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Crisis! How emergency preparedness logic changes global health policy

ESSAY

ANTOINE DE BENGY PUYVALLÉE

E-mail: a.d.b.puyvallee@sum.uio.no
Antoine de Bengy Puyvallée, MA, researcher in international relations at the Centre for Development and the Environment, University of Oslo. He works on global health security and the governance of global health.
The author has completed the ICMJE form and reports no conflicts of interest.

SONJA K. KITTELSEN

Sonja K. Kittelsen, PhD, Scientia post-doctoral fellow at the Institute of Health and Society, University of Oslo. She has a background in international relations and researches on global health security and the governance of global health.
The author has completed the ICMJE form and reports no conflicts of interest.

KATERINI T. STORENG

Katerini T. Storeng, PhD, medical anthropologist specialising in global health politics and health systems. She is Associate Professor at the Centre for Development and the Environment, University of Oslo and Honorary Associate Professor at the London School of Hygiene & Tropical Medicine.
The author has completed the ICMJE form and reports no conflicts of interest.

The fear of worldwide pandemics is attracting considerable attention, and since the Ebola outbreak in West Africa four years ago, new public-private partnerships for 'global health

security' have been established. But security for whom? What are the consequences for health and development in poor countries?

A medical-technical assistant (MTA) works in a protective suit during a press appointment in the S4 laboratory of the Robert Koch Institute (RKI). In the laboratory with the highest protection level which is four, highly infectious and life-threatening pathogens such as Ebola, Lassa or Nipah viruses can be safely examined. Photo: Soeren Stache/NTB scanpix.

'We are always a step behind because we don't plan. We react…We just need to be better prepared.' So states the Coalition for Epidemic Preparedness Innovations' promotional video in its call to 'outsmart' the next unpredictable, yet inevitable epidemic event (1). What underpins this logic of preparedness and how does it shape our strategies for managing the microbial world?

In his latest book, *Unprepared*, the anthropologist Andrew Lakoff explores how a logic of preparedness has come to dominate our understanding of and approach to infectious diseases, triggering a temporality of emergency. The notion of 'preparedness' captures the idea that we might not be able to avoid crises stemming from certain types of threats, such as epidemics, but that we can – and should – prepare for these potential crises to mitigate their consequences. To do so, we need to identify our vulnerabilities through imagined scenarios and simulations, develop plans to deal with such events, and invest in response capacities in anticipation of a catastrophic eventuality.

Bill Gates' latest campaign to raise awareness of the risks associated with a large-scale influenza pandemic captures this logic perfectly. Using a simulation from the Institute of Disease Modelling (to evaluate the consequences of pandemic influenza), he concluded that 'Over 30 million will die in six months' and pledged USD 12 million to invest in a universal flu vaccine while advocating for more funding and focus on the issue – 'The next outbreak? We're not ready!'(2, 3)

This rise in preparedness thinking parallels a growing preoccupation with the security implications of infectious diseases. Events such as the 2014–15 Ebola epidemic in West Africa have highlighted the disruptive potential of outbreaks to individuals, states and societies, and have led many scholars and practitioners to call for increased investments in so-called 'global health security'. In mainstream discourse, 'security' here refers to *national* rather than human security; health emergencies, such as outbreaks of epidemic diseases like Ebola, are seen as a threat not only to human lives, but, crucially, to economic and political stability. Much like a response to an escalating military threat, preparedness against pathogens is presented as the inevitable response.

Imagining disease outbreak responses

As Lakoff sets out in his book, the concept of preparedness has its origins in the early days of the Cold War when the US civil defence establishment started planning for the consequences of an eventual nuclear attack by the Soviet Union. Ever since, the concept has been applied to the management of different types of crises, including earthquakes, floods, hurricanes and fires, and since the 1990s, infectious diseases. In the United States, preparedness exercises were developed to simulate a biological attack with weaponised anthrax or smallpox, as well as large-scale epidemics of emerging infectious diseases. Lakoff suggests that these initiatives largely convinced US policymakers that pathogens could pose a serious threat to national security. Today, the concept of preparedness continues to be central to health security efforts at both national and international levels, including the International Health Regulations – the international legal instrument revised in 2005 by WHO Member States to prevent and control the cross-border spread of infectious disease.

