at least in appearance, the 2009 virus turned out to originate from North America, and not from an Asian
animal reservoir, which was the expected scenario. In effect, for many
years, in lay and expert narratives alike, Asia is depicted as the likely host
for all flu viruses (Keck, 2010; MacPhail, 2014, 76).

**Ebola: a textbook lethal and African hemorrhagic fever**

The Ebola virus was jointly discovered in 1976 by Peter Piot (a Belgian
doctor at the Institute of Tropical Medicine in Antwerp) in Yambuku, in
the north of Zaire (nowadays called the Democratic Republic of the
Congo), and the Congolese researcher Jean-Jacques Muyembe, who was in
charge of blood collection. Ebola is the name of the river that flows nearby
the small village where the virus was discovered. It was in a hospital of this
village where the first case of Ebola hemorrhagic fever was identified,
announcing its first epidemic which would then come to infect 318 people
and kill 280 of them. Ebola specialists seemed to better understand its
modus operandi than flu specialists understood the mysteries of the flu
virus. It was as if Ebola’s simplicity made it an excellent candidate for a
first-year student’s virology textbook. The Ebola virus, of which several
variations exist (the most dangerous is called “Zaire”), appears more stable
than the flu virus. It is contagious, but not as contagious as the flu.
Several Ebola epidemics have occurred during the past forty years in
the Congo, Sudan, Uganda and Gabon. Each outbreak caused several
dozens infections and large numbers of deaths. These Ebola outbreaks
remained, up until now, relatively limited and did not kill nearly as massive
numbers of individuals as the epidemic of 2014–2016. In the spring of
2014, numerous public health experts understood the situation as follows:
this epidemic is a manageable public health emergency, which eventually
consumes itself, like a raging fire, and runs its own course, like the dozens
of other times it had occurred up until that point. With the term “out-
break”, we can imagine a fire breaking out, which we can of course also
associate with a forest fire, or a bush fire, what Wald (2008, 7) named “the
‘primordial’ spaces of African rainforests”. As such, the following larger
narrative would come to circulate: these flares burn themselves out. And
once the virus has been able to attack everything in its path, it retreats and
lurks in the forest, among the bats, believed to act as the “guardians” of
the virus.

No treatment to fight the disease really exists; the administration of
rehydration salts and antipyretics in order to contain the fever comprise
the basis of Ebola medical care. At the outset, there is no tested vaccine.
Ebola had previously interested virological, epidemiological and ecolo-
gical research, particularly in the context of the agenda of global health
security and the fight against bioterrorism. There was an experimental
vaccine, which was stocked in military laboratories, most notably in the
United States and in Canada. It had never been tested with humans during
an outbreak. In 2014, certain pharmaceutical companies possessed the
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capacity to produce a potentially effective antiviral. Nevertheless, mass
treatment efforts in the first months of 2014 consisted of administering
rehydration salts and antipyretics aimed at containing fever.

The Ebola virus epidemic of 2014 was officially confirmed in March
2014 in Guinea by the Institute Pasteur in Lyon (France) and the WHO
declared it a PHEIC on August 8, 2014. It is likely that the first epidemic
broke out some months beforehand, in December 2013. The index case
might be a child who passed away in December 2013 in Meliandou, situ-
ated in the Guinean forests in the Guéckédou district. It was thought that
the presence of the virus was a result of remote communities who had
been living in the forest in close contact with animal hosts of the virus,
such as fruit-eating bats: this is the leitmotiv of the traditional narration
about Ebola epidemics. This theory is not yet confirmed. After two years of
fighting the outbreak, the PHEIC linked to Ebola in West Africa was
declared over on March 29, 2016. In total, 28,616 confirmed, likely and
suspected cases were reported in Guinea, Liberia and Sierra Leone, and
11,310 people perished (WHO, 2016).

Ebola’s symptoms are comparable, in certain cases, to those of cholera
or Lassa fever, which makes identifying the disease difficult, particularly
among communities and caregivers who are unfamiliar with the disease.
This epidemic presented all of the characteristics of an Emerging Infec-
tious Disease (EID). Since the 1990s, due in part to the anthrax attacks in
the United States and the growing fear of bioterrorism (Collier & Lakoff,
2008; Boin et al., 2003; Bastide, Chapter 2), viral contagions have been at
the heart of collective fears. From this perspective, images circulating
about Africa could only reinforce these worries: those who were sick suf-
f ered greatly, they died in more than half of the cases, a large majority
were women and children, they were not well taken care of, hardship was
rampant, the virus took advantage of promiscuous behaviors and was
transmitted by direct contact and by bodily fluids.

Deforestation, a growing practice, also likely contributed to the disrup-
tion of the ecological balance. As a result, this provided opportunities for
the virus to escape from the forest, where it had been confined most of
the time. The already historically, socially and politically disadvantaged
inhabitants of the Guinean forests would come to find themselves in the
center of the most tenacious rumors and as the object of aggravated stig-
matization (Epstein, 2014; Faye, 2015).

At the beginning of the intervention, African burial practices and the
extent to which they can play a role in contamination appeared to be if not
surprising to the public health community (in the corridors of the WHO,
CDCs or at Médecins Sans Frontières), who knew about their central role,
not culturally handled in an appropriate way. They would end up interfer-
ing in the proper handling of the crisis. Funerary practices and the tradi-
tional preparations of bodies were quickly blamed by health authorities
(national and international) and experts, which created “resistance” and
distress without precedent among local populations. This would only further reinforce the image of an Africa struggling with its cultural practices from another era (Kidjo, 2014). Very rapidly, anthropologists mobilized themselves and organized networks in order to counter this simplistic, culturalistic and counterproductive explanation (Fairhead, 2016; Moulin, 2015; Abramowitz, 2017). Anthropologists were called upon as reinforcements everywhere and their knowledge, invoked in numerous arenas, was tried and tested in the field in the three countries (Moulin, 2015; Richards, 2016; Abramowitz, 2017).

However, it is of importance to recall that numerous accounts already existed on how to engage in dialogue with local populations that are struggling with an Ebola epidemic. At the end of the 1990s, Pierre Formenty, the Ebola expert from the Pandemic and Epidemic Diseases department of the WHO, and his colleagues at the time, engaged in collaborations with anthropologists (Barry and Bonnie Hewlett, anthropologists from the University of Washington in Vancouver; Alain Epelboin from the Musée de l’Homme in Paris, notably), which allowed them to write intervention protocols that were informed by local practices. They particularly addressed safe and respectful burial practices, and aimed at increasing knowledge about the modes of transmission of the disease with the objective to communicate them in the most respectful manner possible (Boumandouki et al., 2005; Hewlett et al., 2005; Hewlett & Hewlett, 2008; Brunnquell et al., 2007; Epelboin et al., 2007, 2008). An update followed in 2014 (Formenty, 2014).

