U.S. Homeland Defense Strategic Public Health:

An Underutilized but Desperately Needed Concept

Pandemics have been an integral part of the history of civilizations and the ongoing process of globalization. The advancement of transportation, commerce, and technological development has dramatically fueled interdependence between nation-states. As the world becomes more interdependent, an awareness of how a pandemic can destroy a nation's progress has been seen in the COVID-19 pandemic of the past three years. For example, COVID-19 has ravaged Latin America, "killing 1.3 million people, fueling recession, and unleashing widespread political upheaval."[1] In many countries, protests over inequality, slow growth, and corruption predated the pandemic. Still, during the outbreak, "demonstrations have intensified as people have taken to the streets to demand economic assistance and vaccines."[2] Further, the global COVID-19 pandemic proved that the United States' domestic response was subpar compared to other nations' reactions within their borders, thus undermining the U.S. leadership or a model for other countries to emulate.[3] This article discusses an underutilized but much-needed concept of homeland defense strategic public health within the national security community. The paper is divided into three parts. Part I provides general introduction to the topic. Part II discusses why strategic health diplomacy is more critical than ever in the twenty-first century, yet is a concept underutilized by the national security community. Part III, discusses the political, social, and economic implications of COVID-19. Part IV provides some recommendations that the United States must consider if it is to remain a relevant superpower in the future and not be caught unprepared for another devasting pandemic.

The novel SARS-CoV-2, also known as COVID-19, illustrated that globalization and interdependence among nations today did not exclude any countries from its impact. The COVID-19 pandemic also showed that the pandemic was more than simply a public health crisis. It was also an economic crisis, a social crisis, a crisis of inequality, and a political crisis. Countries that adhered to the earlier guidelines set up by the World Health Organization (WHO) for dealing with the pandemic, including, but not limited to, enforcement of quarantine, social isolation, testing, and vaccination, were better at tackling the pandemic and its after-effects. Most importantly, countries with strong leadership and reliable governments—governments with legitimacy and credibility- were in a much better position to address the pandemic. Countries with coordinated responses to the COVID-19 pandemic have reaped the benefits—Chile and Canada have successfully vaccinated over 90 percent of their population.[4] However, nations with haphazard reactions, such as the United States and Russia, are proving to have higher numbers of unvaccinated citizens. While credibility and legitimacy were fundamental to tackling the pandemic, missing in many countries was what is referred to in this paper, a homeland defense strategic health diplomacy to address a global pandemic in a collective whole-of-government approach. Given that COVID-19 was not the first (nor will be the last) pandemic to wreak havoc on nations around the globe, the United States must be prepared for the next pandemic. It is not a matter of whether it will happen but when—and the answer is sooner than expected.

Why is Strategic Health Diplomacy More Important than Ever Today?

If the COVID-19 global pandemic has taught any lesson, it is that governments ignore investing in public health at their peril or believed benefit to their economy or international reputation. However, pandemics devastate a nation's overall economic, social, and political

operational environment. Historians have not forgotten this fact. Therefore, today, more than ever, a nation-state should develop strategic health diplomacy to detect, defend, defeat, and protect its citizens against deadly viruses and antimicrobial resistance diseases. Recent outbreaks of potential devasting diseases such as the SARS outbreak in 2003, Monkeypox, the ever-growing threat of antimicrobial resistance (AMR), the devastation caused by Zika in Brazil, Ebola in Nigeria, Chikungunya Virus in Brazil, and the deadly pandemic of the 1980s HIV/AIDS, which former U.N. General-Secretary Kofi Annan once referred to as the "real weapon of mass destruction." Brazil's first case of Zika virus infection was first reported in May 2015 in the Northeast part of Brazil. Brazil's Northeast region is the poorest region of the Brazilian Federation of States and most dependent on the federal government for public health assistance. The outbreak of this disease in Brazil has led to a generation of orphans born with microcephaly and other congenital malformations of the central nervous system early in the Zika epidemic.[5] The Ebola virus disease outbreak in Nigeria in 2014 was even more devasting than any other pandemic. The first known case of Ebola in Nigeria was in a traveler exposed in Liberia. According to the Centers for Disease Control and Prevention (CDC) Morbidity and Mortality Weekly Report (MMWR):

