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**International Legal Issues of National Sovereignty and  
Authority that Impact Global Health Security**

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Authority that Impact Global Health Security**

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2017

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## **Abstract**

### International Legal Issues of National Sovereignty and Authority that Impact Global Health Security

By Rana Khalid Sulieman

The International Health Regulations (IHR) 2005, serve as an overarching role in global health security (GHS); they are designed to prevent, detect, and respond to international threats. In the wake of past international health crises, (i.e., H1N1 influenza [2009], Ebola [2013], MERS-CoV [2014], Zika [2016], and SARS-CoV-2 [2019]) the IHR (2005) strives to compel a robust, coordinated global response but has been criticized. It became clear that the current global legal infrastructure was unequipped for global security (GHS). Understanding the history, development, and evolution of the IHR provides necessary context for the global community to prepare for any future crises. I looked at the intersection between the IHR and domestic health systems and how a synergistic relationship is required to enhance GHS. At the core is to amend IHR (2005) to strengthen GHS and reinforce global preparedness at a global scale while maintaining the delicate balance to preserve national sovereignty and authority.

**Key Words:** International Health Regulations, Global Governance, Sovereignty, Global Health Security, Public Health Surveillance, Multisectoral Collaboration, Coordination, Public Health

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## **Acronym List**

AIDS: Acquired Immunodeficiency Syndrome

FCTC: Framework Convention on Tobacco Control

GHS: Global Health Security

HIV: Human Immunodeficiency Virus

IAEA: International Atomic Energy Agency

IHR: International Health Regulations

ISC: International Sanitary Convention

ISR: International Sanitary Regulations

JEE: Joint External Evaluation

MS: Member States

NFPs: National Focal Points

PHEICs: Public Health Events of International Concern

PHS: Public Health Surveillance

SARS: Severe Acute Respiratory Syndrome

UHC: Universal Health Coverage

UN: United Nations

WHA: World Health Assembly

WHO: World Health Organization



## **Introduction**

Global health security (GHS) has been strengthened by the International Health Regulations (IHR); they are designed to prevent and manage major international public health threats. However, in recent years, the GHS has revealed IHR gaps. Recent global health crises, (i.e., H1N1 influenza [2009], Ebola [2013], MERS-CoV [2014], Zika [2016], and SARS-CoV-2 [2019]) resulted in close scrutiny of the GHS and our ability to deal with these threats.

During COVID-19, GHS entered a state of extreme volatility and unrest; gaps in national interagency and international collaboration were revealed and intensified. These gaps accelerated geopolitical and security challenges and fueled a wave of ultra-nationalism, political unrest, and the emergence of a massive disinformation infodemic. The COVID-19 pandemic has become pivotal to reveal the underpinnings of GHS. Shortcomings in the international legal infrastructure – identified through a high-level evaluation – make it clear there must be reform to improve GHS.

Significant challenges exist regarding GHS and national sovereignty. We must consider the benefits of global governance while maintaining the delicate legal balance of legitimate national sovereignty that benefit all. Assessing the current systems and promoting reform that prioritizes transparency and accountability while preserving sovereignty and authority is a way forward.

I explored the historic context by which the IHR was established and evolved and assessed the functionality of current IHR (2005) guidelines during major international crises. I aimed to review the intersection between the IHR (2005), and the global health system, plus determine how to establish functioning GHS. The objective was to identify key issues prompting amendments to the current legal infrastructure and reimagine the IHR and in global health law.

### **Emergence of the International Health Regulations**

The IHR serve as an instrument of international agreement and provide an overarching governing framework that respects and defines national rights and obligations during

public health crises. The IHR represent a legally-binding, global agreement among 196 countries, including the 194 World Health Organization (WHO) Member States (MS) “*to prevent, protect against, control, and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks and that avoid unnecessary interference with international traffic and trade.*”<sup>1</sup>

The origin of the IHR dates to the first International Sanitary Convention (ISC), held in Paris in 1851 to address the European cholera epidemics.<sup>2</sup> Perhaps more crucially, it was developed to prevent cross-border transmission of this disease in a way that minimized interference with international trade and travel. Subsequently (from 1851 – 1938) 13 more ISC were held to standardize international quarantine regulations against the spread of cholera, plague, and yellow fever.<sup>3</sup>

WHO was established Apr 7, 1948, by the United Nations to fulfill the mandate of protecting GHS.<sup>4</sup> WHO served to administer the International Sanitary Regulations (ISR) by a central international health organization with near universal membership.<sup>5</sup> At the Fourth World Health Assembly (WHA) in 1951, 100 years from the 1st ISC, the ISR were adopted by WHO MS with few changes, including the expansion of infectious diseases under regulation to include cholera, plague, yellow fever, smallpox, relapsing fevers, and typhus and the integration of WHO into its operation.<sup>5</sup> In 1969, the ISR were renamed the IHR.<sup>1</sup>