The 2014 Ebola virus disease appeared in retrospect as an ultra-dangerous, ultra-contagious virus that was capable of tearing down health systems and shifting entire geopolitical and economic balances. It was a virus that got around: it gained Nigeria by plane in July 2014 and, by autumn 2014, had made its way to Mali, Senegal, Spain, the United States, Great Britain, Ireland and Italy.

The virus also attacked three countries that had already been devastated by civil war and desperately lacked healthcare infrastructures. If the entire world seemed to discover this established fact, this was, without a doubt, not the case for the WHO. Before 2014, the United Nations (UN) institution, through the IHR instrument already pointed out the risks for poor countries and their neighbors of major outbreaks occurring with such weak healthcare infrastructures. On May 28, 2009, during the World Health Assembly, the first female president from an African country, Ellen Johnson Sirleaf (who had been in power in Liberia since 2006), pleaded in front of the delegates:

I am here to say that people should not simply die because they are poor and because the treatments that are used in the rest of the world are not available … In Liberia, one woman out of 1000 dies during childbirth, 90 percent of Liberians live on less than two dollars per
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day. In 1989, Liberia still had 800 doctors. After fourteen years of war, only fifty doctors.

(Quoted in Lempen, 2010, 282)

It would be this very president who would confront the Ebola crisis in her own country.

Both diseases, the flu pandemic and the Ebola virus disease, carried their own histories and powerful conventional wisdoms. These impacted even unconsciously the immediate types of responses that public health officials designed at the outset. In a way, initial cognitive frames left a persistent imprint on organizational collectives of early responders, thus continuing to shape organizational behaviors and outcomes in the long run, even as conditions altered and adjustments were needed. However, as Priscilla Wald eloquently explains: “The outbreak narrative is conventional and formulaic, but it is also evolving. Stories of disease emergence in all their incarnations are so powerful because they are as dynamic as the populations and communities that they affect” (Wald, 2008, 28).

On outbreak responses: coping with surprises

A(H1N1): trapped in initial pandemic plans

From the 2000s onwards, global public health experts, as prompted by the WHO and as a result of lessons learned from the Severe Acute Respiratory Syndrome (SARS), continued to devote efforts to a vast operation to prepare pandemic plans (Brender, 2014, 40–44). This investment in pandemic planning also signaled the move from the WHO to re-appropriate the pandemic influenza issue and regain status in world health leadership (Brender & Gilbert, 2018, 39). The largest preparedness operation in the history of public health was applied at all levels and brought people on board from different professions who during these years learned to get to know one another and to work together (Zylberman, 2013; Keck, 2010; MacPhail, 2014; Lakoff, 2017). Ironically, in April 2009, the WHO had just published its new Pandemic Influenza Preparedness and Response plan.

The informants, particularly in Switzerland, Japan and the United States, that we questioned about this all confirmed that they had been very involved in the drafting of these pandemic plans. All of them remembered the years and the months prior to A(H1N1) and how they had tried to mobilize their respective colleagues in order to successfully prepare themselves the best that they could. All of them remember that these preparations allowed them to forge relationships with other entities (i.e. other sectors) and at various levels (local, regional and national), depending on their initial location within the public health system. They had constituted veritable networks, both formal and informal, made of strong and weak ties. It only seemed “natural” that the pandemic would allow these individuals to activate these
networks in order to test out the plans that had been fine-tuned over several long years (Keller et al., 2012). Brender (2014) borrows the term “epistemic communities”, forged by Haas (1992), to account for these knowledge and expertise-based networks. To a large extent, these plans proved, at least according to retrospective declarations made by our informants, to be helpful when logistics were involved. They were used as a coordination mechanism but were ultimately set aside because the plans compelled action based on a severe crisis, but the threat would prove to be of a lesser magnitude than anticipated (Keller et al., 2012).

In the case of the pandemic flu, a kind of blindness resulted in not taking into account some of the signals indicating that the flu, albeit very contagious and able to spread very quickly, resulted in only moderate symptoms in most cases. Yes, it was a pandemic; however, as time would tell, it was not a very severe one. It did nonetheless prove to be a lasting one: a “paracrisis”, as one of our informants called it. Most experts remained alert and waited for the second wave that, in the historical model of the 1918 influenza outbreak, had been shown to be deadly. What was particularly worrisome for experts were the possible recombinations and mutations of the virus (Garrett, 2005; Flahault & Zylberman, 2010). Health authorities stuck for the most part to the original outbreak forecasts, which had been strongly influenced by mathematical models of disease transmission (Fraser et al., 2009) and by the associated death scenarios. These models predicted disturbing severity for populations that were young and in good health. By declaring the transition to Phase 6 on June 11, 2009, the WHO was posed to set off the largest order of vaccines and antiretroviral in history: rich economies jumped at their chance and pulled the lever to launch the entirety of their pandemic plans (Abeyalinghe, 2013; Pasquini-Descomps et al., Chapter 8). They were bound by their Advance Purchase Agreements and a race against time began. Vaccines were not available for the first wave of the pandemic in the spring of 2009, but experts thought they would be useful when the second wave of the pandemic struck, possibly in the fall season for the northern hemisphere (Saluzzo, 2011).

Each country’s over-response should nonetheless be described with greater nuance: the United States, for example, adjusted their response, and vaccination campaigns remained targeted towards specific segments of the population such as high-risk populations like first responders and pregnant women. The American campaigns did not attain the same level of scale that was witnessed among the mass campaigns implemented in some European countries – a phenomenon that can be attributed to the vaccine shortage, which did not allow for any other option.6 In Switzerland or in France, for example, a calculation of two doses per person deemed to be a priority (caregivers; staff serving in sovereign capacities; at-risk populations – pregnant and asthmatic women in particular; and any person wishing to get vaccinated) was proposed.
In Europe, the variance in vaccine coverage between countries was significant (ranging from 4.8 percent to 92 percent, according to the analysis provided by Brien et al., 2012). According to the 2010 VENICE (Vaccine European New Integrated Collaboration Effort) study, of twenty-nine European responding countries, twenty-six organized national pandemic influenza vaccinations. Of the twenty-seven countries with vaccine recommendations, all recommended it for healthcare workers and pregnant women. Twelve countries recommended vaccines for all ages. Most countries identified similar target groups for pandemic vaccine, but substantial variability in vaccination coverage was seen (Mereckiene et al., 2012). In Europe, large centers located in stadiums, military barracks or any kind of large public infrastructures were set up to receive thousands of people to receive their vaccine shots.

