

THE POLICY RESPONSES OF THE LEAGUE OF NATIONS HEALTH ORGANIZATION (LNHO) AND THE WORLD HEALTH ORGANIZATION (WHO) TO PANDEMIC AND MAJOR EPIDEMIC CRISES SINCE 1921¹

LAS RESPUESTAS POLÍTICAS DE LA ORGANIZACIÓN SANITARIA DE LA SOCIEDAD DE NACIONES (LNHO) Y LA ORGANIZACIÓN MUNDIAL DE LA SALUD (OMS) A LAS CRISIS PANDÉMICAS Y EPIDÉMICAS IMPORTANTES DESDE 1921

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| Abstract |

International cooperation in dealing with epidemics and pandemics was developed significantly during the 20th century. In 1921, following the Spanish influenza pandemic, the League of Nations Health Organization (LNHO) was created, a precursor to the World Health Organization (WHO) which was subsequently established in 1948. The purpose of these international efforts was to coordinate actions in order to improve citizens' health as well as to prevent and constrain the transmission of dangerous diseases. Their contribution has been particularly important in preventing and protecting against pandemic crises through specific interventions-regulations which set limits and rules. This paper focuses on the contribution of the World Health Organization (WHO) and the League of Nations Health Organization (LNHO) in preventing and responding to major epidemic and pandemic crises over the last hundred years. A focus will be placed on the management of pandemic crises or risks, specifically HIV, cholera (in Yugoslavia in the 1970s), SARS-CoV, H1N1, Ebola, Zika and SARS-CoV2. The purpose of this paper is to highlight the contribution of the WHO and the LNHO in responding to

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pandemics and dangerous epidemics, by focusing on the political-organizational framework they adopted in terms of international health cooperation and of individual responses-policy measures.

Keywords: International cooperation; Health policy; Pandemics; Health protection.

| Resumen |

La cooperación internacional para hacer frente a las epidemias y pandemias se desarrolló significativamente durante el siglo XX. En 1921, a raíz de la pandemia de gripe española, se creó la Organización Sanitaria de la Sociedad de Naciones (LNHO), precursora de la Organización Mundial de la Salud (OMS), creada posteriormente en 1948. El objetivo de estos esfuerzos internacionales era coordinar las acciones para mejorar la salud de los ciudadanos, así como prevenir y limitar la transmisión de enfermedades peligrosas. Su contribución ha sido especialmente importante a la hora de prevenir y proteger contra las crisis pandémicas a través de intervenciones específicas: reglamentos que establecen límites y normas. Este documento se centra en la contribución de la Organización Mundial de la Salud (OMS) y la Organización Sanitaria de la Sociedad de Naciones (LNHO) en la prevención y respuesta a las principales crisis epidémicas y pandémicas de los últimos cien años. Se hará hincapié en la gestión de las crisis o riesgos pandémicos, concretamente el VIH, el cólera (en Yugoslavia en los años 70), el SARS-CoV, el H1N1, el Ébola, el Zika y el SARS-CoV2. El objetivo de este documento es destacar la contribución de la OMS y la LNHO en la respuesta a las pandemias y epidemias peligrosas, centrándose en el marco político-organizativo que adoptaron en términos de cooperación sanitaria internacional y de respuestas-medidas políticas individuales.

Palabras clave: Cooperación internacional; Política sanitaria; Pandemias; Protección de la salud.

| Introduction |

Pandemics and dangerous epidemics are major threats to human life and have occurred several times throughout human history. It should be made clear that the term “epidemic” refers to disease outbreaks that occur in a human population over a given period of time to a greater than expected extent. It may be geographically confined to a place or an entire country. In the event that the epidemic spreads outside the geographical boundaries of a country, it is defined as a pandemic. International cooperation on epidemic and pandemic management was developed significantly during the 20th century. In 1921, after the Spanish influenza pandemic, the Health Organization of the League of Nations was created, a precursor to the World Health Organization, which was established in 1948 and subsequently managed numerous pandemics and dangerous epidemics up to date. The purpose of these international efforts was to coordinate actions as means to improve the public health as well as to prevent and limit the transmission of dangerous diseases. Their contribution has been particularly important in preventing and protecting against pandemic and dangerous epidemic crises through specific interventions-regulations, enforcing specific policies by setting specified limits and rules.

