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A critical view of the global health emergencies: the 2016 zika epidemic case

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Abstract *The study of global health agenda-setting and issue-prioritization has been one of the key aspects of a critical literature that, in recent years, has aimed to identify the political dimensions of global health governance and to shed light on points of tension, exclusion, and inequality. This essay speaks to this critical global health literature, focusing on the construction of the category of emergencies of international concern. Considering the case of the outbreak of zika and congenital syndrome in Brazil in 2016, it explores the conditions enabling the construction of an emergency. We question the factors and conditions around this public health event that were considered during the decision-making process and that transcended material, more objective data regarding zika's epidemiology, its morbimortality, or its association with congenital malformations. We conclude that the securitized context and the growing relevance of risk to global health are important conditions for understanding emergency declarations.*

Key words *Public health emergency of international concern, Zika virus, Negligence, Brazil, World Health Organization*

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Introduction

In recent years, the academic literature on global health has witnessed the growth of critical approaches that aim to question dominant understandings of health governance. This critical turn is rooted in an anthropological purpose of placing people, their practices, and experiences at the core of the analysis[1,2]. To the detriment of a vision that favors the study of institutional arrangements and the health governance architecture, critical studies start from practice, and from concrete and everyday realities – how health and illness are understood and experienced by individuals and groups in a given historical, cultural, and socioeconomic context.

The genesis of the critique of global health is also grounded in theoretical contributions in International Relations[3,4], which assume that understandings about health and disease must be seen not as evident realities but as the negotiated, contested, and, thus, precarious result of social constructions[5], or, in other words, processes of representation, negotiation, and contestation of collective understandings, which include the definition of problems as an essential dimension[6,7]. Therefore, health policies are not merely medical, technical, or technological instruments for solving objective problems; they depend on a previous construction of what is worthy of priority, attention, or protection. This definition of problems, whose background lies in the definition of the society we have or want to have, configures a range of necessary, possible, or desirable solutions to the detriment of possible alternative solutions.

Thus, one of the primary assumptions of the critical approach is that global health should be seen as a political phenomenon, not merely a technical one. It is political because it results from a social negotiation process, which comprises shared understandings and disagreements. Another political dimension of global health arising from these negotiations and tensions is the fact that it is permeated by power relations[5]. The definition of dominant ideas and practices occurs in a social and economic context that reflects different capacities and reproduces inequalities. Focusing on inequality is a central feature of the critical approach. By unmasking universalist or homogenizing claims, the critical perspective highlights the diverse experiences, that is, how different territories, groups, and individuals are unequal in their susceptibility to the disease and in their coping capacity.

The critical approach also draws attention to the definition of priorities in global health governance. The study of the global health agenda-setting[8,9] aims to understand how the distribution of financial, human, and symbolic resources is related to the interests and the mobilization of power by different stakeholders. In this context, we point out the relevance of the category of health emergencies, associated with a governance paradigm focused on the so-called "emerging diseases" and, in general, on the response or reaction to outbreaks of infectious diseases[10]. This emergency paradigm is interconnected with the development, over the last few decades, of a global governance agenda guided by concerns about health security[11,12]. The 2005 International Health Regulations (IHR) illustrate this: they not only reflect the prevalence of security concepts in global governance[13] but also introduce a set of significant changes that have reconfigured the relationship between the World Health Organization (WHO) and its Member States[14], allowing, for example, the reporting of epidemic outbreaks by non-state actors, or radically expanding the scope of problems that can be considered emergencies. The IHR started to include, in the range of issues that can trigger an emergency response by the UN and the States Parties, any event that meets the requirements of the Public Health Emergency of International Concern (PHEIC) algorithm: having an extraordinary nature, being a public health risk that could spread to other countries, and requiring a coordinated international response.

This essay approaches health emergencies using a critical lens. We selected the Zika Virus Congenital Syndrome (ZVCS) health crisis, whose epicenter was Brazil in 2016, to study the conditions that enabled the construction of an international emergency. We consider this an important example of how the WHO and State instruments are designed and implemented to respond to international health emergencies.

