วารสารวิชาการผลประโยชน์แห่งชาติ
National Interest
ISSN (Online): 2730-2393

# Global health security within a new world order, where conflict and contagion are set to define our future

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## ABSTRACT

Global health security is based around an actionable public health system that is quality assured to exacting standards to detect, prevent and respond to threats that are of an infectious disease in nature. The problem that has existed for years, is such systems have operated in isolation. That isolation represents an evolving threat to the safety and security of mankind. This paper attempts to examine the parameters of global health security, within the new world order that we find ourselves in, one where both contagion most recently COVID-19 and conflict, invasion of Ukraine set to challenge our thinking.

**KEYWORDS:** security, health security, globalization, emerging disease, infectious disease

Received: 03/04/2023
Revised : 10/05/2023
Accepted: 27/06/2023

**Introduction.** The intersection of conflict and contagion that seeks to challenge the very fabric of human security and safety, represents a clear and evolving threat that should require the immediate attention at the highest levels of government. However, there seems to be no clear legislative definition on what constitutes health security, widening the policymaking gap and leaving public health and science isolated from informing any such policy directives. A clear division around the origins of Covid-19 has clouded any effective future mitigative effect towards emerging infectious diseases. An exponential rise in global conflicts seeks to weaponize these misunderstandings which could accelerate intentions along the lines of renewed biological aggression. There are times when concerns about health and safety overlap. Maintaining a safe and healthy population has long been considered crucial to global peace and safety. However, there is no consensus on what constitutes health security among policymakers and medical experts. This essay seeks to define health security concepts to shed light on the intersection of health and safety. Over time, the scope of what constitutes "health security" has broadened. Eight categories of most important relevance to modern health security were identified through a comparison of the health reports of four multilateral organizations (the United Nations, the World Health Organization, the Asia-Pacific Economic Cooperation, and the European Union). New infectious diseases, worldwide pandemics, the intentional release of toxic and biohazardous substances, and armed conflicts and other humanitarian crises round out the list. Natural disasters, environmental change, and chemical and nuclear accidents are two other areas of worry. The last two are food security and poverty, which are rarely brought up in conversation. Despite this, food security is quickly becoming a major concern in the realm of public health. The first line of defense against health crises is a robust heath security system. Increased international effort and political support will be needed to address the expanded scope of heath security brought on by globalization.

**1.Missed opportunity to framework effective global health security.**

The origins of Covid-19 have created divisions within the intelligence community placing it on a collision course with public health intelligence gathering efforts. The most reasonable explanation is that it was a naturally occurring zoonotic spill over event. This represents a case of nature fighting back as the proximity of humans and animals increases thereby accelerating zoonotic spill over events. Other explanations focus on a lab leak theory as well as misuse of gain of function research both of which are plausible. However, a lack of formal real time data sharing efforts on behalf of the Chinese government coupled with a huge pre Covid anti-Chinese sentiment have accelerated conspiracy theories which hampered global vaccination efforts. Today a public display of Chinese sympathies towards Russian aggression against Ukraine seem to undermine and destabilize efforts towards unifying and securing commitments towards understanding the immediate threat posed by infectious diseases. From a historical perspective Russia never abandoned it biological weapons programme (Petersen, 2022) and this coupled with the Xi-Jinping led China lack of transparency at the beginning of the Covid-19 pandemic severely undermines the basic tenants of health security.

**2.What exactly do we mean when we talk about health security?**

In 1994, the United Nations was the organization that initially outlined the concept of health security (UNDP, 1994). Since then, the term "health security" has been used in a variety of references to describe aspects of health that have a substantial impact on human safety (McKee et al., 2021). Public health security, global health security, international health security, and global public health security are all words that are frequently used in conjunction with one another (Mackenzie et al, 2004).

Despite the ubiquitous application of the concept, its definition and extent have not been sufficiently explored. There are a variety of health issues that do not warrant security considerations. The fields of health and security don't cross over into one another except in very specific situations. Recent years have seen an increase in the amount of focus placed on health security due to the rise of newly developing contagious illnesses and acts of bioterrorism (Roxas-Duncan & Smith, 2012). Particularly, globalization speeds up the transmission of epidemic diseases (Mohle-Boetani et al., 2000) consequently, we need to take into consideration the negative effects that globalization may have on international health security in addition to its other potential repercussions. The repercussions of such dangers extend well beyond the realm of public health concerns, and they can be felt in many different industries, including commerce, tourism, agribusiness, transportation, and shopping. For instance, the epidemic of Severe Acute Respiratory Syndrome (SARS) in 2003 caused a significant drop in customer confidence (Walker et al., 2020), which was represented in an evident drop in the demand for services. SARS was a respiratory illness. Over the course of the last decade, those who determine policy and those who work in the health care industry have come to a greater understanding of the potentially negative effects that public health emergencies can have on national, regional, and even worldwide interests.