Objectives, hypotheses and methodology

This paper focuses on the contribution of the LNHO and WHO in preventing and responding to major epidemic and pandemic crises over the last hundred years. A focus is given on their management and specifically on HIV, cholera (in Yugoslavia in the 1970s), SARS-CoV, H1N1, Ebola, Zika and SARS-CoV2. The main purpose is to highlight the contribution of the LNHO and the WHO in responding to pandemics and dangerous epidemics by focusing on the political-organizational framework they have adopted in terms of international health cooperation and on the relevant individual intervention policy measures that were implemented by the welfare states. While LNHO and WHO seem to have played an important role in managing these pandemics and dangerous epidemics, the paper aspires to uncover existing and existent shortcomings which keep posing barriers in the international cooperation towards the effective reduction of their deadly contagiousness. The main hypothesis is that although international measures have been introduced that led to effective restrains in contagiousness of these viruses, still the gaps in cooperation between the member states pose crucial questions in terms of health safety. The attempt to answer why these shortcomings play a crucial role and how the WHO tries to address them is also an objective of this paper. Unquestionably though, the role of WHO during the postwar decades becomes even more prominent as long as the occurrence of pandemics seems to be a “white swan” phenomenon in the entire human history that it should not be underestimated.

This study is a historical literature analysis and it was based on articles in peer-reviewed journals, policy reports from the LNHO and the WHO from Google Scholar and Pubmed, as well as from available secondary data. The studies were selected by emphasizing on management by WHO of the following pandemics and dangerous epidemics: HIV, cholera (in Yugoslavia in the 1970s), SARS-CoV, H1N1, Ebola, Zika and SARS-CoV2. By using definitional measures of these pandemics and dangerous epidemics and the measures of “epidemiological management”, “administration”, “regulations” and “public health recommendations”, the appropriate reports and studies were selected. Similarly, the LNHO development analysis focused on the preparation of the institution towards pandemics and used the same management measures in order to select the appropriate reports and studies.

| The League of Nations Health Organization (LNHO): the contribution of the precursor of the WHO to the prevention from pandemics and dangerous epidemics |

It should be firstly mentioned that the end of the World War I marks a crucial shift in the way the concept of health is understood and the organization of health services is implemented. The millions of dead, wounded and disabled as the result of the war, the increase in the number of refugees, the creation of new states, demographic and social upheavals, as well as the fears of national decline and racial decay, dictate a different approach to public health problems (Harrison, 2006). Examples of these changes in public

policy could be seen in the establishment of health ministries in the early 1920s, the emergence of a wide range of state welfare services in some states, and the recourse of several European governments to international agencies in order to address the acute problems that had arisen. As it will be analyzed, the LNHO made thus crucial attempts for health reforms in several Central and Eastern European countries in the 1920s, and the Rockefeller Foundation funded these efforts while also experts were sent to these fields (Weindling, 1993). The priority was given to child health, social and infectious diseases, the establishment of polyclinics, public hospitals, health centers and national schools of public health (Roemer, 1993). These are examples of an international consensus among experts around the steps that should be taken in each country in order to adopt a holistic model of public health during this particular period, in which the LNHO played a significant role (Harrison, 2006).

Focusing on the LNHO, it should firstly be noted that it was created in 1921 (temporary committee) and consisted of health and biomedical scientists. Although no pandemic occurred during its period of operation, as according to Huremovic (2019), after the Spanish flu in 1918-1920 the next pandemics occurred in the 1970s with the re-emergence of cholera in Yugoslavia and in the early 1980s with HIV, the LNHO laid the foundations for modern international epidemiological management and thus the basis for the subsequent creation of the WHO.