However, vaccination campaigns were not always met by population-level adherence, with few exceptions, such as in Sweden (Barrelet et al., 2013). Also in the US, campaigns targeted at pregnant women and healthcare workers have been successful and with lasting effects over the years. Several experts and researchers even hypothesized that in countries where populations have high levels of trust towards their leaders and governmental authorities, vaccination campaigns were met with higher levels of adhesion. By contrast, in countries where trust had been eroded, vaccination measures failed. In Switzerland, for example, not more than 17 percent of the total population was vaccinated (Barrelet et al., 2013). Several researchers have suggested that the failure of this vaccination campaign should not only be interpreted in light of the particular event represented by the 2009 pandemic, and have claimed that the interpretation could go a step further by attributing this failure to a growing mistrust among certain groups of European populations towards vaccination use (Burton-Jeangros et al., 2005; Schindler et al., 2012).

As for Japan, which was used to such strong responses to epidemics and was well equipped for the seasonal flu, its authorities supported and maintained a significant level of engagement, despite critics in the press, due to extra costs in the end incurred by underused vaccines. A total of 17 million doses were supplied by the end of 2009. Large amount of vaccines were imported (GSK and Novartis). Most of them were not used and resulted in significant waste (see Pasquini-Descomps et al., Chapter 8).

Various investment logics were in the works. They concerned the resources that needed to be mobilized, resources that were not only financial in nature, but also organizational, communicational and cognitive. The establishment of pandemic plans along with contingency and business continuity plans within administrations, hospitals, schools, public transportation, the private sector, airports and places with high concentrations of people fell upon the responsibility of hundreds of individuals in order to get ready for the preparedness war front. All the hype about the rolling out of the thought-out plans for one of the most severe pandemics,
as well as the difficulty of leaving behind a worst-case-scenario logic, are both strongly engrained in the memories of the actors we met, even five years after the event, which is when we conducted our interviews. Many of them, particularly those who worked in national public health services, attributed this escalation to the strong injunctions provided by the international echelon represented by the WHO.

The WHO responded to critics, who accused its top leaders of a “cry wolf attitude”, on June 10, 2010 by referring to the large biomedical uncertainties they faced in handling the flu virus:

The first human infections with the new H1N1 virus were confirmed in April 2009. Analysis of laboratory samples showed that the new virus had never before circulated in humans. This is a virus of animal origin with a unique mix of genes from swine, bird, and human influenza viruses. The genetic composition of this virus is distinctly different from that of the older H1N1 virus that has been causing seasonal epidemics since 1977.

(WHO, 2010)

To summarize, the response to A(H1N1) was mainly geared towards the production of a vaccine. However, the time it took to produce it, and the difficulties encountered in convincing populations to get vaccinated provoked social controversies, which consistently made the headlines in the press. Interestingly, not being able to provide a vaccine in time was also an issue when the 2014 Ebola epidemic struck.

**Ebola: using a classical toolbox for an unfolding disaster**

In the spring of 2014, the situation for numerous public health experts was as follows: Ebola was a health emergency that could be controlled and that would eventually run its course on its own, just like all previous outbreaks had done up to that point. So goes the leitmotiv of the traditional narration concerning Ebola epidemics. Our informants attested to this “Ebola normal” scenario that they first thought was unfolding, at WHO headquarters and at the CDCs alike. Lakoff (2017, 158), in his recent book, makes the same observation and calls it a “failure of administrative imagination”. The measures that needed to be implemented in order to bring an Ebola epidemic to a close were well known. It generally consisted of the deployment of public health interventions, the operational doctrine of which was as follows: (1) isolation of patients practices and forced quarantines, if necessary; (2) the systematic searching out of those who had come into contact with each patient in order to track down the transmission chain; (3) the implementation of risk communication programs specifically aimed at afflicted communities in order to inform the locals and to avoid the spreading of the disease through risk behaviors; (4) the
implementation of medical care that prioritized rehydration and the provision of painkillers, in the absence of a real cure; and (5) the overseeing of funerary burial practices. No one suspected that this arsenal of public health measures might be insufficient.

Yet, populations at the borders of the three countries – Guinea, Liberia and Sierra Leone – were in fact very mobile (Richards, 2016). For that matter, before their prohibition, local markets were sometimes held in one country and sometimes in another, depending on the day of the week. Contamination, as a consequence, followed the commercial routes and the paths of the most mobile members of the communities: merchants, religious leaders, healers, farmers and small-harvest vendors. Hunger, lack of resources and the disorganization of post-conflict countries brought these populations to the roads as they sought out better living conditions and resources for survival. As such, the most active members of these communities navigated non-stop between their villages of origin and the cities where work opportunities were more abundant.

Two other narrative elements reinforced the initial framing on an “Ebola normal” outbreak and served to handicap the emergence of a new representation of the crisis as it continued. The first element was of a logistical nature: the virus would spread into a borderland region where it was thought that means of communication were lacking and in bad shape due to war that had raged on for so long. As such, experts projected that the virus would not spread very easily. However, in reality, the road system was not as bad as was thought, and, as Richards (2016, 45–48) attests, the roads were regularly utilized. A second element strengthened the first one: this time, it was of a meteorological nature. The rainy season might mechanically slow down travelers and hinder both the virus’s progression and further contagion.

The international and national health authorities acted according to the model of a classic epidemic and rolled out measures designed with this model in mind. As was customary practice, it was decided that small contingents of experts from the WHO, the CDC and MSF (Médecins Sans Frontières), coordinated by the WHO and under the banner of the Global Outbreak Alert and Response Network (GOARN), would be sent into the field. These measures had previously proven to be effective elsewhere, as we were informed in August 2015 by an expert from the CDC who had been accustomed to these types of deployments.

In April 2014, the number of cases seemed to demonstrate the experts’ capabilities. The curve began to slope downward, leaving the impression that epidemic hotspots were under control, especially in Guinea. However, at the end of the spring of 2014, voices were raised to call attention to the need to reconsider the premises of the first analysis of the situation. These voices came mainly from actors who were in the center of the action, particularly from MSF. More marginal voices, further from the direct health response, were raised for example in Geneva-based embassies to the
United Nations of the concerned countries and from anthropologists (Fairhead, 2016).

As the crisis continued, the complexity of relationships between the different levels of the WHO – from the headquarters in Geneva, to the level of the AFRO (Brazzaville) region, down to the level of the afflicted countries – significantly hindered a robust assessment of the situation. The complexity of the WHO’s structure was once again called into question (Sridhar et al., 2014; Horton, 2014). Global public health experts again highlighted that the director-general could not act without a mandate from the Member States and that the nomination of WHO regional directors, no more than the nomination of WHO country directors, for that matter, was not within her purview.

Both within the hallways of the WHO as well as outside them, our informants confided to us that declaring a PHEIC does not always suit the governments of the concerned countries. Particularly, this type of announcement inevitably risks having non-negligible collateral effects, in terms of product boycotts, the closure of countries’ borders in the region and the slowing down of, or even bringing a complete halt to, business exchanges. Clearly, during these months of this wait-and-see approach, from the point of view of massive assistance, many other considerations were taken into account at the heart of these debates. It is not that nothing happened; only that what happened obeyed other logics, particularly of a global health diplomatic order, so as to not push the governments of the affected countries into a corner.

