National Defence — Défense nationale

Canadian Forces College

Collège des Forces Canadiennes

Health Security Is the New Pillar of National Security in Order for Nations Around the Globe to Thrive in the 21st Century

Lieutenant Colonel David A. Allan-Matheson

JCSP 46 DL	PCEMI 46 AD
Solo Flight	**Solo Flight**
Disclaimer	**Avertissement**
Opinions expressed remain those of the author and do not represent Department of National Defence or Canadian Forces policy. This paper may not be used without written permission.	Les opinons exprimées n'engagent que leurs auteurs et ne reflètent aucunement des politiques du Ministère de la Défense nationale ou des Forces canadiennes. Ce papier ne peut être reproduit sans autorisation écrite.
© 2021 Her Majesty the Queen in Right of Canada, as represented by the Minister of National Defence.	© 2021 Sa Majesté la Reine du Chef du Canada, représentée par le ministre de la Défense nationale.

Canada

CANADIAN FORCES COLLEGE – COLLÈGE DES FORCES CANADIENNES

JCSP 46 DL – PCEMI 46 AD

2019 – 2021

SOLO FLIGHT

HEALTH SECURITY IS THE NEW PILLAR OF NATIONAL SECURITY IN ORDER FOR NATIONS AROUND THE GLOBE TO THRIVE IN THE 21ST CENTURY

By Lieutenant Colonel David A. Allan-Matheson

INTRODUCTION

Healthcare is a construct that touches the lives of all citizens worldwide. The foundational aspects of a strong national security framework are proper health security policies or actions towards maintaining population health. Thus, challenges to health security become major national security concerns for nations within political, social, and economic paradigms as man-made and natural disasters such as pandemics become a reality. Colin McInnes noted that health becomes a major national security concern when it threatens a nation's ability to function and safeguard its citizens' welfare, including provisioning basic services.[1] The Coronavirus 2019 pandemic's rapid spread globally exemplifies this new critical concern.

Coronavirus 2019 (COVID-19) emerged out of China in late 2019 to become a global pandemic throughout 2020, infecting tens of millions worldwide and killing millions. Countries such as New Zealand, Taiwan, and Singapore took proactive response measures by shutting borders and enforcing strict public health measures. Other countries were more reactive in their approach, placing right-leaning ideology over scientific guidelines, and suffered devastating outcomes. Countries executing slow decision-making based on an ideological lens included the United States, the United Kingdom, Brazil, Iran, and Sweden. Brazil, the United Kingdom, and the United States led the world in COVID-19-related deaths ranging into hundreds of thousands.[2] These nations failed the health security test of national security, meaning protecting their citizens by marshalling the right level of engagement and resources to stop COVID-19.

---

[1] McInnes, "Health." In *Security Studies*, 543, Routledge, 2018.
[2] Pearson & Magalhaes, "Brazil, hit by Covid-19 variant, surpasses U.S. in daily cases and deaths," *The Wall Street Journal*, 10 March 2021, 3, last accessed on 06 April 2021. https://www.wsj.com/articles/brazil-hit-by-covid-19-variant-surpasses-u-s-in-daily-cases-and-deaths-11615385902#:~:text=Covid%2D19%20has%20killed%20more,has%20more%20than%20525%2C000%20deaths.

Katheryn Bouskill and Elta Smith wrote in the December 2019 "Global Health and Security" RAND report, that health is security is a pillar of national security.[3] This means that policymakers and executive governmental leaders must recognize the only reality worth focusing on is protecting their citizens from man-made and naturally occurring health threats.[4] Man-made health threats are bioterrorist activities, while pandemics like COVID-19 arise from nature. Thus, health security is a core national security imperative, meaning nations must better adapt to the changed global healthcare landscape of the 21st century based on the consequences of the COVID-19 pandemic.

However, to better understand the importance of health security to a state's welfare related to political, social, and economic dynamics that impact national security and, thus, the lives of the country's citizenry, a working definition of health security is required. Health security (or global health security), as defined by the World Health Organization (WHO), is

> The activities required, both proactive and reactive, to minimize vulnerability to acute public health events that endanger the collective health of population living across geographical regions and international boundaries.[5]

Further, during research on health security, one will arrive at the United States Centers for Disease Control and Prevention's (CDC) web page, which speaks to the topic. The CDC is one of America's main healthcare policy arms that influence the decision-making of not only U.S. leaders but also of regional and global leaders based on the deep level of expertise found in the institution on a range of disease-related subject areas.