On July 17, 2014, while under observation in a Monrovia, Liberia, hospital for Ebola, the patient developed a fever and, while symptomatic, left the hospital against medical advice. Despite advice against travel, on July 20, he flew by commercial airline from Monrovia via Accra, Ghana, to Lomé, Togo, then changed aircraft and flew to Lagos. On arrival on the afternoon of July 20, he was acutely ill and immediately transported to a private hospital, where he was noted to have fever, vomiting, and diarrhea. During hospital admission, the patient was queried about Ebola and said he had no known exposure; he was initially treated

for presumed malaria. Nigerian doctors, realizing that the patient did not respond well to the initial treatment for malaria, shifted gears and began treating the patient for Ebola. The Nigerian public health system also activated the Emergency Operations Center (EOC) and the Incident Management System (IMS), resulting in a "rapid, effective, and coordinated outbreak response."[6]

Chikungunya is a life-threatening and disabling infectious disease caused by an Alphavirus transmitted by Aedes mosquitoes. This disease has been prevalent in Brazil's Northeast. The first reported outbreak of Chikungunya was in 2013. According to Nunes et al., "the outbreak has since spread to 38 regions in the Americas. By September 2014, the first autochthonous CHIKV infections were confirmed in Oiapoque, North Brazil, and Feira de Santana, Northeast Brazil."[7]

Antimicrobial resistance is an equal concern on the global scale as any other disease. Illnesses such as tuberculosis, HIV, and malaria are treated with antibiotics widely used and distributed internationally. However, overuse and misuse of antibiotics make these diseases less responsive and more prone to mutation, leading to higher mortality.[8] While the World Health Organization has published a 5-objective Global Action Plan to combat AMR, each nation must prepare accordingly.[9]

Respiratory illnesses, such as the SARS outbreak in 2003 and COVID-19, are also devastating illnesses on a global scale due to the interconnectedness of nations through rapid air travel. According to theoretical physicist Dirk Brockmann, "Our transportation network… shapes the pandemic more than our physical geography."[10] In 2013, Brockmann studied the distributions of a modern pandemic of influenza worldwide. Without air travel, he found the pattern would be "chaotic and formless." However, with air travel, the distribution is a "series

of waves, radiating outward one by one." While the wet markets of China served as the ideal conditions for initiating a flu-like disease such as COVID-19, the ability to spread to other continents quickly was the launch pad for a global pandemic.

The destructive impact of disease on nation-states' preparedness and readiness has been known for centuries. In his magnum opus, The Peloponnesian War, the great Greek historian Thucydides reports how the plague twice devasted and destabilized the Athenians' forces and society during the second and fifth years of the conflict.[11] As Thucydides says, during the first year of the plague, which lasted two years:

> People in good health were suddenly attacked by violent heat in the head, redness and inflammation in the eyes, and the inward parts, such as the throat or tongue, becoming bloody and emitting an unnatural and fetid breath. These symptoms were followed by sneezing and hoarseness, after which the pain soon reached the chest and produced a hard cough.[12]

During the fifth year of the Peloponnesian War, the plague returned to Athens. The second plague returned, lasting less than a year, but its effects were just as devasting to the Athenians' forces and society. Thucydides reports, "No less than four thousand four hundred hoplites in the ranks died of it [the plague] and three hundred cavalry, besides a number of the multitude that was never ascertained."[13] Recently, U.S. government personnel assigned to embassies in Cuba, Russia, China, India, Austria, Germany, Switzerland, and the U.S. complained of debilitating headaches, vertigo, and ringing ears. After an extensive interdisciplinary examination by physicians, psychiatrists, and psychologists, the conditions became known as Anomalous Health Incidents (AHI) or Havana Syndrome[14] due to where the original incidents occurred. While the number of individuals impacted by Havana syndrome is small compared to the general population, there is no consensus on the precise cause and methods to prevent or treat Havana syndrome.[15] AHI nevertheless shows how diseases are

becoming a major national security issue and calls for a broader conceptualization of what is defined as national security concerns moving forward into the twenty-first century.