### **Evolution of the IHR**

The IHR (1969) focused on control of a short list of diseases (cholera, plague, yellow fever, smallpox, relapsing fevers, and typhus) and only obliged MS to report these specific diseases and maintain minimal public health capabilities at ports and borders.<sup>6</sup> Following public health threats and outbreaks outside the regulation – including the Ebola hemorrhagic fever in Zaire in 1976 – and the non-applicability of the IHR at the time in addressing the growing threat of other (re-)emerging infectious diseases (e.g., HIV/AIDS, tuberculosis, and malaria), the WHA and other WHO governance structures recognized the need to revise IHR (1969).<sup>7</sup>

The revision process commenced in 1995<sup>1</sup>, preceded by an initial amendment in 1981 that removed smallpox from the list due its global eradication in the late 1970s.<sup>5</sup> This brought forward the IHR (1998) draft.

About five years after the IHR (1998) draft, a pandemic of Severe Acute Respiratory Syndrome (SARS) in 2003 revealed the urgent need for a new set of rules to prevent, control, and provide a public health response to international disease threats.<sup>8</sup> This accelerated the IHR revision process and within 18 months a new set of regulations was agreed upon.<sup>7</sup> On May 23, 2005, the WHA adopted the IHR (2005) and concluded the decade-long effort led by WHO to revise the IHR (1969) to make them more effective against global disease threats. IHR (2005) is currently operational and entered into force on June 15, 2007.<sup>9</sup>

IHR (2005) constitute the most radical and far-reaching change in international law on public health since the beginning of international health co-operation in the mid-19th century.<sup>5</sup> Under it, GHS is an improved comprehensive governance strategy that applies to significant international threats emanating from biological, chemical, or radiological sources that are naturally occurring, accidental or intentionally caused.<sup>5</sup>

While bi-and multilateral collaborative efforts are the basis for global management of infectious disease epidemics, they are strengthened by the IHR. Since IHR (2005), there have been several global disease pandemics including the H1N1 (commonly known as swine flu), Zika, Ebola, and COVID.<sup>6</sup> There has been a noticeable shift towards global governance, defined as a purposeful order that leans on a mutual arrangement among global institutions to synchronize action for the greater good.

Within the context of GHS, this can manifest in formal or informal sets of policies and recommendations transcending national boundaries; this is rooted in a set of rules that are driven by a combination of economic and moral incentives. This shift towards global governance is highly dependent on reputable institutions to negotiate, adopt, and evaluate normative rules among sovereign nations. Currently, WHO has constitutional

authority to negotiate and evaluate normative instruments, making it a central driver of guiding stakeholders towards collaborative efforts.<sup>1</sup> The constitution of the WHO articulates the universal value of the right to health; an extensively accepted international legal entitlement. To understand the issues surrounding GHS response, it is important to discuss relevant legal instruments and processes.<sup>10</sup>

### **Relevant Legal Instruments and Processes**

Global health law is not organized as a standardized legal body, but rather unified by a network of “hard” and “soft” laws. Hard laws denote legally binding obligations that can be legally enforced before a court of law (e.g., treaties).<sup>11</sup> Soft laws refer to agreements, principles, and declarations that are not legal binding (e.g., codes of practice); soft law instruments are primarily utilized in the international sphere.<sup>11</sup> The combination of hard and soft legal instruments greatly impacts the realm of GHS and has come under the auspices of the WHO. Legal norms are not binary, but are rooted in normativity, ranging from binding to non-binding instruments. While the WHO has historically granted the World Health Assembly (WHA) substantial powers to develop global health law, only two treaties have been established since its inception: the Framework Convention on Tobacco Control (FCTC) and the International Health Regulations (IHR).<sup>10</sup>

WHO has extraordinary access to treaty-making powers; the processes for negotiating agreements, conventions, and regulations are well-established. MS have 18 months to accept or reject a convention after its adoption by the WHA. This is an influential mechanism that obliges MS to consider a given treaty in accordance with their respective national, constitutional practices. Unfortunately, WHO lacks power to enforce compliance at a national level, which leads to a heavy reliance on MS involvement to implement conventions through domestic policy.<sup>12</sup> WHO has authority to negotiate a wide range of health topics, including sanitation and quarantine, disease nomenclature, and standards of safety of pharmaceuticals.<sup>13</sup> Regulations are set into motion after the adoption by the WHA the process of adoption occurs within an 18-month period. If a given MS does not opt out, they are automatically bound.<sup>12</sup>