---

[3] Bouskill & Smith. Rand Corporation, *Global Health and Security: Threats and Opportunities*. Washington D.C.: The RAND Corporation, 2019, 3, last accessed 22 March 2021. https://www.rand.org/content/dam/rand/pubs/perspectives/PE300/PE332/RAND_PE332.pdf
[4] *Ibid*.
[5] Chiu, Ya-Wen., Yi-Hao Weng, Yi-Yuan Su, & others, "The nature of international health Security," *Asia Pac J Clin Nutr 18*(4) (2009): 680, last accessed 22 March 2021. http://apjcn.nhri.org.tw/server/APJCN/18/4/679.pdf.

Health security is an important area of concern for the international community because it is one of the few key interests that enjoin all nations' collective focus, as the COVID-19 pandemic proved throughout 2020 into 2021. The singularity of national security focus tied to the health security of nations' populations illustrates how critical a pillar health assurance is to countries. For example, on the CDC's web page, there is an emphasis on health security as the newest pillar of national security for nations to thrive in the 21st century, with ramifications for economic and political stability worldwide.[6] A missing word from the declaration was "social," a key aspect of modern human society. As a result, health security has implications for overall political, economic, and social well-being as the newest structural supporting edifice of national security in line with the CDC's framing of the change. Therefore, this essay will argue that for nations to thrive in the 21st century, they must root health security in the political, social, and economic determinations of their national security foundations.

POLITICAL

According to the CDC, "health security is a national security issue – not only does investment in global security help prevent threats from reaching our shores, but it also promotes economic and political stability in the U.S. and around the world." [7] Politics is imbued in the daily life of all human society; it is the key driver behind how nations are governed. Policymakers and decision-makers play a central role in how their nation's national security apparatus embeds health security. Health security serves as one of the foundational edifices of national leaders' ability to secure their populations against threats from within or across international borders. As the COVID-19 pandemic has proven, diseases do not recognize man-

---

[6] CDC., *About Global Health Security*, (Atlanta, GA: Centers for Disease Control and Prevention, 2021), 1, last accessed 22 March 2021. https://www.cdc.gov/globalhealth/healthprotection/ghs/about.html.
[7] *Ibid*.

made artificial boundaries. Dr. Preslava Stoeva of the London School of Hygiene and Tropical

Medicine wrote,

> COVID-19 pandemic is a stark example of health security politics, despite the
> pandemic not being currently labeled as a health security concern in political discourse.
> With high levels of morbidity and mortality globally and a highly contagious pathogen
> this pandemic is a prime and unprecedented example of a global health security threat.[8]

Heath security as a construct is, therefore, rooted in nations' politics due to COVID-19 and

further embedded in the international relations of an interconnected world built on a foundation

of globalization.

For many years, health security has been a topic tossed around in academia, attempting to

define its essence and relatability to the daily life of people across the globe, with definitional

terms of preventing the transit of communicable diseases across borders.[9] In the realm of daily

politics, health security absence was noticeable pre-2013. Only when diseases were carried via

vectors, meaning human hosts from their place of origin to a virgin location that had never

experienced an epidemic, did health security become a concern. The rapid movement of disease

across borders is a function of globalization, which set the conditions in 2014 for the naturally

occurring Ebola West Africa to make to countries like the U.S. The WHO had been fighting the

disease for years, but it was not until Ebola left Africa and crossed into the "pristine" locations of

the western societies did political leaders external to Africa pay attention to the crisis.[10] Health

security had become a national security concern.

---

[8] Stoeva, "Dimensions of Health Security – A Conceptual Analysis, " *Global Challenges 4*, 2020, 1ast accessed 25 March 2021. https://doi.org/10.1002/gch2.201700003

[9] Aldis, "Health security as a public health concept: a critical analysis," *Health Policy and Planning 23* (2008): 370, last accessed 22 March 2021. https://www.researchgate.net/publication/23158196_Health_security_as_a_public_health_concept_A_critical_analysis/link/0deec526524076fa51000000/download.