Nation-states can take a proactive approach by establishing strategic health diplomacy to mitigate potential disease outbreaks and protect their citizens' health while protecting their sovereignty. So, what is strategic health diplomacy? Strategic health diplomacy is an underutilized concept familiar to many medical professionals and military leaders. However, as "globalization has pushed health to the forefront of international diplomatic efforts, global health diplomacy has emerged as a means of neutralizing, managing, and correcting health threats."[16]

Kickbusch, Silberschmidt, and Buss argue that strategic health diplomacy aims "to capture these multi-level and multi-actor negotiation processes that shape and manage the global policy environment for health."[17] This article utilizes the Bipartisan Policy Center's definition of strategic health diplomacy. The Bipartisan Policy Center is a non-profit organization founded in 2007 by former Senate Majority Leaders Howard Baker, Tom Daschle, Bob Dole, and George Mitchell. According to the Bipartisan Policy Center, strategic health diplomacy means that "by addressing global health, America advances its national strategic interests." Further stressing the utility of strategic health diplomacy as an instrument of state power, the Bipartisan Policy Center emphasizes that "global health interventions should be a critical element of U.S. national security policy, giving U.S. policymakers a means to improve the lives of people around the globe, and thereby build stronger, more stable, more prosperous, and more capable partners."[18]

As an instrument of national power, strategic health diplomacy is not an imperialist or hegemonic tool at the hands of a more powerful nation-state. Instead, strategic health

diplomacy projects a nation's soft power within the global international system, given the complexities of health issues and health disparities facing many countries today. While soft power has been widely applied in political science and social sciences literature, what it does mean remains a contested concept.[19] However, Joseph S. Nye has defined soft power as the ability to get "others to want the outcomes that you want."[20] In other words, soft power is the ability to achieve one's objectives through the power of persuasion rather than conflict or coercion. Soft power is a tool of national power since other nation-states would emulate or follow us. By doing so, everyone can collectively benefit from collaboration and cooperation.

The United States has been using soft power to combat deadly diseases worldwide. For example, "the number of military humanitarian and civic assistance projects, which can include health capacity building and aid, has grown from about 155 projects in thirty-five countries in fiscal year (FY) 1997 to about 480 projects in forty-six countries in FY2007."[21] Furthermore, as reported by the Centers for Diseases Control (CDC), in 2002, the CDC "assigned 224 U.S. personnel to fifty-four countries around the world for fixed-term appointments—above twice the 2004 levels—and employed about 1,200 local staff to support global health programs.[22] The utility of strategic public health as a force multiplier and soft power in the arsenal of a country's national instruments of power has not gone unnoticed by our near-peer adversaries such as China. For example, China's leader Xi Jinping has "pledged $500 million to support development objectives in Central Asian countries, including improvements in agriculture and *public health*."[23] Furthermore, as Maria Repnikova points out, "The Chinese understanding of soft power is connected to ideas of cultural confidence and security that President Xi Jinping has promoted, terms that signify social cohesion around and pride in Chinese culture, values, and history."[24]