A health worker, wearing Personal Protective Equipment (PPE), stands inside the high-risk area at Elwa hospital in Monrovia, which is run by the French organization Doctors

without Borders. Photo: Dominique Faget/NTB scanpix.

Preparedness, Lakoff argues, constitutes a major shift in the way we respond to disease emergence. Whereas contemporary public health approaches often rely on statistics of the burden of disease to establish priorities and design interventions, preparedness focuses on the *potential* impact of disease not only on population health, but perhaps more importantly, on the 'vital systems' that are critical to the functioning of the economy and society. The emphasis is on ensuring that, in the event of a major crisis such as a nuclear attack or indeed pandemic flu, the political, economic, and social systems that underpin the state will continue to function.

Thus, in preparing for a catastrophic eventuality, emphasis is placed not on trying to *avoid* the event, but rather on generating knowledge on how to *mitigate* the event's adverse consequences through scenario planning and simulation exercises. These exercises are 'carefully scripted activities in which decision-makers [are] presented with the details of a crisis situation, [take] action in response, and then stud[y] the results of their decisions' (p. 24). Preparedness simulations help to maintain a 'continuous state of readiness' (p. 24), feeding a feeling of emergency that is necessary to sustain attention, investment and training to cope with risk. The lessons drawn from them help to develop guidelines to respond to crises, such as allocating responsibilities to different levels of authority or developing crisis procedures, and to identify response capacities worth investing in.

Like many global health efforts today, such imagined scenarios are often based on sophisticated mathematical and statistical models, but they ultimately rely on *assumptions* that have little grounding in empirical measurement, such as assumed infection rate, scale of the outbreak, lethality, and likely effectiveness of the response. For instance, in the endnote of a widely cited article, 'Modelling the Worldwide Spread of Pandemic Influenza', the authors outline important limitations of the study: 'Like all mathematical models, this model [...] contains many assumptions (for example, about viral behavior) that might affect the accuracy of its predictions. The model also does not consider variations in travel frequency between individuals or viral spread in rural areas.'(4)

Drawing from this logic of preparedness, Lakoff argues that the scale of the 2014–15 Ebola epidemic in West Africa was partly due to a *failureof imagination*: 'at a crucial stage, health authorities did not conceptualise Ebola as the potential source of a catastrophic epidemic' because previous epidemics of the Ebola strain were contained relatively easily (p. 141).

Preparedness, then, operates at the limits of our imagination; it demands that we anticipate all potential future scenarios, yet we can only prepare for those situations that we envision as possible. Preparedness, moreover, puts responsibility for future potentially catastrophic outcomes in the actions taken in the present. It demands that we continuously invest in our preparedness, yet we can never be 100 per cent prepared.

Warfare versus welfare?

Preparedness plans are activated when an outbreak is detected, and its severity assessed and categorised following pre-established criteria. Operationally, the logic of preparedness therefore relies on early detection systems combining sentinel devices spread all over the world, laboratory capacities, global surveillance systems analysing the data gathered, and field teams capable of investigating suspected cases. The information collected, updated continuously in real time, provides the basis for decisions on potential interventions.

Under the International Health Regulations, for example, pre-established categories are used to classify outbreaks in order to determine whether they are reportable to the World Health Organization (WHO). Based on the information received, a committee of experts at the WHO decides whether the outbreak in question constitutes a so-called 'Public Health Emergency of International Concern'. The declaration of such an emergency triggers a global alert system, which activates preparedness plans and sets off a global response that often relies on biomedical countermeasures. In 2009, for instance, the WHO declared the H1 N1 influenza pandemic a 'Public Health Emergency of International Concern'. The declaration triggered advance purchase agreements for influenza vaccines contracted by a number of wealthy countries with pharmaceutical companies to secure prioritised access for their populations. These countries 'bought virtually all the vaccine companies could manufacture' and exercised pressure on their domestic pharmaceutical companies to meet domestic needs before exporting (5). The WHO's efforts to encourage equitable access led to the donation of some vaccine stocks, but they remained largely insufficient to provide extensive coverage in developing countries (5).

This focus on early detection and rapid response to outbreak events thus reflects the prioritisation of a *reactive* logic rather than a *preventive* one. In keeping with the logic of preparedness, the aim is not to prevent outbreaks from happening in the first place, but rather to *contain* them rapidly at source.