It is impossible to achieve complete health security without the collaboration of multiple nations, particularly in the fight against newly developing infectious illnesses (Brenner et al, 2020; Robinson et al., 2021). The coordination, planning, and provision of health services, as well as the prosecution of related crimes, are all very essential responsibilities that fall under the purview of multilateral organizations (Sam-Agudu et al., 2021). Their statements have become essential for an in the process of renewing strategic profiles for health problems and the elevation of policy objectives (Suter & Mallinson, 2015). In order to devise more effective management strategies, it is necessary to have an understanding of the principles that are upheld by international organizations in the area of health security. This article provide a synopsis of the characteristics of health security by evaluating the health reports of four well-known international organizations, namely the United Nations (UN), the World Health Organization (WHO), the Asia-Pacific Economic Cooperation (APEC), and the European Union. These organizations are collectively referred to as "the big four" (EU) (Tello et al., 2013).

### 3. The United Nations' Concept of Health Security

The United Nations (UN) was established in 1945 as an international entity to promote international collaboration in the areas of law, security, economic growth, social advancement, human rights, and the maintenance of world peace. In its Human Development Report from 1994, the United Nations Development Programme (UNDP) first outlined the idea of heath security (UNDP, 2020). The scope of health security was subsequently defined in 2003 by the Commission on Human Security (CHS) (Emmanuel & Ani, 2015).

### 4.UNDP

In 1994, the UNDP made the initial connection between human security and the absence of both dread and want. The Human Development Report it released changed the focus from countries to people when it came to the idea of safety (UNDP, 2020). Economic, dietary, health, environmental, personal, societal, and political security are the seven major pillars upon which this study rests in its description of human security. Health security and personal security were linked for the first time in this definition. In this paper, "health security" refers to measures put in place to provide assurance against dangers such as illness and poor diet. Infectious illnesses are a leading source of death and disability in the world's poorest regions. Contrarily, the majority of sickness in developed nations is attributable to citizens' harmful habits. In addition, the impoverished, women, and children are disproportionately affected by risks to heath security. With the right tools and research, some of these illnesses can be avoided or treated.

### 5.Human Security Commission (CHS)

In 2001, the UN created the CHS to integrate human security into the organization's core mission. Health is defined as "a state of complete mental, physical, and social well-being" rather than simply the lack of illness, with good health being fundamental to human security since security is about safeguarding human lives. However, not all medical concerns are associated with people's safety. In their concluding report from 2003, Human Security Now, the CHS identified four conditions that were strongly correlated with people's sense of safety (Emmanuel & Ani, 2015).

This includes four factors:

(1) the magnitude of the current and projected illness load.

(2) the timelessness of the need for action.

(3) the breadth and complexity of the societal influence; and

(4) the potential for far-reaching consequences.

Among the many threats to human safety associated with poor health, the following are among the most serious:

(1) Infectious Diseases

(2) wars and famines around the world

(3) poverty and unfair distribution of resources

**6.Health security defined by WHO**

Established in 1948, the World Health Organization (WHO) is a specialized organization within the UN system that serves as a coordinating authority on issues pertaining to public health on a global scale. It described "global public health security" as "the activities required, both proactive and reactive, to minimize vulnerability to acute public health events that endanger the collective health of populations living across geographical regions and international boundaries." In other words, it was "the activities required to minimize vulnerability to acute public health events that endanger the collective health of populations living across geographical regions and international boundaries" Two reports published by the WHO in 2007, titled World Health Day 2007 and World Health Report 2007, have outlined a variety of concerns relating to health safety.

**7.A new world order evolving at warp speed**

As China races to erode the global diplomatic footprint of the US, an effort started by the belt and road initiative (OECD, 2018), a new rules-based order is beginning to take shape, placing Xi-Jinping at the centre of leading global diplomacy. The recent "apparent" thawing of relations between Saudi Arabia and Iran who have used the battle fields of Iraq and Syria to ferment aggressive loyalties, placed China at the fulcrum of this diplomatic effort (Crisis Group, 2023), hailing Xi-Jinping as the new ambassador for peace. Should China leverage its technological prowess and newly formed "peace maker" status over Russia, and manage a similar exercise of de-escalation in Ukraine, you will see a Chinese diplomatic metastasis the likes of which were only on display on April 4th, 1949, which was the date NATO was formally created. Such badges of honour in de-escalation coupled with a display of enormous humanitarian effort in the middle of the pandemic (e.g., vaccine and PPE supply), would relegate any thoughts of early pandemic secrecy held by the Chinese to the recesses of our collective memories.