Until 2013, the Zika virus was little known. Isolated in the 1940s, it had specific infection records until the mid-2000s[15]. In 2013, starting in French Polynesia, the virus would have traveled across Oceania and Easter Island before reaching Central America and the Caribbean[16]. In Brazil, it initially did not attract the attention of local authorities, as the disease was perceived as having mild and short-lasting effects and was not included in the list of notifiable diseases. The Pan American Health Organization (PAHO) was only notified about the circulation of the virus in the Northeast of the country in May 2015[17]. The

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virus seemed to adapt to urban and peri-urban cycles, transmitted by *Aedes aegypti* and other vectors, with increasingly severe manifestations, especially neurological[18]. There were no effective vector control means, neither vaccines or specific drugs for the disease.

In this essay, we set out to answer the following questions through the case of the ZVCS-related emergency: why do specific public health problems become priorities on the global health agenda and are elevated to the status of an emergency of international concern? What explains the persistence of other issues that remain focused on the neglect?

As we look for answers to these questions, we seek to highlight the boundaries of merely technical approaches to the health crisis. To this end, we pay special attention to the political dimensions of the construction of the ZVCS as an international emergency, questioning the factors and conditions surrounding this public health event that were eventually considered in the decision-making process.

Uncertainty, risk, and fear: the association between Zika and congenital syndromes

Despite concerns, the Zika disease alone was initially insufficient to declare an emergency in the Brazilian territory. In 2015, Brazil had 1,688,688 probable dengue cases, with 986 confirmed deaths[19], and yet this was not declared a national emergency. In mid-2015, some municipalities in the Brazilian Northeast started to report the unusual increase in the number of babies born with microcephaly, drawing the attention of state health authorities concerned about this event's impact on local health systems[20]. Until then, the correlation between Zika virus infections and microcephaly had not been proven yet.

The Ministry of Health declared a Public Health Emergency of National Concern (ESPIN) in November 2015[21], based on the unusual increase in the number of babies born with microcephaly. Despite the small number of cases and the lack of etiological evidence, the event represented a significant risk to public health, since the potentially affected population was vulnerable. The clinical profile of microcephaly and the incidence in the Northeast region at that time of the year and in the affected population were uncommon.

The public mobilization around Zika was ultimately connected with the many unknowns in the scientific environment, especially around the mechanisms of disease transmission and the relationship between the virus and neurological complications[22], which made it urgent to make sense of what was happening. The question of uncertainty became important in global health as the scope of legislation and governance started to focus on concrete diseases and on uncertain, yet to be calculated, risks[23]. This shift in focus is evident in the IHR adopted in 2005, which referred to events that could eventually constitute a public health risk. The presence of risk in global health stems from the importance of health security but adds new elements by prescribing a concern with not only concrete threats but also future risks. Attention regarding the future shows a reorientation of health policies towards attempting to predict and calculate risks and govern a backdrop of permanent uncertainty[24]. Risk and risk perception are two key factors involved in the conceptualization and practice of global health governance. The question becomes how to identify the risk and the extent to which its impact and global scope can be overestimated or underestimated, especially since the identification of risks is complex, involving different stakeholders, empirical determinants, competing knowledge demands, and a kind of systemic disorder due to lack of information[25].

The use and definition of fear and susceptibility to risk serve as tools for global health policy formation and political mobilization. Consistent security mechanisms can be established with elements such as defining common threats, building consensus, and relinquishing aspects of state sovereignty in favor of international surveillance mechanisms, besides associating medical and public health experts and international or national bureaucrats[25]. In this context, the language of risk, primarily associated with threat and security, could elevate health to the global agenda, promoting the availability of resources and the organization of new global policy initiatives, with new multisectoral governance forms, with a variety of stakeholders at different decision-making levels.

The uncertainty stemming from the association between Zika and congenital syndromes, and from the way in which the risk category was used to identify this uncertainty, explain the context in which (national and international) emergencies were declared[24]. The reaction to this uncertainty must also be understood against the background of a broader political imaginary which has guided global health, and which relates to a mentality based on anxiety and fear[26]. The politics of fear

in global health is not a recent event: the history of social medicine and international health evidence the persistent association between illness and political anxieties related to groups and regions that are disease carriers or with contagion risks, such as immigrants, LGBTQI populations, or non-dominant ethnic groups[27-29]. During the Zika epidemic, the mobilization of managers, researchers, the media, and society in general also generated dramatic reactions, which took on the contours of great alarmism and a kind of "*Zikaphobia*"[30]. As a result of the ESPIN declaration in Brazil, research funding agencies and the State allocated resources to scientific research related to the disease and, particularly, to its unexpected effects. For Brazilian scientists, the Zika outbreak was an opportunity to receive funding for international cooperation and boost international publications, which was decisive given the scarce national resources, primarily due to the then country's political and economic crisis[31].