[10] CDC, 1

As a result, health security and politics' interwoven structure had its foundation in the interconnection of states due to air travel, an aspect of globalization. Now, like the movement of Ebola, when COVID-19 left the shores of China in 2020 to head eastwards to Japan, then westwards to Europe, Africa, North America, and South America via air travel, health security and politics again collided. Globalization had caused a disease to reach the previously unreachable shores of a distant country like the United States, triggering political maneuvering between nations regarding the responsibilities between global powers. The U.S. diplomatically attacked China. China responded in kind, and then European nations and others under political strain also attacked China or stayed neutral.[11] The great power engagement of the past entered a redux phase. Protective internationalism and geographic isolationism entered vogue again after last being seen in the 1930s and 1940s prior to and during World War II[12]. Health security had become a true national security issue for regions and nations since their borders were not impediments to disease. Thus, the impetus is now to treat health security as a political imperative. This imperative represents a political dynamic of the utmost importance to nations' security and ultimately their economic well-being to prevent a collapse of the state due to citizens becoming desperate and enraged at current circumstances.

ECONOMIC

Nations' health security situations are highly dependent on the macro-economic circumstances permeating their societies and sectors of commerce. Countries' citizenries will decide on their likes and dislikes of political leadership based on developments in national

---

[11] Nichols & Holland, "U.S. – China tensions take center stage at U.N. as Trump accuses Beijing of unleashing 'plague'", *Reuters*, 22 September 2021, 2, last accessed 07 April 2021. https://www.reuters.com/article/un-assembly/u-s-china-tensions-take-center-stage-at-u-n-as-trump-accuses-beijing-of-unleashing-plague-idUSKCN26D2KU.

[12] Allen et al., "How the World Will Look After the Coronavirus Pandemic," *Foreign Policy*, 20 March 2020, 5, last accessed 25 March 2021. https://foreignpolicy.com/2020/03/20/world-order-after-coroanvirus-pandemic/.

economies. Businesses will make capital investment or divestment decisions depending on the dynamism of the state and global economies, whether they are expanding or contracting. Governments will develop fiscal and monetary policies to stimulate economic growth or redistribute resources to secure sectors of society while creating incentives for businesses and individuals to thrive. Political leaders know a nation's health and economics are part of its national security framework. As a result, if health security is faltering across the globe, supply chains and nations' internal economic factors will also tumble due to the interconnectedness of systems due to globalization. COVID-19, as an example, shocked the global economy and many nations' local economies, leading to unexpected spirals and new permutations in global commerce previously inconceivable due to globalization's decades-long net positive effects.[13] As COVID-19's spread, nations' economic well-being was severely damaged. Nations' economies, measured by gross domestic product (GDP), from China to the United Kingdom to the United States to Canada, shrunk between 5% and 30% in 2020.[14] Supply chains became unstable as countries retreated and tried to husband medical and healthcare resources to secure their own populations' well-being.

Supply chains are nations' lifeblood and, therefore, part of their economic security architecture. For example, 72% of 200 global companies, in response to a late 2020 Ernst and Young study, reported experiencing significant disruption to their global supply chains, with 55% of the 72% reporting highly negative outcomes. Only 11% stated positive returns due to

---

[13] Cimmino et al., Atlantic Council, "*Taking Stock: Where are Geopolitics Headed in the COVID-19 Era?*" Washington D.C.: Atlantic Council, 01 June 2020, 1, last accessed 25 March 2021. https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/taking-stock-where-are-geopolitics-headed-in-the-covid-19-era/

[14] Jones et al., "Coronavirus: How the pandemic has changed the world economy," *BBC News*, 24 January 2021, 4-5, last accessed 05 April 2021. https://www.bbc.com/news/business-51706225.

disruption.[15] Companies and consumers drive countries' economic growth based on those countries' fiscal and monetary policies, thus affecting their home countries' well-being and economic security. Economic security is part of national security. Harm to supply chains that control the flow of healthcare-related material for vaccines, general medicine, and personal protective equipment is a threat to nations' health security. As health security comes under pressure, political leaders have awoken to the reality that the economics behind global supply chains may not be favorable to their countries' national security.

Therefore, political leaders around the world, especially in the western world, are now assessing the benefits of sprawling supply chains resting primarily outside their national boundaries, as these can determine their national security. Nations will seek ways to cope economically without an extended supply chain, especially as countries like China, the US, and their allies begin to decouple economic ties.[16] Placing health security as a second- or third-tier consideration in the scheme of economics and politics is no longer sustainable, especially as countries have suffered to marshal resources to fight the pandemic. Long-range dependency on supply chains that flow through countries or regions with either adversarial or allied interests is now a risk to nations' economic vitality in terms of health security.

An expected shift is companies' dismantling of global supply chains as they receive economic incentives from their governments to home-base and develop robust internal-facing supply chains with over-emphasized redundancy measures.[17] Countries will call on private enterprises as a matter of national security to prevent adversarial nations from taking ownership

---

[15] Harapko, "How COVID-19 impacted supply chains and what comes next, " E&Y Report, 18 February 2021, last accessed 05 April 2021. https://www.ey.com/en_us/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next.