The LNHO contributed to the development of public health and acted as an institution of experts aiming to reduce disease globally, as well as to prevent dangerous epidemics and subsequently pandemics. In essence, the LNHO promoted the creation of health systems that would have the acceptance of political actors and at the same time, the creation of an integrated framework of care. The fact is that this institution laid the foundations for the international cooperation that developed in the following decades and still exists, while replaced the rudimentary international health protection system that prevailed until then, which was characterized by inefficiency (Harrison, 2006). What the LNHO introduced was the creation of a freer framework for information exchange at the global level, based on the notion that global health can be achieved not only through disease control interventions but also through processes that promote prevention and public health promotion (Dubin & Weindling, 2009). It also used new technologies and information gathering methods to achieve epidemic and pandemic containment management. In addition to the bacterial analysis already in use, the LNHO developed a socio-environmental concept of health, which argued that social and physical characteristics were more important health and disease determinants than race.

In the context of these new concepts of health and disease introduced by the LNHO, two general guidelines for interventions in order to reduce epidemics and improve health were adopted. On the one hand, strategies such as improving nutrition as well as child and maternal health were promoted, while techniques were developed to inform citizens, share information, analyze statistics and promote vaccination. The emphasis was no longer on reducing the movement of people but on the general reduction of health risks to populations (Baldwin, 1999).

Clearly, the LNHO has been instrumental in the development of public health as well as the prevention and response to epidemics and pandemics through the establishment of a

modern public health management mechanism (Akami, 2017). It has particularly promoted collaboration and exchange of knowledge and information regarding the etiology and epidemiology, as well as the role of natural and socio-economic factors in causing disease (Epidemiological Information and Public Health Statistics Service in Geneva - Global Epidemiological Data Base). After World War II, this database was used and further developed by the WHO (Dubin & Weindling, 2009). As part of efforts to expand collaborations and information sharing, the LNHO created a staff exchange network not only just to share information but also to cultivate a common framework of values using current practices even in undeveloped areas (Popkin, 1928). No longer were issues of public health and pandemic risk an elitist subject but collaboration on them expanded significantly, enabling different schools of public health to create a framework for ongoing conversation on such health issues (Dubin & Weindling, 2009). Through these efforts, the idea of the international dimension of health was promoted (Kadetz, 2016). In this context, the LNHO set international standards for medical research, drugs, vaccines, hormones and vitamins (Cockburn, 1991). At the same time, it further developed social medicine through a focus on social and environmental factors that affect human health (Borowy, 2007), enabling the development of areas that are now taken for granted, such as nutrition (Aykroyd, 1968) and agricultural medicine (Borowy, 2010; Litsios, 2016). Finally, it is noteworthy that it has strengthened efforts to develop national health institutions in several countries, provided assistance to reduce epidemics, particularly in underdeveloped areas of Africa (Lund, 2016), conducted surveys, evaluated health services, set nutritional standards (Weindling, 1995), trained health personnel, and designed health service management reforms (Dubin & Weindling, 2009).

Furthermore, the worsening of mortality and morbidity rates will lead in the 1930s to studies investigating the appropriate social and economic conditions in order to ensure that citizens have a minimum of healthy living (Ruhm, 2000). As a result of the discussions held within international organizations such as the LNHO, minimum limits were set for food, housing and wages, as well as institutions of social hygiene were adopted (Harrison, 2006). Although several European countries (the most developed) were working on the idea of social medicine from completely different ideological starting points (Borowy, 2009), but mainly focused on hygiene and the problem of infectious diseases (only after the World War II social medicine was also increasingly preoccupied with social benefits and care for minorities, disabled people and social vulnerable) (Slagstad, 2021), in the field of child health care the actions taken in a state context are relatively similar (Hendrick, 2003). Children's holiday homes, schools for special categories of the population, family allowances and biological data recording, are indicators of this systematization (Platt, 2005), which was supported by LNHO and of course implemented by the nation states, also of the areas of public policy that are involved along with the private sector.

All these LNHO activities were the result of both political, social and technological factors and important developments in scientific knowledge in the field of biomedicine and public health. The foundations laid due to these adjustments and consequent interventions by the LNHO created the necessary framework, which, although suspended during World War II, promoted and developed the mechanisms for health promotion, protection and prevention

of epidemics and pandemics at the international level. This was followed and further developed in the post-war period by the WHO.

| The World Health Organization (WHO) and the responses to pandemics and dangerous epidemics |

Following the devastation of World War II and the cessation of international health cooperation and information exchange, the World Health Organization (WHO) was established in 1948 along with the gradual development of the welfare states in west Europe during the first post-war decades (Kotroyannos et al., 2013). Building on the experience of past pandemics and the practices of quarantine, immunization and hygiene, as well as the institutional framework for cooperation established through the LNHO, the WHO was created in order to strengthen international cooperation for the consolidation of health security at the global level.