Compared to what had been occurred in previous decades, the flurry of reports about Zika produced in a single year transformed the virus "into such a perfect agent as a pathogen that it would be impossible not to be afraid of it"[30]. The spread of panic in some Brazilian areas led to the race for ultrasound examinations that the health system could not meet and tests whose results would take weeks. The widespread pictures of children with microcephaly created an environment of anxiety about the epidemic. They stigmatized the affected populations, who momentarily became targets of pity that did not translate into robust and sustained public policies that could respond to the immediate and long-term consequences of congenital problems.

When a local crisis turns into an international emergency

An international emergency declaration by the WHO is supposedly intended to convert specific public health problems into priorities on the global health agenda. We seek to understand the reasons why ZVCS achieved this status. Firstly, we should emphasize that the object of the declared emergency corresponds to the effects caused by the disease (congenital syndromes) and not the epidemic itself. Considering the dizzying contemporary international mobility, Zika quickly reached other countries[32]. Colombia and the U.S. reported autochthonous Zika virus transmission cases and records of babies with microcephaly and took steps to control them.

The Olympic and Paralympic Games in Brazil, scheduled for mid-2016, were expected to facilitate the international spread of the disease. In January 2016, the then Director-General (DG) of WHO, Margaret Chan, convened an Emergency Committee (EC) that advised her to declare a PHEIC, based on the accumulation of available evidence on the relationship between Zika virus infections and baby malformations[33], in particular the uncertainty about the clusters of microcephaly, Guillan-Barré syndrome, and other neurological defects reported by Brazilian authorities and, retrospectively, from French Polynesia, which were associated in time and space with Zika infection outbreaks[34]. Several measures were recommended, particularly vector control and the distribution of information to pregnant women.

The third EC meeting, held on June 14, 2016, was almost entirely dedicated to the Olympic Games. Considering that arbovirus transmission naturally declines in the winter and that Brazil was adopting vector control measures in the cities that would host the games and their surroundings, the EC considered it sufficient to recommend that the country continue its vector control work and ensure the availability of repellents and condoms in sufficient quantity for athletes and visitors[35].

Thus, the WHO never recommended suspending the Games in Brazil or interrupting the flow of people or trade between States. On the fifth meeting, held on November 18, 2016, the EC concluded that the event would no longer constitute a PHEIC as per the IHR. However, it was still a relevant public health challenge and required greater attention and action by health authorities and the scientific community[36].

According to the WHO DG Margaret Chan, the event would had met the conditions necessary to declare a PHEIC[37]: it was extraordinary because of the novelty of the suspected relationship between Zika virus infection and microcephaly and other malformations; the risk of international spread of the virus was high; and *Aedes aegypti* was present in an area that involved about half of the global population, which, in the absence of treatments and vaccines, required a coordinated international response. It had ceased to be a PHEIC because the questions that made the ZVCS extraordinary had already been answered by science.

Chan's position highlights the WHO's technical and operational motivation to transform a disease of little public attention into an event of

international importance. However, she was not the only one.

PHEIC and its political dimension

According to the IHR, a PHEIC can be declared given an extraordinary event that constitutes a risk to public health due to the international spread of a disease or illness, regardless of its origin or source, and which represents or may represent significant harm to human beings, requiring a coordinated international response. Therefore, this definition also includes problems of chemical, radio-nuclear origin or resulting from environmental disasters, arising naturally or deliberately. A PHEIC is not defined by its severity or lethality but by its potential international reach[38].

Before the 2015 Zika outbreak, the WHO had declared only three PHEICs. In the first, declared in 2009, due to the AH1N1 influenza epidemic, the organization was heavily criticized for allegedly overestimating the pathogenicity of the virus to benefit the pharmaceutical industry[38]. The second PHEIC was declared in 2014 and was in force at the time of submission of this article. It focused on poliomyelitis, despite the small number of cases, particularly in regions of armed conflict.

The third was the Ebola outbreak in West Africa in 2014. At the time, the WHO was criticized for making highly politicized decisions and for the lack of transparency in its decision-making. Its managing and leadership abilities during emergencies were considered unsatisfactory[39]. With the support of the General Assembly and the Security Council, the UN General Secretariat created "the first United Nations emergency health mission"[40]: the United Nations Mission for Ebola Emergency Response (UNMEER), taking over from the WHO in the coordination of the international response.