Detection, prevention, and mitigation to prevent the spread of deadly diseases or viruses is an essential responsibility of the U.S. Government in protecting the homeland. Therefore, health is a national security imperative.[25] According to the Department of Defense (DoD) 2005 Strategy for Homeland Defense and Civil Support: "Homeland defense protects US sovereignty, territory, domestic population, and critical defense infrastructure against external threats and aggression or other threats as directed by the President."[26] Under the responsibility of protecting its domestic population, the DoD could request the assistance of another federal agency as public health concerns have become a national security issue. Andrew T. Price-Smith, in his book *The Health of Nations: Infectious Disease, Environmental Change, and Their Effects on National Security and Development,* argues, "Infectious disease results in far greater population mortality than typical results from war, the resurgence of older miasmas and the emergence of novel and lethal pathogens constitutes a genuine threat to the security of the population of the modern state."[27] Former Director-General of the World Health Organization, Gro Harlem Brundtland, has clearly stated the interconnection and interdependence between national security and the public. Brundtland noted that "there are no health sanctuaries. There are no impregnable walls between the healthy, well-fed, well-off world and another world that is sick, malnourished, and impoverished. Globalization has shrunk distances, broken down old barriers, and linked people. But unfortunately, it has also made problems halfway around the world everyone's problem…."[28]

The traditional view of national security from a strict realist paradigm where the nation-state is the primary unit of analysis, and its *raison d'état* is the protection of its sovereignty, is in much need of a revision given the complexities of the problems nation-states will face in the twenty-first century. As the political scientist Richard Ullman argued in the pages

*International Security, "*defining national security merely in military terms conveys a profoundly false image of reality [and] causes states to concentrate on military threats and to ignore other and perhaps more harmful dangers."[29]

The Political, Social, and Economic Implications of COVID-19

The long-term implications of COVID-19, as a public health issue and a national security one, are becoming apparent to political leaders worldwide. As Steven Mets pointed out, "Now the COVID-19 pandemic will add public health security and national resiliency to an already expensive concept, fueling extensive potential change in how Americans think about and organize for security."[30] This broad reconceptualization of national security, considering the COVID-19 pandemic, clearly illustrates that global health encompasses more than just the basic needs of society. It also must address building state capacity to produce stable countries, which helps mitigate chaos, war, disruption, and criminality. This is no small challenge for developing countries facing tremendous stress on their governmental and institutional capacities. As Cruz and Fonseca argue, "Any truly effective government response must tackle the devastating economic consequences of a health crisis, the erosion in state capacity, and the collapse of institutional legitimacy."[31]

During the pandemic, when governments worldwide lost their capacity to address COVID-19, criminal organizations filled the void by establishing their game rules when dealing with curfew within the poor *barrios* or neighbors within their community. With millions of people unemployed, schools closed, and the inability to find jobs within the larger informal economy, criminal organizations became a substitute for traditional governmental functions. As Crus and Fonseca note, "the operational capacity, adaptability, expansive networks, and deep pockets of TOCs [transnational criminal organizations] have provided

them with opportunities to exploit the voids left by overwhelmed institutions and stressed market chains across the region."[32]

Many parts of the world are witnessing the rise of "criminogenic asymmetries," "inequalities and gaps between the legitimate and illegitimate provision of scarce public goods leading to group grievances that feed violent movements."[33] The healthcare response is in the hands of each state, totaling twenty-six, as opposed to a single national response, which has left the country vulnerable to these "criminogenic asymmetries." Gangs in various *favelas* in Rio de Janeiro have imposed curfews and social distancing on residents, and they control local shops while also handling out sanitation items, medical supplies, and food. In response to the COVID-19 pandemic and fears of the spread of the coronavirus through Rio de Janeiro's densely populated *favelas*, local gangs (*gangues*) and militias (*milícias*) are imposing social controls in the form of curfews to limit the spread of the disease. In this case, Rio's Comando Vermelho gangs act as social bandits, as described by Hobsbawm and later by Sullivan in the context of criminal insurgents.[34] The gangs seek relative power and legitimacy to secure enterprises, community support, and freedom of movement. The pandemic has also forced gangs to pursue a truce. For example, gangs in the Cape Town region have enacted a ceasefire in the wake of the COVID-19 pandemic. South Africa is amid a lockdown to contain the coronavirus outbreak, leading to food shortages. The truce involves gangs throughout the Cape Flats, including Manenberg.[35] Other countries have not been immune from their citizens turning to transnational criminal organizations for assistance while the government has failed to provide the necessities for its population.[36]