Revisions of the IHR establish a more-modern framework for addressing GHS. Because the IHR is a legally binding framework, it establishes a centralized process for coordinating in the detection of and response to “public health events of international concern” (PHEICs).<sup>14</sup> IHR (2005) requires a minimum set of “core capacities” (in relation to health governance) from its signatories, detailed from Annexes 1 and 2:

- WHO shall collect information regarding events through its surveillance activities and assess their potential to cause international disease to spread and possible interference with international traffic.
- Each State Party shall assess events occurring within its territory by using the decision instrument in Annex 2. Each State Party shall notify WHO, by the most efficient means of communication available, by way of the National IHR Focal Point, and within 24 hours of assessment of public health information, of all events which may constitute a public health emergency of international concern within its territory in accordance with the decision instrument, as well as any health measure implemented in response to those events. If the notification received by WHO involves the competency of the International Atomic Energy Agency (IAEA), WHO shall immediately notify the IAEA.
- Following a notification, a State Party shall continue to communicate to WHO timely, accurate and sufficiently detailed public health information available to it on the notified event, where possible including case definitions, laboratory results, source and type of the risk, number of cases and deaths, conditions affecting the spread of the disease and the health measures employed; and report, when necessary, the difficulties faced and support needed in responding to the potential public health emergency of international concern.
- When WHO receives information of an event that may constitute a public health emergency of international concern, it shall offer to collaborate with the State Party concerned in assessing the potential for international disease spread, possible interference with international traffic and the adequacy of control measures. Such activities may include collaboration with other standard-setting organizations and

the offer to mobilize international assistance in order to support the national authorities in conducting and coordinating on-site assessments. When requested by the State Party, WHO shall provide information supporting such an offer.<sup>1</sup>

The competencies detail a process that involves ...

1. detecting.
2. identifying.
3. reporting.
4. verifying and responding.

Following these core steps are expectations from MS to coordinate support in the event of an international public health crisis. Once an event is reported, it is reviewed by the WHO to assess if the event should be declared a Public Health Event of International Concern (PHEIC) (i.e., constitutes an international public health risk through international spread of disease prompting a highly coordinated international response plan).<sup>14</sup>

There have been six PHEIC declarations: the 2009 H1N1 (swine flu) pandemic, the 2014 polio declaration, the 2014 outbreak of Ebola in Western Africa, the 2015–16 Zika virus epidemic, the 2018–20 Ebola epidemic, and the ongoing COVID-19 pandemic.<sup>14</sup> In the past five years, > 100 countries have gone through the latest monitoring and evaluation practices developed by the WHO — the Joint External Evaluation (JEE). This framework identifies gaps to develop national plans of action through multisectoral approaches.

Strategies such as the U.S. Center for Disease Control and Prevention's (CDC) One Health approach were born from these evaluation efforts, identifying a need to engage in collaborative, multisectoral, and transdisciplinary approaches at the local, regional, national, and global efforts. Strategies that emphasize the necessity of a coordinated and collaborative effort to prepare and prevent infectious disease outbreaks and for mitigate harm.<sup>15</sup>

## **Literature Review and Gap Analyses**

### **IHR's Underpinnings for Global Pandemic Responses**

In today's interlocked and symbiotic world, it is more important than ever to ensure all countries can respond to and contain public health threats. The IHR (2005) creates a potential towards achieving this through its purpose and scope. It consists of 66 articles, including communication and coordination mechanisms and activities among WHO and states parties, roles, and responsibilities of WHO and IHR National Focal Points (NFPs) within MS, and public health surveillance (PHS) and responses activities required in-country and at points of entry, and is legally binding on 196 MS.<sup>16</sup>

However, there are considerations and challenges that have been observed since IHR (2005). The world has changed considerably in the past seventeen years, prompting the need to consider revising IHR (2005) to adapt to a shifting global landscape and to become better equipped for future crises. In the past thirteen years, there have been unprecedented crises, each providing a stronger case for legislative reform.

### **2009 H1N1-Influenza**

The 2009 H1N1 influenza pandemic was the first litmus test of IHR (2005); it quickly revealed strengths and weaknesses. The prompt notification of the emergence of a novel influenza strain by Mexico to the Pan American Health Organization; the leadership of WHO in coordinating the response shown through the appointment of an emergency committee and eventual official determination of the first public health emergency of international concern (PHEIC).<sup>17</sup> It initiated the use of epidemic intelligence functions to strengthen timely detection and monitoring of the pandemic and the structured response activities leading up to its declaration all took place within the framework of the revised International Health Regulations [IHR (2005)].<sup>9</sup> Additionally, through the establishment of NFPs, the IHR (2005) enabled communication between WHO and all MS; ultimately served as a guiding framework for the coordination of response efforts.