[16] Allen et al., 3

[17] Ibid., 9.

of material pipelines in the event of another health security crisis, eliminating dependency. As an

example, the US is already considering removing China as a stakeholder in its critical supply

chain infrastructure that affects its population's health since the countries' economic and political

relations have further eroded due to the pandemic.[18] Other nations and regions are looking to

follow suit through alternative measures based on lessons learned from the COVID-19

pandemic.[19]

For example, the European Union's (EU) legislative body in Brussels, Belgium, is

considering legislation to restrict the passage of COVID-19 out of the regional bloc and into

other regions.[20] This development in supply chain restriction has become a real possibility in

2021 since EU countries have struggled to procure enough vaccines to safeguard their own

population's health.[21] A high-level government decision to stop vaccines from getting to other

nations' citizens in favor of European citizens will have wide-ranging international ramifications

with unpredictable societal permutations for the global commons. Thus, there are critical

economic implications with health security tied into national security, which also has a social

component. Health security, therefore, has social consequences for countries if they fail to treat

healthcare and medicine as a national security priority.

SOCIAL

Society and health are the cornerstone of global public health, which is grounded in the

national security component of human security discipline. Health security is a component of

human security. Human security is defined as "protection of vulnerable people against hunger,

---

[18] *Ibid*., 4.
[19] *Ibid*., 6.
[20] Stevis-Gridneff, E.U. will curb covid vaccine exports for 6 Weeks. *The New York Times*, 23 March 2021 (Updated 28 March 2021), 1, last accessed 05 April 2021. https://www.nytimes.com/2021/03/23/world/europe/eu-curbs-vaccine-exports.html.
[21] *Ibid*.

disease and repression; poverty reduction; and 'empowerment' of people."[22] Consequently,

society or population health reinforced by the right health security focus is critical to supporting

national security. As the COVID-19 pandemic demonstrated, societal upheaval and dislocation

occur when diseases spread rapidly. Citizenries lose trust in government, the political leadership

that is nominally expected to lead countrymen through crises. This lack of trust, which can lead

to societal chaos, becomes even more pressing when innumerable persons lose their jobs and

ability to feed their families due to limited government support and intervention.

Across the industrialized world, as the COVID-19 pandemic spread, countries went into

lockdown, and, depending on governmental social welfare policies to sustain people's livelihood,

unemployment rates increased significantly across the globe. In Brazil, the unemployment rate

went from 11.9% in 2019 to 13.4% in 2020.[23] Brazil suffered 300,000COVID-19 deaths as of

March 2021, second only to the U.S., which recorded over 550,000 lives lost.[24] Similar shifts in

numbers occurred in countries hit by the pandemic and by moderate to great numbers of deaths.

In Italy, the unemployment numbers shifted from 9.9% to 11%. Canada's unemployment rate

went from 5.7% to 9.7%. That of the U.S. went from 3.7% to 8.9%, and that of the United

Kingdom increased from 3.8% to 5.4%.[25] Changes in these percentages, depending on the

country, equaled millions to tens of millions of people newly out of work, with many receiving

generous to marginal social welfare benefits from their governments based on social policies.[26]

Equity and parity were absent across many countries as people watched family lose their lives to

---

[22] Aldis, 371
[23] Jones et al., 3
[24] Pearson & Magalhaes, 3
[25] Jones et al., 3
[26] OECD., "The territorial impact of COVID-19: Managing the crisis across all level of government, " *Organization for Economic Co-operation and Development Report*, 10 November 2020, 21, last accessed on 07 April 2021. http://www.oecd.org/coronavirus/policy-responses/the-territorial-impact-of-covid-19-managing-the-crisis-across-levels-of-government-d3e314e1/

COVID-19. Wider global society and national societies crumbled under the weight of the

pandemic before the most powerful started to recover slowly. Stewart Patrick of *Foreign Affairs*

magazine aptly wrote,

> The chaotic global response to the coronavirus pandemic has tested the faith of even the most ardent internationalists. Most nations, including the world's most powerful, have turned inward, adopting travel bans, implementing export controls, hoarding or obscuring information, and marginalizing the World Health Organization (who) and other multilateral institutions. *The pandemic seems to have exposed the liberal order and the international community as mirages, even as it demonstrates the terrible consequences of faltering global cooperation* (emphasis added).[27]

Such a situation occurred because health security parameters failed across the globe,

affecting societies at their most fundamental levels: people's work and ability to take care of

themselves and their families. That essentially is a national security crisis for any nation. As a

consequence, health security is the top layer blanket of a normative society, and when stressed,

as COVID-19 demonstrated, can have spiraling social consequences that have national security

implications for both industrializing and post-industrialized nations alike.