**8.Armed conflict**

Russian aggression as displayed by the 2022 invasion of Ukraine points towards a rapidly shifting global order. It is with this intention one must balance the thinking of Vladimir Putin who seeks to rebuild Russia in the eyes of old USSR against an ever-expanding footprint of NATO and the EU on his doorsteps There were global flashpoints of the Kremlin's intentions in the form of the 2014 annexation of Crimea and the shooting down of MH17. It was not just a display of intention as it was a display of disregard for the global standards of accountability. Russia's invasion of Ukraine brought the health care system to its knees crippling infrastructure meant to deal with the still rapidly advancing Covid-19 pandemic (Van den Berg, 2023). The public health policy decisions made at the level of the Kremlin prior to the invasion would not have been lost on Vladimir Putin. He was looking to capitalize on a country whose human security capital was severely immunocompromised due to the Pandemic (Reliefweb, 2022). Having never abandoned their bioweapons programme, which formed the basis for their covid-19 vaccine strategy development (Dobrovidova, 2021), Russian military units possessed a superior biological advantage over their Ukrainian counterparts. Another aspect not totally lost on

minds of the Kremlin, was the introduction of new variants of Covid-19 onto the population by allowing the virus to spread rapidly among those not or poorly vaccinated.

Fracturing the health delivery system of Ukraine would allow other viruses such as Polio which was in the middle of a resurgence in the areas of Rivne and Zakarpattya (Morris & Diamond, 2022; Kluger & Law, 2022). to spread even faster possibly even hybridize with Covid-19 or possibly and more realistically co-exist with post viral complications of other diseases that would collectively weaken any human response. There was a certain measure of infectious disease modelling analysis conducted by the Kremlin prior to the Ukraine invasion (Kluger & Law, 2022), as their history points to a fascination with infectious agents towards alternative methods of aggression (Leon et al., 2022).

**9.Zoonotic and Emerging Infectious Diseases as threats in an era of change**

Zoonotic diseases are infections that are transmitted from animals to human and vice versa. They can be bacteria, fungi or viruses that possess an evolutionary genetic code far more adaptable than the human genome (Zoonotic Diseases, 2021). They account for 61% of contagious pathogens that can infect human beings. The emergence of Covid-19 has once again shed light on the destructive power of these elegant viruses. At the start of the pandemic the global response to Covid-19 was to use a flu model intervention, which was basically a wait and see approach towards mitigation, and hope that it disappears, and that mistake cost us dearly.

Emerging infectious diseases (EID) are contagious illnesses that are recently identified in a population or have existed but are quickly increasing in frequency or geographic spread. The term "emerging infectious diseases" was coined by the Centers for Disease Control and Prevention (CDC). Simply put, they may be new infections that result from changes or evolution of existing organisms, known infections that spread to new geographic areas or populations, previously unrecognized infections that appear in areas that are undergoing ecological transformation, or old infections that reemerge because of antimicrobial resistance in known agents or breakdowns in public health measures. The collaborative communication between emerging diseases and other contagious and noninfectious conditions is a significant cause for concern. Numerous newly discovered illnesses are zoonotic or synoptic, meaning that an animal receptacle incubates the organism, and then the organism is randomly transmitted to human communities. Similarly, EID can be transmitted through the environment, through vectors, or through food. In any case, for an EID to become established, the contagious agent needs to be introduced into a population that is susceptible to the illness, and the agent also needs to have the ability to cause disease and propagate from human to humans.

As human communities have expanded into previously uninhabited regions, there has been a corresponding increase in the patterns of contact between human and wildlife reservoirs. These interactions, as well as the ensuing destruction of habitat, are driven by factors such as population development and agricultural expansion, as well as rising wealth and larger property sizes. The genomes of all living things, from viruses to elephants, are continually undergoing mutation. For example, if you want to trace the effects of worldwide connectivity on an outbreak, you could use genetic changes that

have no discernible influence on fitness (and are therefore selectively neutral) to do so. In addition to the pathogen population dynamics, which may be modulated by the global change context, the degree to which such mutations increase frequency or spread geographically will rely on the degree to which they increase fitness. There may be more opportunities for new variants to develop as the population of susceptible hosts such humans, crops, and livestock grows and spreads (Deng et al., 2020). Cross-scale selection, or determining how one level of selection (say, at the host level) affects another (say, at the population level), is still a relatively uncharted territory.

The following are examples of factors that can be classified as biological, societal, or environmental, all of which are interrelated:

- Alteration and plasticity in microorganisms (e.g., genetic drift and shift in influenza A).
- Vulnerability to the effects of infection.
- A greater concentration of people in each area.
- The problems of poverty and discrimination in society (e.g., tuberculosis).
- The environmental strain caused by the development of agricultural territory.
- Manufacturing and the food market's increasing globalization.
- Environmental contamination.
- Alteration of the climate.
- Additional possibilities for the development of new infections.
- Growth of the population.
- Spread in hospitals and other medical centers.
- Aging population.
- International tourism.
- Altering and growing the environments of vector species (warmer temperatures may allow mosquitoes, and diseases they transmit, to expand to new regions).
- Resistance to drugs (contributes to re-emergence of bacteria, viruses, and other microorganisms that change over time).
- Deterioration in the state of public health.