During the summer of 2014, MSF continued to regularly alert the international public health authorities. For the stakeholders, everyone had a role to fill. The expected course of the outbreak was drifting out of control in the field, but on the global chessboard, the various actors were playing a part that they thought they knew. The WHO occupied the posture of the large UN agency, “prevented” from its duties by its Member States (Lall, 2017) but at the same time as the keeper of the resources that come with diplomatic expertise as well as of capabilities to mobilize resources of supplementary expertise. The figure of “I wish I could, but my hands are tied” was once again over-played by this UN agency, although it would prove nonetheless to be critical, most notably for the speedy coordination of clinical trials, which it would come to achieve (Evans et al., 2016). On the other side of the chessboard, there was MSF, a powerful and rich non-governmental organization with strong reputational capital and advocacy power. As one of our informants told us: “This is normal for MSF to manifest, this is what they do as an organization, and they are in their role”. This expected stand might have prevented them from being heard early enough.

Thus, the scenario at the beginning (sporadic outbreaks that could be contained each time, which killed by hundreds and not by thousands, struck at the heart of remote, rural communities) was not reevaluated
The question that we needed to answer was: What do we do once Ebola enters a city? Everything else was essentially secondary. Nobody was able to give an answer to this question. Not on the ground, not in the country, not in the region, not in Geneva. No coordination efforts were working on this fundamental point.

Finally, in the sense that an epidemic with different hotspots leaves room for distinct, separate epidemics, it became vital that the communities themselves take ownership of the struggle against Ebola. On the ground, the public health approach, which was too strictly articulated around biosafety measures and had been used in all of the epidemics before this one, was not working well: numerous anthropologists warned of the risk of not relying on people’s expertise in handling contagion (Richards, 2016), which could handicap the measures being implemented in the field (Wilkinson & Leach, 2015; Fairhead, 2016; Anoko et al., 2014; Le Marcis, 2015; Faye, 2015). First responders declared themselves to be floundering and too often incapable of correctly deploying interventions in the field (Médecins Sans Fronières, 2015; CDC, 2015). They particularly cited risk communication operations in relation to the population to be greatly suffering from their overwhelming workload. The deployment of international response teams, which fell into place the best they could, provoked uprisings among the concerned populations, right up until the dramatic Womey episode of September 2014.\textsuperscript{10} The hostility and violence towards teams of first-line responders, both local and international teams alike, were, however, not new (Bausch et al., 2007; Fribault, 2015; Calain & Poncin, Chapter 11). Both were particularly well known by our MSF informants.

Global health workers and their responses

In this section, we intend to present three different angles to better apprehend what global health work entails. The first one concerns the flu pandemic responders, the second one deals with the Ebola responders, and the third focuses on international global health workers. Generally speaking, global health workers are medical professionals, drawn from public health, medicine and the life sciences.

Pandemic flu: tailored responses by long-committed experts

The pandemic rapidly mobilized the highest public health and civil security authorities of the Member States, as well as other socio-economic stakeholders possibly impacted by a pandemic. The degree of leadership
retained by public health actors differed depending on the country. In France, leadership had to be shared with other pandemic stakeholders (Brender & Gilbert, 2018). Whereas in Switzerland for example, public health officials and experts stayed center stage.

The numerous retrospective feedback reports (international, national and regional) written after the flu pandemic (US Department of Health and Human Services, 2012; ASTHO, 2010; European Commission, 2010; Forster, 2012; Greco et al., 2011; Lister & Redhead, 2009; President’s Council of Advisors on Science and Technology, 2009; Delaporte et al., 2010; WHO- Regional Office Europe, 2010; Ernst & Young/OFSP, 2010; WHO, 2011; Door & Blandin, 2010), the numerous academic writings on the subject, as well as our retrospective interviews with actors involved in response efforts, at the WHO, in Switzerland or in Japan, all confirmed that in the case of the influenza A(H1N1), the pandemic plans were activated from the beginning. As our informants told us in their own words: “At the time, we had one concept: the plan”. The scenario for the A(H1N1) crisis had a powerful vehicle at its disposal. This vehicle was the framework of action that was “already there”, operational and reassuring.

Most countries quickly came to focus on two tools: (1) social distancing measures, which consisted of a campaign to raise awareness about safe sneezing practices, frequent handwashing, and limiting one’s outings in case of the flu; (2) the development of a vaccine, as quickly as possible, as a response to the most dreaded eventuality, which was the second wave of the epidemic in the autumn of 2009 (with the model of the 1918 influenza waves in mind), which occurred but proved to be even milder.

In accordance with the application of pandemic plans, national and regional public health authorities found themselves in crisis centers which were often coordinated by security actors. This was the case in both France and Switzerland, for example. The paradigm shift in the affairs of surveillance and anticipation of bioterrorism post-9/11 brought about the emergence of new command structures. Such structures placed health authorities in close coordination with security forces aimed at maintaining public order, like in the Canton of Geneva, where the catastrophe plan named OSIRIS was deployed. This plan is coordinated through a crisis center, occupying its own space at the police headquarters, regrouping specific functions under the command of the police chief of staff. Representatives of the Canton of Geneva’s Directorate General for Health, the cantonal doctor in charge of infectious diseases, the cantonal pharmacist responsible for “vaccination” records and “stocks of antivirals” (essentially Tamiflu, which is produced by Roche in Switzerland), representatives from public transportation services, flu experts working in infectiology or vaccinology at the cantonal hospital, a representative from the airport, and also a representative from the Fédération des entreprises romandes (the French-Swiss Business Federation) shared a same space. Health experts rapidly gained the upper hand and organized themselves into a sub-crisis...
“health center”. However, their dependence upon federal-level decisions, particularly those of the Federal Office for Public Health (based in Bern), for the dispatching of vaccines and Tamiflu, which frequently resulted in volte-face decisions, underscored the OSIRIS’s actors (Ernst & Young/OFSP, 2010). When discussing the proximity between the forces of law and order and health experts, the actors we met offered an ambiguous version of events: with the police or the army, there certainly existed a clear chain of command, but they reported not being able to count on the police forces for any credible expertise in public health. As one key informant, working in the crisis center at the time, explained, “We could not expect everything to come from the OSIRIS apparatus in Geneva”.

Certain researchers have already retraced the mixed results that the responders who struggled with these measures were able to take away from the situation (Keller et al., 2012; MacPhail, 2014; Brender & Gilbert, 2018). For certain actors, crisis centers served essentially for them to know on which network of actors they could lean for support: the famous A4 sheet of paper with “all of the telephone numbers on it”. For many, the frequent telephone conference calls during the spring, autumn, and winter of 2009 with public health, national, federal and international authorities were an immense waste of time. The cumbersome organizational structuring of the response, stained by the transaction costs for communication charges, revealed itself to be ill-suited to the situation. Pandemic fatigue took place during the fall of 2009.