From its inception to the present day, the WHO has played a major role in both preventing and eradicating diseases that have threatened the health and lives of millions of people around the world. These included hepatitis, yellow fever but also HIV, cancer, chronic diseases and harmful behaviors that stress and/or threaten health. Among WHO's first priorities were combating malaria, improving the health of mothers and children, eradicating tuberculosis, improving nutrition, and reversing environmental degradation. WHO is still concerned with many of these issues today, along with other epidemics (SARS, Ebola, Zika) and COVID-19 pandemic (Sidiropoulos et al., 2022).

It should be noted that just three years after the establishment of the WHO, the international health regulations adopted in 1892 were re-adopted, which focused on the containment of cholera, plague, smallpox, typhoid fever and yellow fever. Certainly, these regulations were largely based on 19th century concepts that believed that controls and cross-border restrictions alone could reduce transmissible diseases. It was precisely for this reason that they were revised in 1969 when it was decided that each state would have to report any outbreak of disease. The International Health Regulations (IHR) of 2005 clearly stated that measures taken should be based on epidemiological data rather than predetermined policies focused primarily on cross-border control (International Health Regulations, 2005).

In addition to the priorities introduced by the WHO in order to tackle major diseases, the latter created a system for classifying them according to their risk (International Classification of Disease - ICD). This system is still used today at both clinical and epidemiological levels and has been adopted worldwide as the gold standard for describing and tracking health issues and disorders (Sidiropoulos et al., 2022). Particularly in cases such as the re-emergence of the 1972 cholera epidemic in Yugoslavia, the WHO's action was decisive. Its characteristic feature, such as the later cholera epidemic in 1990 (WHO, 2016a), was the reluctance of states to acknowledge or notify the existence of a pandemic despite the fact that it was their basic obligation under existing regulations (Bredimas, 2020). Thus, the WHO in the 1972 cholera outbreak was forced to publish official reports in order

to make the outbreak known and hold the concerned states accountable (Tomasewski, 1990). Through concerted efforts that included mass vaccinations in Yugoslavia, cholera was contained two months after its emergence (Ilic & Ilic, 2017).

HIV/AIDS emerged in the 1980s in the USA and gradually became a pandemic as it spread around the world. HIV leads to the death about 1 million people worldwide each year, particularly in African countries and in populations with low educational attainment (Wang et al., 2016). The discovery of medication has transformed the disease into a chronic one but the differences are vast between countries at the economic, social and health levels, in terms of prevention and health promotion. Due to the fact that HIV was not included in the regulations before 2005, WHO tried to implement coordinated actions for prevention and treatment. The most important were the London Declaration of 1988 (Alfredsson & Tomasewski, 1998), the Consultation on HIV infection and disease (WHO, 1988), the Declaration on HIV epidemiology and prostitutes of 1989 (WHO, 1989) and the Declaration of the Paris Summit of 42 States on AIDS in 1994 (WHO, 1994). The United Nations found that the WHO's response to HIV was not effective and thus recommended the Joint Programme on HIV/AIDS as an attempt to address it jointly at the global level. Indeed, in many cases public-private sector cooperation, as well as the active presence of movements and other civil society actions such as the ACT-UP coalition etc. were necessary towards the mobilization of the international community and international organizations (Sidiropoulos et al., 2021). However, the realization that the WHO was failing in its HIV response led to efforts in order to modernize its network of partnerships and strengthen its intergovernmental role, ultimately culminating in the adoption of the renewed IHR in 2005 that created a different framework for responding to subsequent pandemic crises (Bredimas, 2020).