However, the H1N1 pandemic also highlighted weaknesses in IHR (2005) that could derail its successful, future implementation and effectiveness. These included varying

disease detection and response capabilities among MS; violations of IHR rules; and sovereign issues as nations made unilateral decisions outside the governance structure of the IHR.<sup>17</sup>

In 2009, during the aftermath of the H1N1 influenza pandemic, WHO's Executive Board assembled an independent review of the efficacy of IHR (2005).<sup>18</sup> The review highlighted strengths, but ultimately concluded much more needed to be done to establish a feasible and sustainable contingency plan for future public health emergencies. This served as a major lesson and initiated a series of recommendations as underpinnings for future PHEIC mitigation plans.

### **2016 Zika Virus**

The 2016 Zika put IHR (2005) under scrutiny, emphasizing the importance of proficient PHS. The Zika virus outbreak response between 2015 – 2016 was magnified because of the criticisms of the preceding 2014 – 2015 Ebola pandemic.<sup>19</sup> WHO and other key players were harshly scrutinized for the delay in decisive action. There was a significant delay in declaring Ebola as a PHEIC, resulting in a delay of the call-to-action from the international community to provide financial and technical resources in response to the GHS threat posed by Ebola.

The lesson was learned and in the early stages of the epidemic, Director-General Margaret Chan declared clusters of microcephaly and neurological syndromes associated with Zika virus infection a PHEIC.<sup>19</sup> The rationale for this declaration was driven by concerns surrounding the virus' propensity to lead to congenital Zika syndrome.<sup>19</sup> The IHR's emergency committee was able to quickly respond and prompt an immediate international coordinated effort. There was heightened concern about the sexual transmission of Zika and how it could lead to the introduction of the virus in other countries. To mitigate spread, the WHO and CDC established travel advisories, specifically for individuals travelling from Zika-endemic countries to avoid pregnancy. Several countries issued travel warnings and there was a sharp decline in tourism to countries that experienced outbreaks; this impacted the call to cancel the Olympics in Rio de Janeiro.<sup>18</sup>



While the response was better, there were PHS shortcomings. Zika responses were reliant on case based PHS, which had significant validity issues. Health departments became the conveyors of PHS, using case reports to track infections in state and local areas, as well as evaluating the efficacy of prevention and control programs while guiding public health action.

This process created what are known as “PHS artifacts”, or erroneous markers that increase the number of cases that are not due to an increase in disease.<sup>20</sup> PHS artifacts can provide misleading information about the spread of a disease in a given population. This can have significant implications on public health practice. On February 16, 2016, WHO released the “Zika Strategic Response Framework and Joint Operations Plan”.<sup>21</sup> This was an imperative step towards an effective response to the Zika epidemic, taking a leap towards re-establishing WHO’s global health integrity. This strategy focused on the mobilization and coordination of global partners, while distributing resources to help countries enhance their PHS of Zika.<sup>20</sup>

### **COVID-19 Pandemic**

COVID-19 (described as the biggest challenge that human society has faced since WWII) has tested the scope of IHR (2005). This pandemic has necessitated the employment of drastic measures including timely triage, referral of suspected cases, provision of designated isolation facilities, institution of socioeconomic support to promote widespread uptake of public health measures, transparent communications, and development of multi-level partnerships across sectors.

The implementation of these, all within IHR (2005), have had a positive role in limiting the spread of disease. However, to objectively assess the performance of IHR (2005) during COVID-19, WHO set up an IHR expert review committee. Key findings from this review revealed insufficient preparedness efforts across many MS, including lack of multisectoral coordination and leadership as well as underfunding of pandemic activities.<sup>16</sup> These were particularly regrettable since the world had witnessed the devastating impact of novel

viruses in recent times, including 2003 SARS, 2009 H1N1 influenza, 2012 MERS-CoV and 2014 Ebola pandemics.<sup>19</sup> COVID-19 has brought into sharp focus the limitations of IHR (2005). These include delays of China notifying WHO of public health risks; delays in declaring a PHEIC, as neither the timing of the threat nor the actual international spread of disease is constitutive elements of a PHEIC stated in the IHR; and shirking global solidarity for infectious disease prevention, detection, and response activities by many MS.<sup>21</sup>

While the IHR are binding on MS, they contain no enforcement. As a result, WHO has been unable to hold MS to their obligations – or discipline those that have failed to meet them.<sup>22</sup>

The gaps identified in IHR (2005), emphasise a need for whole-of-government and society approach to public health, including governance and financing and empowering the WHO in coordinating public health responses, through ensuring mandatory reporting and discipline of MS that do not comply with WHO guidance. Over the last thirty years, GHS crises have resulted in pointed criticisms of the international health community's ability to deal with such threats. These crises offer opportunities growth and improvement.