The WHO has been acting differently regarding events that could potentially configure a PHEIC. Cases such as the cholera outbreak in Haiti, the Fukushima nuclear disaster in Japan, and the use of chemical weapons in Syria, although subject to notification under Annex 2 of the IHR, did not even lead to the convening of an EC at the WHO, as were so many other subjects. On the other hand, other arboviruses with a more significant impact on public health than Zika virus disease are not conceived as potential international emergencies.

The WHO Director-General has the final say on whether or not to declare a PHEIC. However, the lack of transparency in the decision-making process of the ECs has been controversial since the declaration of the first PHEIC, the AH1N1 flu, in 2009, when conflicts of interest between EC members and pharmaceutical companies were pointed out.

This decision-making process has come under intense scrutiny. In the case of the AH1N1 flu and the 2014 Ebola crisis, several governments and independent international commissions strongly criticized the WHO for possible conflicts of interest and the delay in declaring an emergency. The declarations issued by ECs are not detailed, particularly concerning the criteria used to determine what is or is not a PHEIC[41]. The three conditions under the IHR do not always seem to be considered. Even when criteria are mentioned, there are different interpretations of evidence of the potential international spread of the threat. The only sources of information on the deliberative process are the communiqués and the press conferences held after the EC meetings[41], substantiating a requirement of the IHR[42]. Increasing transparency on the functioning of the EC could bring more clarity to the entire international community about the consequences of an emergency.

The Ebola crisis in the Democratic Republic of Congo (DRC), in 2018 and 2019, raised new questions about this decision-making process. In its first communiqué, the EC acknowledged that it was an extraordinary event with a risk of international propagation but understood that, at that moment, it would not be positive to declare a PHEIC[43]. The information available to the public hinders the identification of the criteria adopted by the EC to make such a statement[42]. With the negative repercussion of this communiqué, a new meeting finally recognized that it was a PHEIC. The same pattern was observed regarding the five meetings on PHEIC on ZVCS, whose public statements do not explain the weightings carried out internally.

The lack of transparency compromises the legitimacy of the decisions taken and, consequently, the performance of the IHR and WHO itself[44]. Records of EC meetings are subject to a 20-year confidentiality rule. This opacity raises questions about the relevance of information, the possibility of conflicts of interest, and political interference in the decision-making process.

PHEIC and the Zika virus

Despite the lack of transparency in the decision-making process, we can identify factors that led the WHO to declare a PHEIC in 2016. These relate to aspects already mentioned in this essay, such as the security trend and the focus on risk calculation and crisis containment. Two important political events shaped the discourse and actions of the stakeholders involved: on the one hand, political instability, as the emergency unfolded in the middle of the impeachment process of the President of the Republic, Dilma Rousseff; and, on the other, the Rio de Janeiro Olympic Games, scheduled to start in July 2016, which would host delegations from 208 countries[45]. Being a severe, sudden, unusual, or unexpected event with implications beyond the affected State, a PHEIC requires immediate international action. For these reasons, it seems unlikely that the WHO would have declared a PHEIC related to ZVCS were it not for the increased level of global attention on the emergence of the virus stemming from the proximity of the Games in Brazil, the concerns regarding the State's ability to manage it amid the deep political crisis and the great uncertainty surrounding the disease and its association with congenital malformations.

Margaret Chan's visit to the country shortly after the PHEIC declaration in February 2016 signaled the concern of the WHO. However, even when faced with public pronouncements of experts demanding that the Olympics in Rio de Janeiro be postponed, the WHO remained firm in its decision[46]. Experts warned of the unnecessary risk the Games posed to thousands of people, further suggesting a possible conflict of interest between the WHO and the International Olympic Committee (IOC). The WHO replied that Brazil was just one of the 60 countries where the Zika virus was circulating, to which people did not stop traveling for several reasons, and that the PHEIC declaration sought precisely to avoid adopting restrictive measures against the country[47].

The WHO assessment was closely related to the performance of the Brazilian government. Even on the verge of impeachment, a "war against the mosquito" was launched by the President's Office, embracing vector control as a response strategy and involving a large contingent of the Armed Forces.