In 2002 a new virus emerges and takes on pandemic proportions. Called Severe Acute Respiratory Syndrome (SARS), it was the first pandemic of the 21st century and appeared in China. In close resemblance to what has happened in the evolution of the COVID-19 pandemic, in 2002 the new virus suddenly appeared in China, there was a lack of any treatment and it was spread internationally with tremendous speed. When the Chinese government became aware of the existence of the new respiratory disease cases, it did not immediately inform WHO (the Chinese government informed the WHO only about one month later and allowed WHO's officials to have access to the epicenter of the pandemic – Guangdong - only three months after the outbreak of the epidemic) (Institute of Medicine, 2004), while internally – and contrary to the COVID-19 case - it addressed relatively effectively the new virus by implementing restrictive measures (Schwartz, 2012). However, the Director-General, Brundtland, accused China about the late diagnosis and containment measures of SARS cases (Fleck, 2003; Heymann et al., 2013) and issued travel warnings (Nippani & Washer, 2004). Brundtland pressed WHO to use its diplomatic channels and the internet to identify potential outbreaks (Katz et al., 2017). These measures made the WHO less dependent on governments for information and also increased more the notification pace from indirect sources of the member states to WHO. In addition to acting with the lack of the necessary authority, WHO also took the initiative to strengthen efforts to scientifically analyze the SARS virus, develop strategies for national health systems and establish clinical treatment protocols (WHO, 2004). Thus, it should be noted that although

the procedures for the adoption of the 2005 regulations were not completed and therefore SARS was not listed, they were in fact de facto implemented (Fidler, 2016). The poor management by China was the main reason why the WHO proposals for the 2005 IHR were finally adopted. This was an outcome of the fact that China at first tried to hide the existence of cases and not to inform the WHO (Bredimas, 2020). The result of this management was that SARS created huge economic problems especially in Hong Kong and a spate of deaths (Fidler, 2016), accelerating the procedures on the part of the WHO to adopt the new IHR. Hence, several countries made public health a national priority issue (National Intelligence Council, 2003), in effect securitizing the public health field to a significant extent (Davies, 2008; Kelle, 2007; McInnes & Lee, 2006). In practice, SARS accelerated the revision of the IHR by giving the WHO Director (Kamradt-Scott, 2010) supranational powers while committing states to upgrading their scientific and medical capacities (WHO, 2007).

The emergence in 2009 of the so-called “swine flu” or H1N1 pandemic led the WHO to declare the first state of international public health emergency, in effect implementing the IHR which was adopted in 2005 (WHO, 2009). Through this, the WHO advised strict measures on travel and trade as well as coordinated scientific, medical and communication activities. The WHO sought to maintain direct contact with states for information exchange as well as epidemiological surveillance, particularly in those that were weaker and had problems in sustaining the pandemic (WHO, 2009). To address the resulting weaknesses, the WHO established an IHR review committee, which included WHO oversight and response actions in order to achieve international health security (WHO, 2009). However, it should be noted that the economic crisis had a decisive impact on WHO’s actions, because resources for all the above-mentioned activities of international health interest were limited (WHO, 2011).

The limitation of resources, the decline in interest in complying with the recommendations on the part of individual states and the inaction of the WHO to promote international health security became evident during the outbreak of the Ebola epidemic in West Africa in 2014, with the slow response of the Organization. The WHO’s delay in declaring the Ebola outbreak an “emergency of international concern” led to a delayed response by the individual states in complying with the health protocols under the 2005 IHR (WHO, 2016a). At the same time, several governments contested WHO’s recommendations and post-crisis analyses criticized its overall performance by recommending leadership initiatives under the IHR, as well as strengthening its capacity to respond to large-scale health outbreaks (WHO, 2015). Clearly, the re-emergence of Ebola in late 2018 in Congo highlighted that the WHO decisively strengthened its operational capacities, as with its intervention in Congo was able to bring the epidemic under control in 2019. However, the WHO encountered resistance to declaring a public health emergency of international concern under the IHR, as the Emergency Committee stated that the escalation of the crisis did not meet the conditions for declaring such a status (Villareal, 2019). The Director-General eventually declared a state of emergency of international concern only when the outbreak reached dangerous proportions. What remains as a positive outcome, however, is that the adoption of an emergency by the WHO is the key prerequisite for the mobilization of international financial assistance (Villareal, 2019).