RECOMMENDATIONS

> Owing to the growing complexity of health security challenges, an effective response requires the close collaboration of governments, international organizations, civil society, the private sector and other partners.[28]

Three recommendations emerge from the political, economic, and social facets to create a firmer

foundation under the health security pillar of national security. First, politically, nations should

create robust health response plans to all forms of health-related threats and name a chief health

and national security officer (CHNSO), who will serve as lead national security expert and

---

[27] Patrick, "When the System Fails: COVID-19 and the Costs of Global Dysfunction", *Foreign Affairs*, August 2020, 40, last accessed 25 March 2020. https://www.foreignaffairs.com/articles/world/2020-06-09/when-system-fails

[28] Rockenschaub et al., World Health Organization – Europe. *Towards health security: a discussion paper on recent health crises in the WHO European Region*, Copenhagen, DK: World Health Organization, 2007, 7, last accessed 25 March 2021. https://www.euro.who.int/en/publications/abstracts/towards-health-security.-a-discussion-paper-on-recent-health-crises-in-the-who-european-region

coordinator for the government. The CHNSO and their team will focus primarily on national security concerns regarding health in political, economic, and social spheres, working in tandem with other health authorities already established with countries' governments and regional entities like the EU.

Secondarily, the CHNSO will have a role in working with healthcare companies, global health organizations, and country-based and global economists to best structure supply chains that affect their nation's or region's health security parameters. Appropriate plans for supply chains ought to "reflect and integrate examples of effective response to reduce the vulnerability of the health sector to potential hazards and threats."[29] These changes in a nation's or regions' perspective on health security will involve revising established norms of globalization with more internal supply chains to limit economic fallout, such as recessions, and social impacts involving lost jobs and livelihoods from future pandemics.

Thirdly, the CHNSO can serve regional and national governmental bodies by developing mitigation measures to buffer against recessions due to pandemics or other serious health security concerns. Leveraging empirical data, general evidence from the past, and reviewing lessons learned from previous disasters, the CHNSO can change the dynamic of societal upheaval when health security fails.[30] The CHNSOs and their teams can provide predictive analysis on potential societal stress points in the national security realm from both man-made and natural health-related disasters. In turn, national governments and regional bodies can use the information to push forward fiscal packages to reinforce those stress points, whether they are social or training programs or some form of infrastructure to weather the deleterious effects of the disaster.

---

[29] *Ibid.*
[30] *Ibid.*

CONCLUSION

This essay argued that for nations to thrive in the 21st century, they must root health security in the political, social, and economic determinations of their national security structures. The essay addressed the political impact of health security on the relationships among nations and regions. It also discussed how national leaders' decision making affects the global society, as diseases recognize no borders, and countries that fail to cooperate fail to understand the national security challenges at hand. National security challenges are further compounded by economic insecurities caused by globalization and the build-out of global supply chains that become strategic risks for nations working to provide for their citizenry's health and well-being. In turn, these political and economic challenges impact global and local societies, causing fractures and instability due to loss of work and livelihood.

Thus, the national security threat is implicit in health security, which is now a recognized pillar of the sprawling state security apparatus that will require further research on other means to resolve the conundrum of health and welfare, whether national, regional, or global. However, appointing a CHNSO is recommended as a quick measure to address the potential for a healthcare security crisis. A CHNSO will ensure that health security continues as a top priority to help nations, regions, corporate entities, and global organizations collaboratively build working systems to effect positive change. Collective engagement by these various bodies through CHNSOs can mitigate health security cross-border problems that affect multiple nations and that are short- and long-term national security threats that can devastate populations. As a result, health security, intended to secure the citizenry from internal and external threats to life and livelihood, has implications for nations' and regions' overall political, economic, and social well-being as the newest structural edifice of national security.