Yet, the overall picture still needs to be more nuanced. Japan firmly anchored itself in a posture of “super-management” when facing the pandemic. As many experts have pointed out, the Japanese health authorities (“the good student” when handling the seasonal flu, as WHO experts have contented themselves in recounting) habitually employed comprehensive measures in seasonal flu management. The most common measures implemented for the seasonal flu included: keeping social distance from others, mask-wearing behaviors, rapid administration of antiviral medications, school closures, isolation, vaccination and border control. As our informants explained, before 2009, influenza pandemic preparedness focused on early response, through “early medical responses and aggressive measures of containment”. Japan had developed since December 2005 a “National Action Plan for Pandemic Influenza”, last updated in February 2009. In line with this philosophy, early response to the 2009 pandemic made use of “aggressive border control measures”, starting April 28, 2009, including fever screening for all passengers coming from affected countries. Public health authorities also decided to close schools for five days in May 2009 in Hyogo and Osaka Prefectures for example (Kawaguchi et al., 2009). Japanese experts we met in March 2015 at the Ministry of Health, Labor and Welfare recalled that these school closures were successful in containing the virus in the early stage.

Switzerland opted for a strong response (ordering 13 million doses to cover 80 percent of its population) without employing the same systematic
measures that characterized the Japanese response. The United States, for its part, adopted a middle-ground approach. In fact, it quickly became apparent that the virus was only slightly virulent. Beginning in January 2010, Janet Napolitano, Secretary of Homeland Security, began to declare that it was no longer the time for a mass uproar but rather the time for a scaling down. Mass vaccination would never have been an option. This was without a doubt more due to the unavailability of the vaccine than due to it being a consequence of a sound political decision. However, at the CDC, as was confirmed to us in the summer of 2015, the Incident Command System, staffed with no less than 300 “Flu guys” at the height of the crisis, compared with sixty people at WHO headquarters, remained active after January 2010.

The variance in pandemic responses is important across European countries, even between countries with a very similar profile. This is one of the puzzles of A(H1N1) research. Despite strong international impetus, resources invested at the country level and similar threats, European countries offered a picture of contrasts. This is especially clear when considering vaccination campaigns (Mereckiene, 2012). Baekkeskov (2016) compared Dutch and Danish 2009 A(H1N1) responses. Tracking the main factors that can explain why such similar countries differed in their vaccination programs (the Netherlands ordered vaccine for all residents while Denmark ordered vaccine for 28 percent of their population), he finally reached the conclusion that what makes the difference is the different pre-formatted norms that national leading experts are using in order to advise their governments. “The Netherlands prepared for an extraordinary deadly influenza solved by general mass vaccination … Danish pandemic flu preparations had focused on the problem as a range of probable, moderately severe influenza, solvable through limited vaccination” (Baekkeskov, 2016, 307–308).

After the crisis, and in line with the observations made in the retrospective feedback reports, the Member States adopted an ambivalent position: one that allowed them to free themselves of the supervision of the WHO in matters of risk evaluation, while at the same time recognizing its central role. Several laws concerning epidemics, which were presented in the years following the pandemic, particularly in Japan and in Switzerland, aimed at reaffirming the necessity of establishing the conditions for independent national risk evaluations. The WHO did not issue a new Pandemic Plan after the 2009 version. It did issue, however, “Pandemic Influenza Risk Management” in May 2017 that updates and replaces the “Pandemic Influenza Risk Management: WHO Interim Guidance” published in 2013. And recently it published a “Checklist for Pandemic Influenza Risk and Impact Management” in January 2018 and a document titled “Essential Steps for Developing or Updating a National Pandemic Influenza Preparedness Plan” in March 2018. These documents are in line with what experts had already pointed out: “European national plans are
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being up-graded and global leadership is required to ensure that these plans are uniformly applied across regions ... Without regional or global leadership in these domains, pandemic preparedness plans could diverge even further across Europe” (Nicoll et al., 2012, 317). One can take note of a change in the vocabulary: checklists and steps are now preferred as plans. Finally, some countries are also moving away from specific pandemic preparedness plans to incorporate a wider range of emergencies, and have built more generic plans, that could be of use in several emergencies and not only health emergencies. The “All-hazards” doctrine is gaining ground.

Ebola: the early commitment of emergency workers pushed to their limit

Prior to the 2014 Ebola virus disease and as the years went by, MSF had become the de facto main medical caregivers during Ebola epidemics. Not surprisingly, during the first months of the management of the Ebola virus crisis, MSF was the main actor operating on scene (Casaer, 2015; Hofman & Au, 2017). The Swiss MSF had operated in Guéckédou in Guinea since 2005. They were very familiar with the region, well equipped and set up, and were able to react quickly, not to mention able to cross the Guinean borders by sending a doctor detail when Liberia declared itself to be afflicted by the disease. It is clear that the MSF experts, just like those from the WHO and from the CDC, who were deployed in the first weeks via GOARN, were familiar with Ebola, and they knew it well. The NGO was used to intervening in these situations. It had developed protocols, could count on trained personnel and on powerful logistics.

However, MSF would eventually find itself overwhelmed (MSF, 2015), despite the fact that its teams were composed of the experts on Ebola (Wolz, 2014). The director of MSF international (the umbrella organization of the different MSF sections), Dr. Joanne Liu, for the first time in the history of the organization, on September 2, 2014, made a declaration to the UN in order to request that the Member States mobilize to confront the epidemic that risked decimating African populations. She described the situation as a “global coalition of inaction”. And added “The clock is ticking and Ebola is winning ... The time for meetings and planning is over. It is now time to act. Every day of inaction means more deaths and the slow collapse of societies” (Liu, AFP, September 2, 2014).

Isolation, searching for infected individuals and acceptance of intervening medical teams proved to be recurring challenges in almost all of the afflicted regions and countries. Humanitarian aid workers were regularly met with hostility. This was not the first time that MSF teams met strong reluctance among the populations who were afflicted with the disease. Rumors were rampant and fed off of each other in communities that had not only been profoundly impacted by civil war and where abuses had been committed, but also where tenacious, misguided medical practices
had previously been imposed upon African populations by “the white”
doctors (Lachenal, 2014; Calain & Sa’Da, 2015; Tilley, 2011). In Liberia,
one rumor spread concerning how President Sirleaf herself might have
been responsible for unleashing the virus in her country in order to attract
the attention of humanitarian aid. Another rumor depicted foreign public
health experts as going to and from districts, commissioned by their gov-
ernments, to bring back biological samples that would later serve in the
development of medication and vaccines for their own benefit, without
benefiting local populations in Africa. Worse yet was a rumor claiming
that certain public health experts were there to traffic organs.