In 2016, Zika disease emerged in Latin American countries, which is mosquito-borne virus and causes microcephaly in newborns and neurological disorders such as Guillain-Barre syndrome (WHO, 2016b). For these reasons, the WHO declared the disease a public health emergency of international concern in early 2016 (WHO, 2016c). But this disease was not addressed based on the recommendations made after the emergence of the Ebola pandemic, as only guidelines were given for the control of mosquitoes carrying the virus and some basic guidance to populations and particularly to pregnant women on how to protect themselves (Fidler, 2016). However, the decrease in research funding for Zika control in countries such as Brazil, and the WHO's emphasis on the COVID-19 pandemic, should not ignore the fact that in Latin American countries a relative contagiousness of the virus is maintained, which may pose risks of mutation and expansion of infections, which is a consequence that could possibly lead to a new pandemic (Nolen, 2022). Thus, international action is more than necessary in order to completely eliminate Zika virus.

The outbreaks of these health crises highlight the importance of the IHR for international health security, as it is the only set of legally binding provisions on the conditions that states must meet to identify and respond to threats for public health. Its purpose and scope is to prevent, protect, control and respond to events of international health concern with a risk of global dispersal (Article 2), while its methodology addresses the limitations to control public health risks while avoiding interference with international movement and trade. The main objective is to increase the likelihood of early identification and reporting to the WHO of all potential serious transboundary threats by its Member States, covering all health risks (biological, chemical, radiological) and obliging States to possess the appropriate infrastructure and a well-established national surveillance and intervention system.

The latest and ongoing major pandemic health crisis is that caused by the SARS-CoV2 virus in December 2019. SARS-CoV-2 (Severe Acute Respiratory Syndrome - Corona Virus-2) is the coronavirus responsible for COVID-19 (Coronavirus Disease 2019), which has caused the COVID-19 pandemic. The first case of COVID-19 was detected in Wuhan city, capital of Hubei province in central China, on 1 December 2019. On 24 December 2019, the virus was isolated and identified as a new strain belonging to the coronavirus family. On December 30, 2019 there was the first international recognition of the problem. On January 9, 2020 the first death was recorded in China and on January 13, 2020 the first case was detected outside China, in Thailand. On January 15 there was the first case in the USA from a traveler in the city of Wuhan. On January 20, 2020 it was confirmed that human-to-human transmission is occurring and on March 11, 2020 the WHO declared the problem with this virus a pandemic.

In this context, WHO declared COVID-19 as a public health emergency of international concern on January 30, 2020. Subsequently, it has taken a scaled-up approach by preparing the Strategic Preparedness and Response Plan for COVID-19, including operational advice on its management (WHO, 2020). This was followed by recommendations on the COVID-19 laboratory testing strategy, as well as collaboration with other international institutions.

However, WHO has been severely criticized for both delayed action and it was accused for ineffective management of the pandemic during its first phase in China (Agartan, Cook &

Lin, 2020). Certainly, this does not mean that states did not adopt the WHO's recommendations and take action to address the pandemic, but the main argument was that more immediate intervention, especially in the early stages of the epidemic at the Chinese level, could have prevented the worst for humanity.

The pandemic of COVID-19 subsequently reached frightening proportions, resulting in over 4 million deaths worldwide by 8 July 2021 (WHO, 2021). With the discovery of vaccines, a window of opportunity to exit the pandemic appeared, but access problems remain. Several poor countries lack the financial capacity to access vaccines, leading WHO to take action through the adoption of the COVAX mechanism which aims to encourage and equitably distribute vaccines globally to effectively address the pandemic (McAdams et al., 2020). Despite the first optimistic signs, the response of states and related organizations to COVAX calls has not been as expected, resulting in a significant disparity between developed and less developed states in terms of vaccine distribution (Herzog, 2021).

An important differentiating factor in the (in)ability to prevent and treat COVID-19 is the divergence between rich and poor countries or developing and developed countries, and WHO should play a crucial role in international cooperation in order to diminish these inequalities. Despite their inherent internal variations, countries in Africa, South America and the Indian sub-region appear to be the most vulnerable to COVID-19 due to widespread poverty, inadequate health systems, inability or unwillingness to measure and disclose data due to fear of challenging authoritarian regimes or those with limited levels of democratization, widespread co-morbidity, high rates of illiteracy, confusing safety and hygiene measures, weak social security systems, lack of acceptable sanitation, poverty, inadequate transport services and inability to purchase protective, pharmaceutical and medical equipment (Nanda, 2021). These vulnerabilities are also exacerbated by climate disasters or situations of political instability, thereby preventing the acceptance and widespread implementation of important preventive measures (Maclean & Marks, 2020).