BIBLIOGRAPHY

Aldis, William. "Health security as a public health concept: a critical analysis," *Health Policy and Planning 23* (2008): 369 – 375. Last accessed 22 March 2021. https://www.researchgate.net/publication/23158196_Health_security_as_a_public_health _concept_A_critical_analysis/link/0deec526524076fa51000000/download

Allen, John, Nicholas Burns, Laurie Garrett, Richard N. Haass, G. John Ikenberry, Kishore Mahbubani, Shivskankar Meno, Rob Niblett, Joseph S. Nye Jr., Shannon K. O'Neil, Kori Schake, and Stephen M. Walt. "How the World Will Look After the Coronavirus Pandemic," *Foreign Policy*, 20 March 2020, 1-12. Last accessed 25 March 2021. https://foreignpolicy.com/2020/03/20/world-order-after-coroanvirus-pandemic/

Bouskill, Kathryn E., & Smith, Elta. Rand Corporation, *Global Health and Security: Threats and Opportunities*. Washington DC: The RAND Corporation, 2019. Last accessed 22 March 2021. https://www.rand.org/content/dam/rand/pubs/perspectives/PE300/PE332/RAND_PE332. pdf

Chiu, Ya-Wen., Yi-Hao Weng, Yi-Yuan Su, Ching-Yi Huang, Ya-Chen Chang, and Ken N Kuo. "The nature of international health security." *Asia Pacific Journal of Clinical Nutrition 18*(4) (2009): 679-683. Last accessed 22 March 2021. http://apjcn.nhri.org.tw/server/APJCN/18/4/679.pdf

Harapko, Sean. "How COVID-19 impacted supply chains and what comes next." *E&Y Report*, 18 February 2021, 1-10. Last accessed 05 April 2021. https://www.ey.com/en_us/supply-chain/how-covid-19-impacted-supply-chains-and-what-comes-next

Jones, Lora., Daniele Palumbo, & David Brown. "Coronavirus: How the pandemic has changed the world economy." *BBC News*, 24 January 2021, 1-9. Last accessed 05 April 2021. https://www.bbc.com/news/business-51706225

McInnes, Colin. "Health." In *Security Studies*, 541-555. Routledge, 2018.

Nichols, Michelle, & Steve Holland. "U.S. – China tensions take center stage at U.N. as Trump accuses Beijing of unleashing 'plague'". *Reuters*, 22 September 2021, 1-6. Last accessed 07 April 2021. https://www.reuters.com/article/un-assembly/u-s-china-tensions-take-center-stage-at-u-n-as-trump-accuses-beijing-of-unleashing-plague-idUSKCN26D2KU

Organization for Economic Co-operation and Development. "The territorial impact of COVID-19: Managing the crisis across all level of government." *Organization for Economic Co-operation and Development Report*, 10 November 2020, 1-94. Last accessed on 07 April 2021. http://www.oecd.org/coronavirus/policy-responses/the-territorial-impact-of-covid-19-managing-the-crisis-across-levels-of-government-d3e314e1/

Patrick, Steward. "When the System Fails: COVID-19 and the Costs of Global Dysfunction".

Foreign Affairs, August 2020, 40-50. Last accessed 25 March 2020. https://www.foreignaffairs.com/articles/world/2020-06-09/when-system-fails

Pearson, Samantha, & Luciana Magalhaes. "Brazil, hit by Covid-19 variant, surpasses U.S. in daily cases and deaths." *The Wall Street Journal*, 10 March 2021, 1-6. Last accessed on 06 April 2021. https://www.wsj.com/articles/brazil-hit-by-covid-19-variant-surpasses-u-s-in-daily-cases-and-deaths-11615385902

Rockenschaub, Gerald., Jukka Pukkila, and Maria Critina Profili. World Health Organization – Europe. *Towards health security: a discussion paper on recent health crises in the WHO European Region*. Copenhagen, DK: World Health Organization, 2007. Last accessed 25 March 2021. https://www.euro.who.int/en/publications/abstracts/towards-health-security.-a-discussion-paper-on-recent-health-crises-in-the-who-european-region

Stevis-Gridneff, Matina. E.U. will curb covid vaccine exports for 6 Weeks. T*he New York Times*, 23 March 2021 (Updated 28 March 2021), 1-2. Last accessed 05 April 2021. https://www.nytimes.com/2021/03/23/world/europe/eu-curbs-vaccine-exports.html

Stoeva, Preslava. "Dimensions of Health Security – A Conceptual Analysis." *Global Challenges 4*, 2020, 1-12. Last accessed 25 March 2021. https://doi.org/10.1002/gch2.201700003

United States. Centers for Disease Control and Prevention. *About Global Health Security*. Atlanta, GA: Centers for Disease Control and Prevention, 2021. Last accessed 22 March 2021. https://www.cdc.gov/globalhealth/healthprotection/ghs/about.html