MSF was finally joined at the end of the summer of 2014 by some
Cuban doctors, American Christian NGOs, International Medical Corps
and the British organization Save the Children. In an open letter to the
Swiss French newspaper Le Temps on October 31, 2014, Thomas Nierlé,
president of the Swiss section of MSF, and Bruno Jochum, the director-
general, demanded that roles be respected. They explained that MSF
could not be a substitute for international cooperation between countries
of the international community. This letter inscribed itself into the same
line of thinking as the mixed reviews of MSF’s implication in the chronic
under-medicalization of the developing world (Péchayre, 2014).

MSF’s way of intervening has met with controversies, both internally
(Nierlé, 2015) and within the WHO. Two of the many controversies con-
cerned: (1) the choice made early on by MSF to opt for centrally located
Ebola treatment centers, whereas other actors within the response –
including inside MSF and at WHO headquarters – would rather favor com-
munity care centers or home-based care options (for which both
organizations had guidelines, e.g. for the WHO’s recommendations: see
Kerstiëns & Matthys, 1999; Formenty et al., 2003; Roddy et al., 2007; For-
menty, 2014; for MSF: see Sterk, 2008); (2) the choice to use “full” per-
sonal protective equipment (PPE). Full PPE was an option strongly favored
by MSF field managers. They were operating in a very dangerous phase of
the response, facing difficulty in recruiting healthcare givers, and over-
whelmed by the magnitude of the epidemic despite their early and
powerful commitment. One has to recall that by 2015, 815 healthcare
givers had been infected with Ebola virus and two-thirds of them had died
(MSF, 2015). Proponents of the “sufficient” PPE, however, suggested that
it could be more appropriate in settings where basic protection was already
difficult to guarantee and resources were scarce. In addition, accounts
abound describing the difficulty of actually delivering compassionate care
in these outfits, especially to children (Pallister-Wilkins, 2016; Georges,
2015). The “sufficient” PPE option constituted a middle ground that
WHO clinicians and some MSF specialists would have favored. It did not
propose second-class protection, unduly exposing healthcare workers to
fatal risks. It suggested a modulation of the protection depending on the
context, allowing for adaptation, when people had only limited resources
to protect themselves (only one pair of boots, long plastic bags instead of full PPE), or when circumstances allowed for faces to be uncovered if standing at a distance, over a fence. However, they had to back off when confronted with the opposition mounted by frightened first-line responders (MacIntyre et al., 2014, 2015). In this context and in order to maintain a reasonable flux of new hires, full PPE was recommended (WHO, 2014c).

As our informants would come to tell us, in different points of the global health system, and contrary to what was said at the beginning of the crisis, there was not so much an issue of a lack of money, but rather of trained personnel. This observation was made at MSF where donations were far from lacking. The organization was in fact facing a shortage of qualified staff members, which was also recounted by other organizations in the field, particularly by the Red Cross (Georges, 2015) and the WHO. We turn now to the position of the international global health workers.

**International global health workers on all fronts**

First, the involvement of the WHO’s personnel at headquarters is especially important to follow in both cases. It once again reveals the somewhat paradoxical position in which the WHO’s global health workers have been locked for decades (Hein & Kickbusch, 2010). As one of its top representatives in 2014 explains, “WHO is not traditionally involved in direct patients care activities. Our principal mission is to guarantee international health safety” (Jaberg, 2014). Are they expected to provide technical expertise or are they expected to become the general operational coordinator of health emergencies? Many informants we met at the time were not all in accordance on this subject.

Second, the short experience of the United Nations Mission for Ebola Emergency Response (UNMEER) adds yet another example of the complex international governance schemes that vast transboundary crises like the 2014 Ebola epidemic trigger, even if it constitutes a one shot experience.

**WHO representatives: as technical experts or operational coordinators?**

The WHO’s position in the context of both crises reactivated numerous debates and criticisms. In the case of the flu pandemic, the WHO, in the middle of a dense network that had been up-and-running since the 1950s (McPhail, 2014; Keck, 2010) and assisted by Mexican, American, and European health ministers, quickly took the reins in the central coordination of the pandemic in 2009 and would hold on to them over time. Dr. Keiji Fukuda, a former epidemiologist for the Centers for Disease Control and Prevention and flu specialist, served as one of Margaret Chan’s assistant directors-general. Undeniably, there were leadership implications on the chessboard of global health politics (Forster, 2012). Criticized for its
alarmism, its lack of foresight in the use of pandemic phases, the ambiguous nature of the definition of a pandemic (Doshi, 2011), its dependence upon certain experts with close ties to pharmaceutical industries, the opacity regarding the nomination of members for expert committees whose responsibility was to enlighten the leadership of the UN agency, the WHO faced non-stop controversies (British Medical Journal, 2010; Kamradt-Scott & Lee, 2011; Nerlich & Koteyko, 2012) throughout the duration of the pandemic crisis management (particularly the strategy implemented by the Parliamentary Assembly of the Council of Europe, 2010; WHO, 2010).

As a result of the 2010/11 crisis, the UN organization was summoned to reform itself once again (Sridhar & Gostin, 2011) and was subsequently forced to reduce its personnel. Nine hundred positions were cut back as a consequence of budget cuts of almost 5 billion euro in 2010/11 and subsequent cuts of 4 billion euro in 2012/13 and 2014/15 and 4.4 billion euro in 2016/17. WHO headquarters in Geneva lost almost 200 employees in 2011. The Pandemic and Epidemic Diseases department was affected. Its experts became scarce. The link between the epidemic’s mega-alert and this personnel reduction was drawn by numerous observers and by members of the organization itself, seeing it as a “punishment”. When Ebola emerged, the organization was in the middle of reforming its structures, its resource allocation procedures and its mandates.

In the first months of 2014, in stark contrast, the WHO was only slightly visible on the media front of the Ebola crisis. For several months, there was no veritable leader to represent the fight against the Ebola virus. The difficulties met on the inside of the WHO itself, and the discord surrounding the best ways to approach the problem, were central to the lack of the WHO’s ownership of the problem. Following the criticisms the WHO had endured regarding its handling of the flu pandemic in 2009, the organization seemed to be keeping a “low profile”.

The WHO’s positioning in this regard meant that the organization found itself once again in the middle of heated debates and difficulties in the context of its management of the Ebola crisis. For some of its members and senior staff, the WHO remained a “technical” organization charged with establishing recommendations so as to clarify global health policies as well as the policies of its Member States. In the context of this mandate, the WHO’s role was not one that involved deploying its own resources in an operational capacity in the field. For others, in particular those who came from the ranks of emergency response, the organization’s responsibilities involved being in the field, where it could deploy its experts to assist health authorities who were closest to the action. Those who shared this line of thinking were team members who had traditionally been involved in interventionist work throughout the world; they had been deployed for natural or industrial disasters, or were experts who had been in charge of large disease eradication programs, such as for polio and malaria. As one of our informants would summarize it: “Two cultures were clashing”. On one side, there were the
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disease specialists who occupied positions concerning a specific disease focal point (flu, plague, Ebola). They were experts on the surveillance and the evaluation of the epidemiological risks of these diseases. On the other side, there were experts in force deployment in the field who were used to intervening in mass health efforts and programs.