The already precarious economies of developing countries have been severely hit economically by the restrictive measures as governments try to limit the spread of COVID-19. It should also be noted that economic contraction in some developed economies, such as the United States of America, is also negatively affecting developing states. For millions of people in developing (and developed) states who can only meet basic needs, such as food, when they are working, the most important source of fear and uncertainty is hunger rather than the pandemic itself (Husain, 2020). The worst impact of the pandemic has been on poor states, where economic contraction, soaring food prices, inadequate public policies and civil war, have threatened a significant number of socio-economic groups desperate for food and basic necessities already. A characteristic example is the five-year war raging in Yemen, which has destroyed schools and hospitals, leaving protective equipment and medical supplies in short supply (Yee, 2020).

The COVID-19 pandemic has had a negative economic impact on all countries around the world, both developing and developed. However, comparing the ability to cope with the demand for protective medical equipment, medicines and vaccines, the difference between the two categories of countries is visible. In this regard, developed countries are more easily able to procure larger quantities of protective equipment, medicines and vaccines compared to developing countries, and have better levels of medical and nursing staff adequacy, as well

as organized and more universally accessible health systems (Sharma, 2020). At the same time, overcrowding in urban centers prevents social disconnection and weak welfare systems cannot support unemployed workers (Nanda, 2021).

One such effort in order to assist developing countries to procure vaccines as a way to reduce the infectiousness of COVID-19 and consequently global vaccine inequality, was the creation of the COVAX mechanism. As it has already been mentioned, this mechanism was created by the WHO in June 2020 with ambitious goals but poor results to date. Its goal was to equitably distribute vaccines and provide at least 2 billion doses to developing countries by the end of 2021, which has not been achieved even halfway, as it is evident from the map below. Global vaccine inequality remains high, posing risks associated with the creation and expansion of new variants of the virus that can increase morbidity. While addressing the issue of vaccine coverage should have followed the message “no one is safe until everyone is safe” which was the main goal of COVAX, it appears that global inequality maintains the distinction of societies also in the health protection level, leaving many of them unprotected to COVID-19, even though the WHO attempts were aiming to solve these disparities.