**10.Intentional biological assaults**

The influenza virus (Pitzer et al., 2016), which is the pathogen responsible for the illness, is a current illustration of how these factors influence new diseases because it modifies its genomic information. When these changes become noticeable, the human immune system is put to the test, which increases the risk of pandemics. When people live near agricultural animals that are natural carriers of the virus, such as chickens, ducks, and piglets, the chance of genetic alterations as well as human transmission is heightened. Infection with the H5N1 strain of the avian influenza, also known as the bird

flu, can only occur through close interaction with animals that are ill. In contrast to the H1N1 influenza virus, which was transmitted from pigs to humans but does not have the ability to spread among people despite its lethal nature, this virus does not have this ability. In 2009, this virus had an effect on a worldwide scale as a direct result of human activity, particularly travel by airplane.

HIV is an additional instance of a contagious illness that can be traced back to human activities. One of the most prominent hypotheses suggests that HIV was initially transmitted to humans in remote areas of Africa through prolonged and intimate interaction with chimpanzees, possibly because of the consumption of bushmeat. Because of the prevalence of plane travel, the disease quickly expanded from remote areas to international regions. Before the novel illness was discovered, human behaviors that contributed to its quick spread were already taking place. These behaviors include the use of intravenous drugs, sexual transmission, and the transfer of blood products.

Chikungunya is a tropical illness that has become more widespread because of climate change (discussed previously). The mosquito that is responsible for the transmission of this virus was at one time native only to the equatorial regions that surround the Indian Ocean. In 2007, more than 200 people living in a village in Italy were diagnosed with this illness after an epidemic of it there. Following that, instances of the disease have been documented on every continent.

As practitioners of health care working within health care institutions, the shifting demographics of the population deserve more attention and conversation. The increased risk factors for infection and consequent hospitalization that come along with aging only serve to exacerbate the patient's preexisting susceptibility. Candida Auris, is correlated with high mortality in patients who have underlying comorbidities and is creating epidemics in health care facilities.

**11.Misuse of toxic substances and living organisms**

The danger is one posed by terrorism that must be taken seriously (Pitzer et al., 2016). The release of an aerosolized substance or the adulteration of food products are both examples of acts that could be considered acts of chemical or biological terrorism. Both the accidental release of sarin gas on the Tokyo subway and the release of anthrax in the United States are two of the most renowned instances of assaults using chemical and biological weapons, respectively, that have taken place in the past few decades.

**Conclusion. Current and future challenges.** Health security exists when health emergencies having potential large-scale dangers that can devastate people, societies, and economies worldwide. It's imperative to determine the current risk factors, to discard what is no longer significant, and to look for approaches to new challenges. By analysing the health reports of four multilateral organizations (Hardiman, 2003), eight main themes are summarized, and the consistencies of scopes are compared. At present, pandemic disease is the most significant risk to health security. Infectious pathogens (Fukuda-Parr, 2003), both new and old, pose a substantial menace to global health. In addition to emerging and infectious diseases, conflicts, terrorism, and humanitarian emergencies are regarded as very important

threats by all four international organizations. The other challenges that concern the majority are natural disasters, environmental change, and chemical as well as radioactive accidents. In contrast, food insecurity and poverty.

It is possible to speak of global health security (Scharoun et al., 2002), when there is preparation for and response to health crises that pose widespread threats to human life, social structures, and economic systems around the globe. It's critical to identify the most pressing threats, eliminate those that are no longer relevant, and seek answers to emerging problems. In this paper, we analyse the ranges and congruencies of eight major topics collected from the health reports of four international organizations. An epidemic illness is currently the greatest threat to heath safety. Both novel and established infectious organisms represent a serious threat to world health. All four groups agree that wars, terrorism, and humanitarian crises rank among the most serious global challenges today. Natural catastrophes, climate change, and toxic and radiological mishaps are other threats that most people worry about. However, issues like food instability and destitution tend to get less attention, possibly because they typically only pose intermittent, chronic risks to health.

Despite the lack of agreement, food poverty poses a possible threat to world health. Indeed, food security is rising to prominence as a major concern in public health at the age of 12. Issues revolve around both the availability and quality of nourishment. As a bonus, there are commonalities between health and food security strategies. Because of this, it is important to address underlying issues like the integration of growth of guaranteed access to assets, jobs, revenue, and a dependable sustenance system.

In conclusion, one common illustration of a non-traditional security problem is heath security, an important component of human security. It's the very first line of defence in case of a medical emergency. Managing the scope and depth of health security will call for more concerted international effort and political backing as the challenges it presents increase in tandem with the complications introduced by globalization.

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