Transnational criminal organizations strive for ungoverned areas or "gray zone" areas where governments are weak and unable to respond to public demands. As Robert N. Nang

and Keith Martin eloquently argue, “Weak governments in Central America created a fertile ground for organized criminal gangs to terrorize the populace and profiteer off the illegal drug trade that destroys lives and drives people to flee northward into the United States desperately.”[37] The United States is also home to a prison system with more people per capita than any other nation, with the incarcerated population living in densely populated conditions. This led to significant outbreaks of COVID-19 within the American prison system. The New York Times reported that “thirty of the top fifty outbreaks recorded as of May 17, 2020, were in prisons, including the four biggest outbreaks in any type of location in the United States.”[38] The inactions of governments when addressing the COVID-19 pandemic have created mass migration and widespread environmental degradation worldwide, especially within the Southern Hemisphere. Again, Nang and Martin state, “Environmental degradation is also increasing the spread of infectious diseases and facilitating zoonoses to jump the species barrier and infect humans.”[39] Poverty breeds disease just like disease breeds poverty, according to Gro Harlem Brundtland. “One of the key signs of a failing country,’ asserts Brundtland, “is its growing inability to provide even basic services to its population. A descent into poverty and lawlessness leads to rapid declines in health indicators such as infant mortality and life expectancy.”[40]

The COVID-19 pandemic has also exacerbated another critical security issue in the twenty-first century: migration or internally displaced people while also placing tremendous stress on governments worldwide to “leave no one behind.”[41] Mass migration during the pandemic has also unleashed a new wave of nationalism, isolationism, and xenophobia in Latin America.[42] For example, “Just three days after crossing the border into Colombia to escape food shortages, joblessness and authoritarian rule in Venezuela, Alexander González

says he's shocked by the xenophobia of his adopted homeland."[43] The situation for migrants is no better in neighboring Brazil, which has received since "2015, half a million Venezuelans have crossed the border into Brazil, i.e., approx. 10% of the estimated total of displaced Venezuelans worldwide, either to settle (over 250 thousand) or in transit to other countries."[44] In times of crisis, demagogue leaders will easily find a scapegoat for its inability to govern and malfeasance on immigrants who are considered disposable and the "other." As Francis Fukuyama argues, "the desperate will see to migrate, demagogic leaders will exploit the situation to seize power, corrupt politicians will take the opportunity to steal what they can, and many governments will clamp down or collapse."[45] The United States is seeing the effects of xenophobia within its borders concerning Asian Americans. While the WHO has been trying to reduce discrimination by no longer naming pathogens after where they originate, some have called COVID-19 the "Wuhan flu," including government members. This makes way for scapegoating and encourages racism but also exploits an "already fraught relationship between China and the United States."[46]

Another primary concern regarding COVID-19 and its implications relates to the one billion people who live in the slums of the world's megacities. Megacities are major urban centers within the developing world with a population of over 10 million people, including Dhaka, Bangladesh, Rio de Janeiro, Brazil, and Nairobi, Kenya, to name a few. While megacities are engines of economic development in most developing countries, they are also high-density populated areas, thus creating the proper conditions for the spread of the virus and disease among its population, especially among the most vulnerable that do not have the luxury of quarantine in separate quarters during the high of the pandemic. As John Kemp states, "High density ensured that once the virus had entered a megacity, it would spread

quickly and cause high death rates, forcing urban lockdowns to bring transmission back under control."[47]