In this context, an opinion piece published at the beginning of the autumn of 2014 in the *New England Journal of Medicine* from the director of the Pandemic and Epidemic Diseases department allows us to identify some of her colleagues who were working on the fight against the Ebola epidemic (Briand et al., 2014). A little while after this, some of the faces of the highest-ranking officials in charge of the response would come to be better known by the general public.

In the spring of 2014, the provisions of the internal WHO Emergency Response Framework, created in 2013, fell sequentially into place in order to manage the Ebola epidemic. It allows the various levels of the organization to be called upon to pull resources when a crisis exceeds a country’s capabilities. Grade 2 of this instrument deployed different forces from the Pandemic and Epidemic Diseases department, but not only. These forces were also able to find support from the GOARN initiatives, which were operating in concert with the various countries and the regional WHO office, AFRO. Then in July 2014, a political and diplomatic path was attempted at the regional level with the proposal of the SEOCC (Sub-regional Ebola Operations and Coordination Centre) solution. It was only in August 2014 that the WHO, in the person of Bruce Aylward, and by implication the WHO director-general and three of her assistant directors-general, drafted up the “Ebola roadmap” (WHO, 2014a). At this date, the WHO Pandemic and Epidemic Diseases department would come to join forces with the Health Emergencies department. This “roadmap” was continually and incessantly revamped and updated in order to accommodate and cover the immense needs that changed on both a daily and weekly basis (WHO, 2014b).

In March 2014, the Global Outbreak and Response Network (GOARN) was beginning to deploy twenty people when the internal organization of the WHO was placed on a Grade 2 emergency. Then, when the warning became “international” – still acting in line with the internal Emergency Response Framework of the WHO – GOARN deployed fifty people. During the second call in June 2014, 100 people were deployed. Grade 3 emergency was attained on July 26, 2014, once the response became regional and implicated all three countries at the same time via the regional coordination structure SEOCC. At this time, GOARN deployed 250 people into the field. In May 2015, 1100 people had been deployed and were active at seventy-three different sites. Since the beginning of the crisis, GOARN had deployed a total of 2000 people.

The “Ebola roadmap” was a work in progress and was rewritten as the news became more and more alarming. The concerned African countries
did not really have an emergency public health plan. There were so many
other public health emergencies in these countries that Ebola was not,
and never had been, a priority. It was thought that GOARN would do the
job, like it did in previous Ebola outbreaks. Putting Ebola onto the entire
world’s agenda turned into an ongoing battle (WHO, 2015a, 2015b). The
important actors and the major donors did not tilt in the “right” direction
regarding their preoccupations, which came to translate into financial and
personnel assistance being granted (or not). The official version of the
2014 situation was as follows: mobilization efforts had experienced organ-
izational difficulties, which could mainly be explained for financial
reasons, lack of expert staff and manpower. Other criticisms arose and
suggested that it was in the heart of the WHO machine that resources had
not been allocated in a timely fashion, nor properly disbursed (Grépin,
2015; UNMEER, 2015).

In December 2014, our informants confided to us, the “work plans” of
the different sections, divisions and departments, in charge of a different
piece of the international response, had still not been approved officially by
higher ranks in the hierarchy. What was missing for the financial backers,
accountants and human resources managers in order to approve the work
programs of their colleagues and experts, who were responsible, for
example, for “clinical management”, “clinical training” and “contact
tracing”? In the decisive months at the end of 2014, why did the different
components of the Ebola response team, orchestrated from WHO head-
quarters, appear to find it difficult to coordinate and be on the same page?

Political pressures were important as well as uncertainty on the best
strategy to choose. Controversies inside the ranks of the WHO, as well as
outside, like inside MSF, developed and can be attributed to the great
challenges faced by responders. Indecisiveness played a role, as well as the
great difficulty in disposing of a safe place to exchange and work on trade-
offs. As we came to realize throughout our study, managing outbreaks, no
matter their size, scope, complexity or lethality, is plagued with resistances
and pre-formatted conventional wisdoms at all levels. There was no ration-
ality at the WHO level, and irrational fears on African soil. There was in
fact great difficulty in formulating a blueprint for a “back to basics”
strategy that would build something from the situation, bottom-up, and
not top-down, superimposing external public health interventions that
were known for decades to create resistance in the populations. This does
not mean that no help should have been offered. But as many anthropolo-
gists and experts have said on numerous occasions, the outbreak response
should be designed in accordance with and based on existing knowledge.
As Hewlett and Hewlett wrote ten years ago:

Interventions teams should view local people as allies rather than as
enemies in epidemic control efforts … Although some behaviors
need modification, local people are ready and willing to help where
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possible. Local people can contribute to disease surveillance … as well
assisting health education and social mobilization among family and
neighbors.

(Hewlett & Hewlett, 2008, 115)

*When UNMEER intervenes*

In September 2014, in the context of open and political contention
regarding the WHO’s coordination capacities and facing the fact that the
crisis had “become multidimensional with significant political, social, eco-
nomic, humanitarian, logistical, and security dimensions” – to borrow the
terms used by the secretary-general of the United Nations – as well as the
impossibility of containing contamination zones, the United Nations
sought to coordinate their action and to create a new actor on the global
chessboard. This was the first pandemic that gave rise to a Security Council
Resolution (Security Council Resolution 2177, September 18, 2014). This
is how UNMEER, the first multi-agency mission of the UN (established on
September 19, 2014 and closed on July 31, 2015) was created. Based in
Accra in Ghana, UNMEER was responsible for coordinating the UN agen-
cies’ actions in the battle against Ebola. These were WHO actions, of
course, but also those of the World Food Programme, the World Bank,
UNICEF, the International Monetary Fund, the UN Development Pro-
grame (UNDP), the UN Population Fund, the UN Office for the
Coordination of Humanitarian Affairs (OCHA) and the International
Organization for Migration. The secretary-general appointed David
Nabarro as the special envoy on Ebola, and he named Anthony Banbury as
his special representative and head of UNMEER.

Little has been written since then about the role of UNMEER (Garrett,
2015; Benton & Dionne, 2015). Our informants, mainly in the ranks of the
WHO and of MSF, painted a contrasting picture of the situation. For many
of them, there is no doubt that this institutional creation is the fruit of the
WHO having been discredited through its actions in the first months of
the crisis. It is the symptom of the non-use of the global health cluster that
should have been activated, but which was not, during the Ebola response.
The senior experts of the WHO openly criticized this “layer of supplemen-
tary bureaucracy”, on which the personnel was “entirely” dependent for
the information and expertise of the WHO. Other actors, particularly in
the embassies in Geneva, provided a different, more forgiving, discourse
and indicated the aid offered by UNMEER had been of the utmost impor-
tance in order to unify the UN areas of action in these countries.