This decoupling of prevention and containment speaks to the differences in objectives between what Lakoff has identified as *population* security and *vital systems* security. Whereas population security aims to ensure the collective well-being of populations and thereby focuses on longer-term interventions aimed at improving health and living conditions, vital systems security is focused on mitigating the crisis event. While a focus on population security and vital systems security are not necessarily mutually exclusive, it is the latter approach that dominates current efforts to manage infectious diseases.

The changing landscape of global health security

This distinction between population security and vital systems security underpins what Lakoff identifies as two regimes of global health: a *global health security* regime and a *humanitarian biomedicine* regime. The global health security regime, according to Lakoff, focuses on the protection of vital systems and brings together *state-based* institutions such as national disease control institutes, multilateral health agencies, and collaborative reference laboratories in an effort to anticipate and rapidly contain emerging infectious diseases. The humanitarian biomedicine regime, on the other hand, operates largely outside of the state and brings together non-governmental organisations and philanthropic foundations around projects aimed at alleviating the suffering of individuals from neglected diseases and failures of development.

Topical book: Andrew Lakoff. Unprepared. Global Health in a Time of Emergency. University of California Press, 2017.

While Lakoff maintains that these two regimes operate largely independently, driven by differing ethical and political imperatives and technical approaches, the 2014–15 Ebola epidemic in West Africa demonstrated that the boundary between these two regimes is not as distinct as Lakoff would suggest. In fact, the various stages of the Ebola response engaged actors from both the global health security and humanitarian biomedicine spheres. Humanitarian actors like Médecins sans Frontières operated alongside national and international health agencies as well as military and civil protection assets in the later stages

of the response. Rather than two distinct regimes of global health, this suggests the existence of two interdependent yet distinct groups of actors from the fields of global health and medical humanitarianism operating *within* the broader framework of global health security (6). The concept of global health security can thus be interpreted more broadly than just a narrow, state-based understanding rooted in self-protection and self-interest. However, there are also potential tensions between these diverse actors in providing for global health security given their distinct values, interests and capacities.

Global health security and the modality of emergency

The rise of a number of new initiatives focused on strengthening national and international epidemic prevention, preparedness and response capacities in the wake of the 2014–15 Ebola epidemic speaks to the idea that we remain, as Lakoff puts it, *unprepared* for the next epidemic event. However, the emergency modality that underpins preparedness risks leading to an approach to global health security that largely overlooks the structural causes of epidemic events, such as poor primary health care, lack of potable water, insufficiently regulated economic activities, or barriers in access to medicines.

Recent debates have downplayed such tensions by suggesting positive synergies between global health security and broader health goals, such as the movement towards universal health coverage, which includes financial risk protection and access to quality essential health services, medicines and vaccines for all. However, critics have questioned the extent to which synergies can be built between these two goals given the divergent interests and objectives underpinning them (7). Another concern is that the substantial resources needed to prepare for potential disasters diverts resources from actual, current public health needs (8).

Such concerns have become all the more pressing following the 2014–15 Ebola outbreak, as a range of private-sector actors have taken on 'global health security'. These include both non-profit actors like non-governmental organisations and humanitarian agencies, and for-profit companies supplying medical services, pharmaceutical development and logistics. Their primary motivation for participating in the global health security space may therefore not be so much national self-interest or even global public health, but rather humanitarian concerns or for-profit motives.

Increasingly, these actors have converged in new public-private partnerships. These are collaborative arrangements for policy development and implementation of various degrees of institutionalisation that are focused on strengthening national and international capacities to effectively detect and contain infectious diseases. The Coalition for Epidemic Preparedness Innovations (CEPI), for instance, launched in 2017, aims to develop vaccines against a select list of emerging infectious diseases of epidemic potential. It describes itself as 'an alliance between governments, industry, academia, philanthropy, intergovernmental institutions, such as the WHO, and civil society.'(9) The formation of partnerships such as CEPI reflects that it has

become increasingly mainstream to see non-state actors' resources, innovation and expertise as both necessary and desirable for making progress towards global health security (10). Yet, how does the convergence of these disparate actors in these new partnerships influence approaches to global health security? How will interests for profit and national security be balanced against those for health equity and health systems development?

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