Thus, the declaration of international emergency by the WHO worked as a kind of guarantee for the participants of the Olympic and Paralympic Games hosted by Brazil, showing that the international community was vigilant of what was happening in the country. The fact that the sports events were not suspended corroborates the idea that it was a matter of supporting a weakened government and ensuring a national consensus between different political forces around the need to adopt control measures subject to international pressure and surveillance. Therefore, it was not a mere calculation of the probabilities of the international spread of the disease, based on technical information which could justify the suspension of the games. The emergency declaration mechanism clearly took the form of ad hoc political action to the detriment of an effective and permanent confrontation of the public health issues at the root of a health crisis. Corroborating this idea, while not the object of this article, it is essential to note that important literature has addressed the Brazilian response to Zika from a gender perspective, showing its adverse impact on women's sexual and reproductive rights[48-52].

The transmission of infectious diseases in large-scale events is one of the factors to be considered in risk assessment, along with the possibility of criminal dissemination of biological agents[53]. It was well known that the risk of introducing non-existent arboviruses in Brazil, such as new serotypes of dengue, chikungunya, and Zika, required the strengthening of surveillance services[54]. However, the Brazilian response to mass events prioritized diseases transmitted from person to person[55].

Conclusion: risk, safety, and neglect

Health has grown in relevance on the global governance agenda, among other reasons for its economic impacts. With the emergence of HIV/AIDS in the 1990s, infectious diseases were described as threats to peace and security. Shortly after September 11, 2001, the US anthrax attacks further reinforced the discourse around health securitization and placed security at the center of academic works on global health[56]. Problems emerge as security issues through intentional representations, explicit or not, shaping the means by which policies are legitimized, agendas are justified, priorities are changed, and resources are mobilized. A critical approach to health security can help us avoid wrongfully using a security vocabulary regarding health issues through questionable emergency measures such as travel restrictions, quarantines, or mandatory vacci-

nation campaigns. The security context and the growing importance of risk in global health are necessary conditions for understanding emergency declarations. The predominance of a risk logic explains recent changes in global health norms and governance mechanisms, such as the very figure of PHEIC, which represents a significant transformation in global health governance, moving from surveillance of some diseases to surveillance of public health risk in the shape of uncertain and unexpected events, which results in the reorientation of resources in the name of the precautionary principle rather than in response to real and objective health issues, which may serve other agendas (such as the media or corporate interests)[10].

It seems that this was the same mentality that led to the declaration of a PHEIC during the Zika virus outbreak in Brazil, since the object of the emergency was not the virus itself but the uncertainties regarding the association between the virus and neurological disorders, particularly microcephaly in newborns. The logic of risk in the case of Zika kept the issue on the agenda for a few months. It contributed to diverting attention from other materially more impacting health issues, such as the millions of dengue cases that plagued the country in the same period. In what Brown and Harman call "inflated perception"[25], the illnesses that become central as global health security issues shift the focus away from neglected diseases and from the socioeconomic conditions that perpetuate disease risk.

The ESPII category shows a global agenda that could be considered simultaneously broader and more restrictive. The emergence of ZVCS is an example of this idea: by not being restricted to a pre-defined list of diseases as it was in the past, the IHR can encompass unpredictable objects such as an unknown syndrome that reached a small number of cases, most of them occurring in a well-defined region. However, this is also a more limited approach, as it contributes to reproducing neglect in global health[57]. Neglect can be understood as the invisibility of other diseases that are deemed secondary because they do not result in the declaration of a PHEIC by the WHO; it also pertains to how the focus on emergencies has contributed to the reproduction of a reactive governance paradigm based on the management of crises and the containment of epidemic outbreaks – and not in proactive and structural initiatives to address the determinants of health and disease. Once again, ZVCS perfectly exemplifies this restriction, as the Zika virus disease continues to afflict vulnerable populations in Brazil. Even ZVCS carriers and their families who supposedly benefited from the emergency declaration in 2016 rarely had their needs met satisfactorily. With the end of the emergency, they began to see themselves increasingly neglected due to forgetfulness.

In this context, it is again relevant to adopt a critical approach that allows investigating what is silenced – the issues that remain outside the political and media agendas, the suffering made invisible, and alternative visions and ways of resisting dominant policies and ideas. It is urgent to adopt a critical view of global health emergencies and the multiple types of neglect they can produce.

Collaborations

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