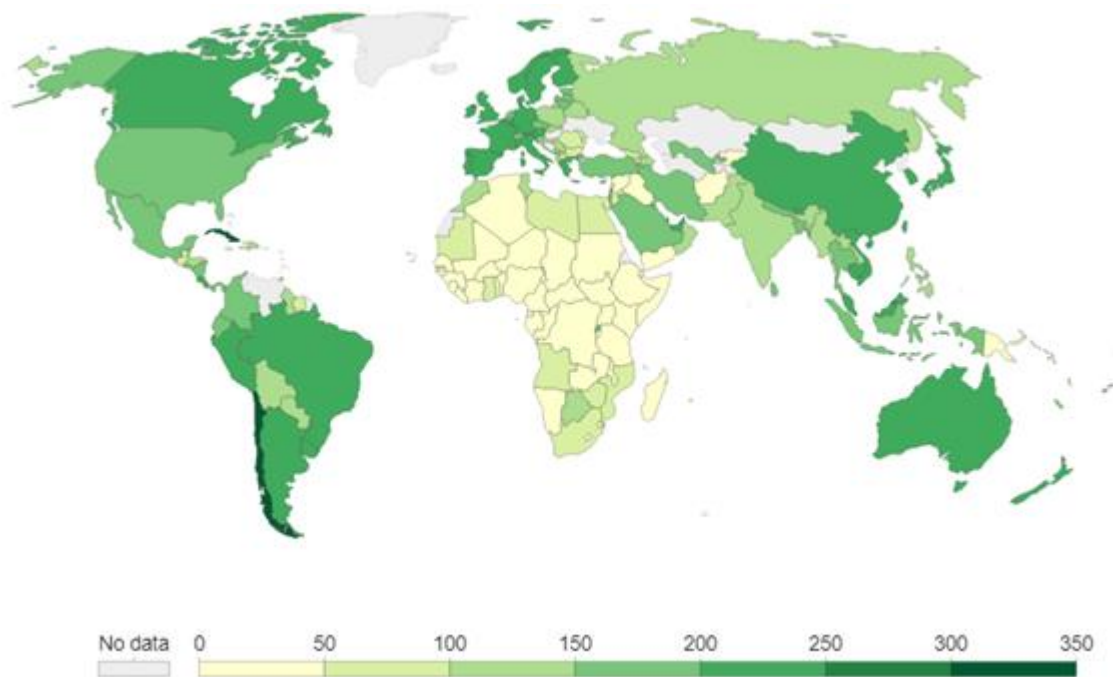


Figure 1: Total number of COVID-19 doses per 100 people by 20 June 2022. All doses per person are included. Source: <https://ourworldindata.org/grapher/covid-vaccination-doses-per-capita> (Retrieved: 06/07/2022).

| Conclusions |

This historical policy analysis highlights that international cooperation in order to address health challenges is more than necessary in the context of the increasingly interdependent world in which we live. Even though a well-developed and organized welfare state may be more adequately prepared for facing such a health crisis (Tzagkarakis, Pappas & Kritas, 2020) along with an active civil society and Corporate Social Responsibility (Kritas et al., 2020), no country alone can completely successfully address the enormous and unpredictable health challenges, as the modern interconnected world poses the risk of more frequent transmission of diseases (Murray & Lopez, 1996). Although the 2003 SARS pandemic outbreak emphasized the fact that states gave to WHO supranational responsibilities and powers that limited their own sovereignty, the COVID-19 pandemic highlights the fact that powerful states, such as China and the USA, continue to define and influence the evolution of global health protection. The WHO continues to fight against the refusal to cooperate internationally, but it does not have the capacity to fully address the problem. States are drifting away from international institutions and some continue to ignore its guidance, as exemplified by the UK's initial choice to pursue "herd immunity" during COVID-19 pandemic.

The preceding analysis has shown that over the last hundred years, international cooperation in order to respond and prevent pandemic and dangerous epidemic crises has grown significantly. While there is criticism of the WHO's management of the current pandemic, we should not overlook the fact that since the LNHO that laid the groundwork, several tools, collaborations, partnerships, information sharing mechanisms, adoption of medical technology, health regulations and much more have been developed. This does not mean, of course, that the problems have been completely solved. On the contrary, they exist and they are constantly being transformed. Consequently, the analysis of pandemic crises highlights that the WHO, due to the political pressures that often exist, chooses to act in global health affairs mainly through its scientific capabilities, rather than through the power it has to challenge states politically within the competences and powers granted to it by the IHR. However, with the end of the current pandemic crisis, the global community should assess the magnitude of the disaster and the level to which the important criticisms that have been expressed during recent pandemic crises, and particularly the current one of COVID-19, in order to improve WHO's capabilities to cope with and reduce the possibility for future pandemics.

Unquestionably, the course of international cooperation in responding to pandemic or major epidemic crises through LNHO and subsequently WHO, highlights two key elements. Firstly, that nothing is certain and secondly, that we are all vulnerable to unforeseen risks. But our uncertainty and vulnerability can be mitigated through cooperation and scientific progress. The tools, as the analysis has shown, exist and should be developed to further strengthen cooperation and reduce inequalities. WHO initiatives such as COVAX are extremely important but need to be supported by individual states. This is the direction in which the international community should move if it wants to be better prepared for the next pandemic, which will inevitably knock on humanity's door again at the future. Clearly, no country alone in the contemporary world can address the huge and unpredictable health challenges. However, the failure of the COVAX mechanism to achieve its purpose has

heightened skepticism that international cooperation and solidarity on such an important issue still faces significant problems. In addition, it should not be overlooked that several developing countries are facing problems of disease outbreaks, such as malaria, which have been successfully eradicated in the developed world. Some others, such as Zika, still exist in underdeveloped regions and may become a threat for the rest of the world since no reaction is occurred. Therefore, further cooperation in order to reduce global inequality is necessary because its negative effects may directly or indirectly impact all societies, but they are certainly affecting more the weakest-vulnerable people.

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