An important outcome has been an incremental strengthening of international resolve and know-how to promote and improve GHS.<sup>23</sup> The Joint External Evaluation (JEE) – a component of the IHR Monitoring and Evaluation Framework – has been leveraged by various countries to improve GHS.<sup>24,25</sup> While the IHR (2005) are not perfect, they help the world prepare to cope with public-health emergencies and significantly advance the protection of GHS.

### **Sovereignty and GHS**

Among the biggest challenges that exist within GHS is the concept of national sovereignty. In the global context, sovereignty is often regarded as a central aspect to the modern international system, meaning it serves as a code of conduct in the international arena.<sup>26</sup> However, as we continue to unravel the concept of sovereignty, it is a rather complicated

phenomenon that becomes difficult to disentangle sovereignty as an idealized conception of the world and sovereignty as a reality.

### **Security-Development Nexus**

Security has been conventionally defined as the *protection of territorial integrity, stability, and vital interests of states through the use of political, legal, or coercive instruments at the state or international level*.<sup>26</sup> This definition was broadened in the mid-1990s to include nonmilitary threats that may result in violent conflict affecting the security of individuals or states; these range from events like mass migration, resource conflicts, and civil war.<sup>26</sup>

Development refers to the processes through which communities and societies, by-and-large, seek a certain standard of equitable living. This could be achieved through activities that promote socio-economic growth, provision of healthcare services, establishment of sound educational systems, and overall improvements in infrastructure.<sup>25,26</sup>

The concept of the Security-Development nexus highlights the importance of a mutually reinforced relationship between maintaining security and promoting development.<sup>27</sup> Tackling the nexus involves identifying how security strategies can become better aligned with development objectives in our increasingly unstable geopolitical landscape. Within the context of promotion of health on an international scale, it is imperative to set contingency plans that emphasize equal development and reduction of harm, particularly among the most vulnerable populations.

### **Viral Sovereignty**

Viral sovereignty is the concept that viruses isolated from within the territorial boundaries of a nation state are the sovereign property of that state. The history of viral sovereignty as a concept in international law is nuanced, resting on the intersection between politics and ethics. Access to biological specimens is obviously necessary for scientific research and the processes that provide diagnostics, therapeutics, and vaccines in response to (re)emerging diseases.<sup>28</sup> Information from research allows for the identification of crucial information about the mechanism of replication and infection and serves as the first step toward developing effective vaccine.

Historically, obtaining access to biological specimens has been a challenge perpetuated by viral sovereignty. The argument that sovereignty is a form of organized hypocrisy is not only true in the context of the international system and its structures, but it also points to a fruitful conversation regarding the dangers of such unrealistic concepts of sovereignty.<sup>27,28</sup> The desire to gatekeep important biological specimens or information in times of potential pandemic damages an interconnected, global system.

A primary reason that access to biological specimens has waned in the context of GHS is the ascendance of the material transfer agreement (MTA) as the medium of ownership and transference among researchers (academic, commercial, or non-profit).<sup>29</sup> MTAs are contracts protected by law. Therefore, if one provision is broken, the contract is considered breached, and the parties involved may be brought into a lawsuit. This needs reform. Clauses that protect intellectual property while prioritizing aid during PHEICs should be added. Sovereignty as an absolute principle deteriorates under international norms of humanitarian intervention, responsibility to protect, and overall liberal ways of order.

## **Flattening the Infodemic Curve**

### **Infodemic Crisis**

The first use of the term *infodemic* is traced to David Rothkopf, a writer for Washington Post in a 2003 article about SARS. In it, Rothkopf argued that an *infodemic* made SARS *harder to control and contain*.<sup>30</sup> There is no doubt that since then, the world has continued to suffer from the impact of infodemics as part of the impact of disease outbreaks.

WHO defines infodemic as too much information; this includes false, misleading information on digital or physical platforms.<sup>30</sup> It causes confusion and risk-taking behaviors that can harm health and leads to mistrust of health authorities that undermines public health response. In addition to the impact of COVID-19 on national and international health organizations, a global epidemic of misinformation has spread rapidly through social media platforms and other outlets. This infodemic poses a serious problem to both global and national responses. In developing strategies for the

preparedness and response to local outbreaks and pandemics, there must be an intentional focus to address infodemics.

### **Impact of “Fake News”**

COVID-19 has been complicated by widespread misinformation, disinformation, and rumors. Some has come from the uncertainty of the origin of the virus. There have been various hypotheses and conspiracy theories, such as the virus being described as a biological weapon produced in China or caused by 5G.<sup>31</sup> There has also been unproven information such as such as using water with lemon or coconut oil to kill the virus.