In the autumn of 2014, a plan for specialization by function, by institu-
tion and by country was drawn up. The “Nabarro plan” proposed a divi-
sion in two phases: a redistribution of the pillars of the response and a
territorialization of different operations. Thus, according to the first
part of the plan’s objectives, the various forces were organized as follows:
(1) UNICEF was entrusted with “community engagement” and “risk communication” in the response; (2) the various Red Cross organizations, aided by the International Red Cross and thanks to a vast knowledge transfer from MSF and WHO teams, were given the responsibility of overseeing safe and dignified burials; (3) the World Food Programme was to take over the dispatching of food supplies, particularly in communities where quarantines had been instituted; (4) the World Bank was to act as the grand financer of programs; (5) the American CDC would coordinate with German laboratories and the European Union in order to look for contacts and to establish 157 laboratories where samples from the sick could quickly be tested; (6) finally, the WHO was to be in charge of the coordination of operations on the ground. This role was so difficult that many in the field recounted an incredible paralysis of WHO deployees on the ground. As one of our informants pointed out, “It’s difficult to coordinate so many people who especially do not want to be coordinated”. As Nabarro would himself say afterwards: leadership is important as well as “followship” (WHO, 2015c).

However, the partition of these tasks is to be taken with a certain prudence, because, in the details, many organizations have declared in their activity and feedback reports that their interventions were hybrid in nature. On top of the specialization by pillar and by institution, a sharing of geographic zones was put into place. As such, the United Kingdom helped more particularly Sierra Leone, France focused on Guinea, and the United States concentrated on Liberia. The former colonial spheres of influence seem to have reappeared and delegated their action to their armies, hereby espousing the tendency towards the militarization of public health operations, called global health security, not to mention the troubling postcolonial influence in all of these schemes.

Abnormal or expected crises of the global health system?

This comparison between both crises leaves open the following questions: are we facing the repeated failures of an international system to fight epidemics, serving as a tangible embodiment of global health, which is insufficiently organized, lacking power, and ill equipped and whose gaps need to be filled (Moon et al., 2017)? Or, rather, are we facing abnormal crises that it would be futile to try to manage, because they are so extraordinary that learning from them, although important will not help us fight the next big crisis, mainly because it will appear very differently? Are we facing a “failure of administrative imagination”, in Lakoff’s words (2017), and particularly are we all trapped in a fatal illusion to conceive of the possible coordination of global health crises via the intermediary of the WHO (and several large partners) at the center? This analytic error has repeatedly provoked criticism and frustration when facing expectations that are as unrealistic as they are
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unfounded and which consistently faults medical personnel at local,
national and central levels. This is true for the 2009 A(H1N1) pandemic
as well as for the 2014 Ebola epidemic. This chapter demonstrates that
each crisis has been dealt with using prior knowledge, pre-conception,
established yet debated doctrines from all parts. Consequently, re-

enforcing command and control, leadership and fellowship, providing
for better ways to coordinate are certainly important tasks on the agenda.
However, in the light of both narratives, establishing a common under-
standing of ethically acceptable modes of intervention, organizing some
mechanisms where distributed knowledge and local expertise are
captured efficiently, seems to be more pressing.

Notes

1 On one occasion, invited as an observer to a consultation aiming at determin-
ing the composition of the vaccine for the southern hemisphere in September
2014, at the WHO headquarters, we witnessed the tribute paid to one of these
stars, Dr. Nancy Cox, Director of the Influenza Division in the National Center
for Immunization and Respiratory Diseases (NCIRD), retiring from CDC after
more than thirty years of service.

2 According to CDC, six countries are concerned: Bangladesh, China, Egypt,

3 Disagreements over the issue underline that it would not be correct to say that
the virus never spread into an urban context. In 1995, the Ebola virus spread to
a hospital in Kikwit, a city of the Democratic Republic of Congo with around
400,000 inhabitants.

4 We can ascertain this just as much by looking at the following extract from
Ebola Virus, a new edition of which was published in 2014, wherein Preston pro-
vided his readers with vivid imagery of the disease for the last twenty years:

The Ebola in Sudan wiped out several hundred people in central Africa in
the same fashion that a fire consumes a pile of straw. When the flames had
burned everything up, there remained only a heap of ashes. The virus, in its
Sudanese incarnation, had retreated into the heart of the bush, where it
continues to live in the present day, circulating indefinitely between
unknown hosts, able to modify itself, potentially with the capability of pen-
etrating the human species in a new form.

(Preston, 2014 [1994], 101)

5 My translation from the original text, which was in French.

6 The United States’ 1976 experience with swine flu, when 40 million Americans
were vaccinated for the new strain, and the pandemic never showed up, may
also have played a role in encouraging caution. In addition, at the time dozens
of cases of Guillain–Barré syndrome had occurred and prompted lasting dis-
trust in public health decision-making processes (Fineberg & Neustadt, 1978;
Saluzzo, 2011).

7 The reported vaccination coverage varied between countries from 0.4 percent
to 59 percent for the entire population (22 countries); 3 percent to 68 percent
for healthcare workers (13 countries); 0 percent to 58 percent for pregnant
women (12 countries); 0.2 percent to 74 percent for children (12 countries).

8 For details on GOARN, see Ansell et al. (2012).
In May 2017, when the Democratic Republic of Congo was affected by an Ebola epidemic, a vaccine trial was quickly established. Designed and tested in Guinea in 2015 by MSF (and Epicentre, the Paris-based research team of Doctors Without Borders) and the WHO, the vaccine made by Merck and stored in the United States, has not yet been licensed, and can only be used as part of a clinical trial.

The Womey massacre is about a deadly attack on and murder of eight members of a team of healthcare workers, journalists, and government officials who were affiliated with the conflict resolution non-profit Search for Common Ground. In mid-September 2014, they traveled to the Village of Womey in Guinea’s southwest region to educate the locate population during the West African Ebola virus epidemic outbreak. The team had come to warn the village about dangers of the Ebola virus disease. The bodies were found in a latrine with evidence of being struck with clubs and machetes, and three were found with their throats slit.

In the end, compared to other countries both in the northern and in the southern hemisphere, Japan fared well with a mortality rate, per million population (directly attributable to pandemic influenza A (H1N1) virus infections) of 0.16 compared with 1.32 for Canada, 1.05 for Mexico or 3.3, for the United States (Source: Ministry of Health, Labor and Welfare, Japan).

Source: Nathalie Brender.

References


Comparing 2009 A(H1N1) and 2014 Ebola


Comparing 2009 A(H1N1) and 2014 Ebola


Mathilde Bourrier

Board, Special Session on Ebola Provisional agenda Item 3, EB 136/26, January 9.