As demonstrated, COVID-19 is more than a public health crisis. It is also a crisis of inequality, accessibility to public health, and an economic crisis. For example, in Brazil, the epicenter of COVID-19 in Latin America, at least 1.5 million of Rio de Janeiro's 6.7 million residents live in the city's 1,000 "*favelas*," or slum settlements.[48] In disorganized urban centers, the world's most vulnerable populations are easy prey for infections, diseases, and high morbidity and mortality. Moreover, the Congressional Research Service states, "overcrowded living spaces and insufficient hygiene and sanitation facilities make conditions conducive to contagion, while poor health services and infrastructure mean there is limited disease surveillance and an insufficient capacity to manage an outbreak."[49] Wendy Orent, disease anthropologist, calls these settlements "disease factories" due to their high transmissibility, dense population, and a typically lower standard of cleanliness.[50]

Recommendations

In the Annual Threat Assessment of the U.S. Intelligence Community published by the Office of the Director of National Intelligence in February 2022, health security received particular attention, especially COVID-19. The Assessment argued that "the lingering effects of the COVID-19 pandemic will continue to strain governments and societies, fueling the humanitarian and economic crisis, political unrest, and geopolitical competition as countries, such as China and Russia, seek advantage through such avenues as vaccine diplomacy."[51] On the other hand, in the U.S. Department of Defense 2022 National Defense Strategy for the United States of America, public health security is barely mentioned. Instead, the document

focuses on our near-peer competitors, such as China, Russia, North Korea, and Iran, and integrated deterrence.[52]

As argued in this paper, public health is the new battlefield in the fight to protect the homeland. Governments can ignore disease outbreaks to their detriment. In the twenty-first century's globalized, interconnected, and complex world, the United States is not a haven. The enemies will not wait for the United States to take the battle to them; they will bring it to our homeland. The luxury that the United States enjoyed since World War II by setting up the global international system, the Pacific and Atlantic oceans as barriers against our enemies, and friendly neighbors to our north (Canada) and the south (Mexico) is no longer a guarantee as shown with the attacks against the United States on September 11, 2001. National borders are increasingly becoming more porous. The United States must do everything within its powers and use a whole-of-government approach to address the scourge of public health diseases. The late Secretary of State Colin Powell warned that disease posed "a clear and present danger to the world."[53]

If the novel Coronavirus has taught anything, it is that complex, interdependent world nation-states cannot go alone in solving many of the global challenges of the future. In the age of "weaponization of everything," addressing public health will require cooperation, coordination, collaboration, and a global whole-of-government approach. As physician and sociologist Nicolas Christakis states, the "transformation of a biological entity into a social symbol greatly complicates efforts to control epidemics."[54] The United States is well positioned as a world superpower to take on those challenges. Accordingly, this paper offers the following recommendations moving forward.

First, the United States is well positioned as a world superpower to invest in global public health strategy and become a trusted partner for other countries. As global public health becomes a national security priority, the United States must "accept the burden of global leadership."[55] Global public health is the new indispensable instrument of national power. Investment in global public health gives the United States will provide the United States a competitive advantage vis-à-vis its near-peer competitors, especially China's Belt and Road Initiative, which in 2019 encompassed projects in 115 countries with an estimated cost of over $1 trillion.[56] COVID-19 may have intensified the U.S.-Chinese rivalry with vaccine diplomacy and mask diplomacy. As the former U.S. Secretary of Defense, Robert M. Gates, also highlights, "the United States is well practiced in the art of economic punishment, but it needs to get a lot smarter about using economic tools to win over other countries."[57]

Second, a global public health strategy is a force multiplier and a diplomatic tool of soft power. As an essential tool of a nation's soft power arsenal, global public health strategy "can be a mechanism to bring nations in tension together through their scientists, health care workers, and other professionals."[58] Furthermore, as globalization pushes global public health to the forefront of the post-Cold War international system, global public health "has emerged as a means of neutralizing, managing, and correcting health threats."[59]