With various impacts, fake news often has more sinister, even fatal, and congealing effects. For example, an official in Iran’s Legal Medicine Organization stated on social media that 796 people died from alcohol poisoning in Iran as a result of rumors about alcohol as a cure for the virus.<sup>32</sup> 5G conspiracy theories proliferated by some celebrities linked 5G towers to the spread of COVID-19 and was responsible for the burning of about 80 mobile towers as well as the verbal and physical assaults of many telecommunication employees in the UK including one engineer who was stabbed.<sup>32</sup>

Though not new, in our digital age infodemics spread like wildfire. They create a breeding ground for uncertainty. Uncertainty, in turn, fuels skepticism and distrust, and this is the perfect environment for fear, anxiety, finger-pointing, stigma, violent aggression, and dismissal of proven public health measures — which leads to loss of life. During the 2015 Ebola outbreak, the most common piece of misinformation was that Ebola might be cured by the plant *ewedu* or by blood transfusion; drinking and washing in salty water were also mentioned. These would eventually have fatal consequences.<sup>33</sup>

In 2018 during the monkey pox outbreak in Nigeria a rumor that the military was injecting school children with the monkeypox virus broke out. While none of the articles could verify the source of the rumor, some publications linked it to a military operation to address separatist agitations by a group in the South-East of Nigeria during the period.<sup>33</sup> But in fact, this report referred to a medical ‘outreach’ focused on other health measures unrelated to the outbreak. This rumor led to the closure of schools, low immunization rates

for other vaccine-preventable diseases during the period, and general widespread panic. It impacted trust in the government generally, as an arm of the government was being accused of 'bioterrorism'.<sup>33</sup>

Another less discussed, but still stark narrative was that citizens from certain demographic groups were treated differently as a result of unfolding information. There was a strong dependence on news platforms for updates on the pandemic and on evolving protocols by different governments in their response. This gave rise to echo chambers that reinforced previously held notions — based on scientific proof or skepticism. These lines were repeated by news outlets, politicians and certified or self-acclaimed scientific experts. This led to the impact of misinformation and, in most cases, discrimination against certain demographic groups.

## Case Study

### The Synergy of Global Health Security and Universal Health Care

#### Background

In the contemporary global landscape, the dialogue surrounding GHS is often in tandem with universal health care (UHC). Proponents of both UHC and GHS emphasize key global agendas that aim to strengthen the health and well-being of the global population. Despite the equivalences, there is existing conflict between the approaches and strategies involved with implementing GHS and UHC. There are several efforts to emphasize the synergistic relationship between UHC and GHS, namely in the context of public health crises. The COVID-19 pandemic has served as a timely reminder of global unpreparedness in the wake of (re)emerging infectious diseases and PHEICs. PHEICs are defined as *occurrence or imminent threat of an illness or health condition caused by epidemic or pandemic disease, bio terrorism, or (a) novel and highly fatal infectious agent or biological toxin, that poses a substantial risk of a significant number of human fatalities or incidents or permanent or long-term disability*.<sup>1</sup> They have gradually become emphasized in global, political discourses, with an ultimate goal of establishing effective GHS in order to respond to these crises. For this to happen, there must be a concerted effort at local, national, and global levels. The GHS Index is the first comprehensive evaluation benchmark MS and adherence to (IHR 2005).

The objective of this study is to evaluate the relationship between GHS and UHC by determining their association using two quantitative indices. UHC is monitored by the UHC index (UHCI) and GHS by the GHS index (GHSI).<sup>2</sup> Identifying the correlation (or lack thereof) can provide important information about how the global health community can achieve a synergetic relationship between GHS and UHC, ultimately for a healthier and safer world.

#### Interventions

The GHS index (GHSI) is a composite measure prepared by the Johns Hopkins Center for Health Security to evaluate a nation's capability to prevent, detect, and respond to PHEICs.<sup>2</sup> It is calculated using a framework based on 140 questions organized across six categories<sup>2</sup>:

1. Prevention of the emergence or release of pathogens.
2. Detection and reporting (early detection and reporting for epidemics of potential international concern).
3. Rapid response (rapid response to and mitigation of the spread of an epidemic).
4. Health system (sufficient and robust health system to treat the sick and protect health workers).
5. Compliance with international norms (commitments to improving national capacity, financing plans to address gaps, and adhering to global norms).
6. Risk environment (overall risk environment and country vulnerability to biological threats).<sup>2</sup>

A macro-analysis is conducted to assess the presence of a relationship between GHS Index (GHSI) and UHC index (UHCI). A Pearson's correlation coefficient and coefficient of determination are utilized. Analyses were performed using IBM SPSS Statistics Version 25 with a 95% level of confidence.<sup>2</sup>

One application of this measure is in the context of the Ukraine crisis. The scores produced provide information about capacity of the nation to operate timely contingency plans. The results were harrowingly low in the rapid response category, with scores of zero in: emergency preparedness and response planning; exercising response plans; emergency response operation; and linking public health and security authorities.<sup>3</sup>

## Observations

- Collectively, global preparedness for health security is quite weak: the average GHSI is 40.2 (out of a possible 100) while it is 51.9 (out of a possible 100) among high-income countries.
- Countries with a high risk of GHS threats have a low capacity for GHS.
- The average UHCI is 66%; highest in Americas region (79%), lowest in African region (46%).
- There is a moderate and significant relationship between UHC index and GHS index.
- Countries with a high risk of GHS threats have a low capacity for UHC.<sup>2</sup>

## Key issues

This study provided a distribution of health security preparedness across the MS, identifying that there is currently insufficient global capacity for GHS. Additionally, UHCI has a significant association with GHSI. It was concluded that one third of the 182 countries analyzed in this study were deemed underprepared to prevent and respond to (re)emerging disease outbreaks. There is an urgent need to employ UHC strategies in order to strengthen the capacities of MS to be better equipped to deal with PHEICs.

## Lessons learned

- ▶ There is a synergy between UHC and GHS, therefore promoting UHC strategies supports GHS. (E.g., High immunization coverage to prevent outbreaks; providing UHC for patients in order to establish earlier detection systems; improved case management and health system capacity to improve response.)
- ▶ There is a verified need to embed IHR (2005) core capacities into the health system architecture. This must be done across all six health system functions and must include a conscious effort to involve governments in local, national, and global sectors.
- ▶ Strong global governance is needed to invest in a more robust and interconnect GHS system, this includes implementation of UHC strategies to bolster the effectiveness of IHR (2005) and improve adherence.

## Recommendations

In conclusion, GHSI has provided high predictive value for the level of global preparedness and GHS. Of the MS analyzed in this study, a majority have demonstrated inadequate capacities to facilitate prevention, detection, and response to PHEICs or other security threats at national and regional levels. Furthermore, the ambition for must be realized in tandem with UHC. This requires active planning by global institutions to improve the effectiveness of crisis preparedness agendas and ease the tensions between the two concepts. This can be done through strategic, integrated implementation approaches. Implementing a “One Health” multi-sectoral approach is a mechanism by which these synergies can be maximized.<sup>4</sup>

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## Vision for the Future

With the ongoing COVID-19 pandemic, there has been tremendous loss; a tragedy with an overwhelming impact on peace and security across the globe resulting in crumbling economies, political tension, and undermining of social cohesion. All of this exposed major cracks in the GHS architecture. At the core is IHR (2005). Moving forward requires reflection on the current global, legal infrastructure and the process of revising again the IHR.

Lessons from the COVID-19 pandemic emphasize the need for global leaders to marshal resources and collaborative strategies to mend the GHS architecture. Change takes time, but major progress can be made by leveraging the synergy between GHS and other strategies, including universal healthcare (UHC).<sup>34</sup> Revising a standing legal framework and creating new international instruments are not mutually exclusive.

An important step involves strengthening the IHR (2005) through early warning systems; centralized information and data sharing; and amended pandemic tracing efforts. These efforts are reinforced when made through collaborative strategies, as Secretary-General of the United Nations (UN) retorts, *The world faces security challenges that no single country or organization can address alone.*<sup>35</sup>

Currently, WHO is proactively supporting IHR (2005) training and capacity development in countries to promote the effectiveness of proficient information-sharing systems. An emphasis on supporting timely communication through a global network is essential for ensuring a strong operational capacity. The JEE under the IHR Monitoring and Evaluation Framework should be complemented with other programs having overlapping frameworks (e.g., UHC, the Sustainable Development Goals, Essential Public Health Functions/Operations).<sup>36</sup> Working in tandem with similarly oriented approaches help bolster WHO's efficient operational role in emergency preparedness while establishing baseline accountability.

Change is required on a multi-level matrix, through the core of WHO programmatic efforts. The goal should be to embed IHR (2005) requirements into the health systems to promote

strong and stable GHS. This can only occur if the framework is laid across all public health functions. This is dependent on the strength of communication within inter-regional clusters. Moreover, these efforts must be morally sound and aim to minimize inequalities by promoting health equity and aiding the most vulnerable communities. The international community must grasp the momentum around the current pandemic in order to ensure preparedness for the next.

## **Actions**

Recent PHEICs (including COVID-19) have accentuated the urgency for reform in the legal infrastructure surrounding IHR (2005). In a post-COVID world, there are some major components of resilient GHS that require key players to guarantee success. Below are some tangible actions that are proposed to achieve this:

- 1) Modernize global institutions — WHO and other global institutions are critical stakeholders with power to distribute aid and initiate pandemic responses. The IHR (2005) should operate as the pillar for synergizing and synchronizing response efforts within a multi-dimensional matrix. A model that can be referenced is the UN's Inter-Agency Standing Committee (IASC), which brings together executive heads of the UN nations as well as non-UN organizations to establish joint contingency plans in the case of crises.<sup>35</sup> This process involves formulating policies, ensuring cohesion of response efforts, and establishing a strategy for efficient humanitarian action.
- 2) Revise IHR (2005) — while the IHR provides a foundation for addressing global health threats, it must be adapted to respond to contemporary GHS threats while maximizing new innovations in public health and health informatics. Some possible amendments could include:
  - Establishing early warning triggers for action through routine system checks in each region. These would act as benchmarks to ensure a monitoring system is in place that can handle identification of a potential PHEIC.
  - Create mandates for MS to comply with all IHR obligations to prepare for, avert, and respond to global health emergencies in a timely manner.
  - Require MS provide rationales and legitimate scientific evidence to justify policies that may interfere with GHS, trade, or travel.
  - Provide WHO access to data about potential outbreaks, strengthen mechanisms for conflict resolution and enforcement, while allowing WHO teams access to investigate potential health crises.

- 3) Standardize contingency and preparedness frameworks — The issues of mis- and disinformation are privy to political and social decohesion. Leaders from the public and private sectors must establish a means of distributing reliable information to the public while maintaining internal plans of action in the case of GHS threats. This should involve receiving more direct contributions from the MS for detection and reporting of public health emergencies to sharpen the WHO's ability to investigate outbreaks and security threats in a timely matter. Facilitating technical and logistical support is vital for addressing inequality gaps and ensuring all nations have a fair chance of protecting themselves.
- 4) Strengthen international laws — To mainstream preparedness and disaster relief, it is imperative for MS to revise their respective laws in order to contribute to international guidelines. These amendments should encourage preparedness and action in the case of a crisis. The WHO should promulgate science-based standards to ensure compliance with IHR protocol and to conduct independent reviews of MS comprehension of preparedness plans.
- 5) Global data exchange — Innovation of new technologies are constantly shifting response capabilities. Data sharing in times of crisis ensures the most vulnerable regions are able to access state-of-the-art equipment and resources. This can bolster rapid information responses and mitigate the spread of disease or other health security threats. Enabling rapid sharing would make it easier to identify an emerging infectious disease, track and share genomic information, and establish PHS protocols quickly.
- 6) Mobilize sustained funding — Funding is necessary to effectively detect and respond to biological threats. It is also necessary to fund research efforts to develop treatments and distribute resources. Investing in a joint funding pot such as the WHO's Emergency Program and Contingency Fund (CFE) would ensure transparency in the use of funding as well as sequestering the security budget so that it is not lost in the overall WHO budget.<sup>35</sup> Unequal access to funding can be amended by encouraging political commitment by high-income MS and

coordinating regional bodies across all emergency preparedness and action activities.

- 7) Strengthen global governance — Accountability and transparency are two key components of responsibility building within a global forum. This involves establishing thorough monitoring and evaluation programs to ensure interagency collaborative efforts. A major step involves leveling the legislative process, countries that are vulnerable to exploitation need to be empowered through transparency and an overall inclusive legislative process.
- 8) Information transparency — In the age of the infodemic, it is important to remember that the general public is the most valuable but fragile asset. In order to better serve society, it requires full disclosure in times of crisis in order to avoid any confusion or uncredible information. A crucial failure of the COVID pandemic was the mishandling of information, which lead the crisis to become highly politicized instead of rooted in science and fact.
- 9) Address health equity — The root of many issues come from unequal access to resources, healthcare, and education. While progress is not linear, addressing the inequities that address on the global scale is essential for filling the gaps. Repairing issues that have been born from exploitive practices and health colonialism are a necessary step in ensuring those who were harmed are protected moving forward. This process includes striving towards UHC, as it is proven to be truly compatible with strong GHS.

## Conclusions

COVID-19 is a critical moment in global health. For the WHO and MS, we must mobilize to secure a more robust PHS and outbreak response for future pandemics. A properly funded, transparent WHO could make the IHR the centerpiece of global health architecture, expanding the role of the treaty in building a coordinated and participatory system.

While revising IHR is vital, it will take time. In the near-term, we encourage WHO and MS to use current authorities to ensure transparency, expand funding, and improve preparedness. We also urge WHO to position the IHR, and the public health recommendations made under its auspices, as an anchor instrument on which public, private, and civil society organizations can rely in making their own plans to prepare and respond to the next pandemic.

If equity is not prioritized in IHR reform, valiant principles such as global solidarity become tokenistic, or used maliciously to advance the interests of some at the expense of others. This understandably breeds mistrust, and it might be inevitable that sovereignty and national interests are prioritized over building a reciprocal and respectful partnership. The future of IHR and global health governance lies in greater equity now; ignoring these risks another failure to respond collectively and promptly to the next pandemic.

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