Third, now that the U.S. Department of Homeland Security has established the Office of Health Security,[60] a new office that will serve as the principal medical, workforce health and safety, and public health authority for DHS, it should connect with other health ministers around the world to establish a protocol on how to deal with a disease outbreak with catastrophic proportions. The international community's failure to swiftly respond to the COVID-19 pandemic showed that the global system is still a Hobbesian state of nature, where

nation-states will refuse to cooperate and advance their prerogatives. However, as the former Joint Chiefs of Staff, Chairman Mike Mullen, states, "the pandemic will lend additional support to the age-old case that large investments in foreign assistance—which would still be relatively small compared with U.S. military spending—can yield outsize returns."[61]

Conclusions

The deadly diseases such as the SARS outbreak, Monkeypox, the ever-growing threat of antimicrobial resistance (AMR), Zika, Ebola, Chikungunya Virus, and HIV/AIDS illustrate the deadly consequences of a disease outbreak on the social fabric of societies worldwide. In addition, the deadly virus of novel SARS CoV-2 has shown the world that the "pandemic's spread in less developed countries could have broad implications for the U.S. foreign assistance policy and priorities."[62] What happens in nations afar directly impacts the homeland and will require the leadership of the United States.

A strategic public health policy in the future will be a crucial tool in the U.S.'s arsenal of foreign policy. Kimberly Sandberg, Kevin Pichard, Jr., Jay Zwirblis, and Speight H. Caroon point out that strategic global health is "a moral imperative that carries the obvious benefit of building trust and amity can be leveraged to develop mutually beneficial partnerships."[63] One excellent example of mutually beneficial partnerships during the COVID-19 pandemic was between the United States and South Korea. Under the auspices of the Mutual Defense Treaty Between the United States and the Republic of Korea, signed in 1953 after the Korean War ceasefire, the United States supported South Korea in its fight against the COVID-19 pandemic in *Operation Kill the Virus*.[64] In addition, the United States, through its Africa Command Center (AFRICOM), "provided COVID-19 assistance to 43 countries, including the delivery of nearly $500 million in medical supplies."[65]

Finally, the U.S. SOUTHCOM has also exercised U.S. soft power in the Americas. As reported by Michael T. Plehn, "The Navy Medical Research Unit–Six in Lima, Perú, loaned us six of its BioFire test systems so that we could test any symptomatic personnel and determine their COVID-19 status. In addition, we sent test equipment to bases in Honduras, El Salvador, and Guantánamo Bay, Cuba, where we had the largest groups of U.S. military personnel."[66] In conclusion, strategic public health is fundamental to the United States' homeland defense and security.

ENDNOTES

[1] The Harvard Gazette, National & World Affairs, "From bad to worse in Latin America," available at How the pandemic has affected Latin America – Harvard Gazette
[2] Ibid.
[3] "COVID-19: Potential Implications for International Security Environment—Overview of Issues and Further Reading for Congress," Updated September 28, 2022, available at R46336 (congress.gov)
[4] https://ourworldindata.org/covid-vaccinations, "Share of people who have received at least one dose of COVID-19 Vaccine, Accessed March 1, 2023
[5] Lowe R, Barcellos C, Brasil P, Cruz OG, Honório NA, Kuper H, Carvalho MS. The Zika Virus Epidemic in Brazil: From Discovery to Future Implications. Int J Environ Res Public Health. 2018 Jan 9;15(1):96. doi: 10.3390/ijerph15010096. PMID: 29315224; PMCID: PMC5800195.
[6] Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report (MMWR) available at Ebola Virus Disease Outbreak — Nigeria, July–September 2014 (cdc.gov) Accessed August 21, 2023
[7]. Nunes, Marcio Roberto Teixeira et al. "Emergence and potential for spread of Chikungunya virus in Brazil." *BMC medicine* vol. 13 102. 30 Apr. 2015, doi:10.1186/s12916-015-0348-x
[8] https://www.paho.org/en/topics/antimicrobial-resistance#:~:text=Antimicrobial%20resistance%20happens%20when%20microorganisms,%2C%20antimalarials%2C%20and%20anthelmintics). Accessed February 21, 2023.
[9] https://www.who.int/publications/i/item/9789241509763, Accessed February 21, 2023.
[10] *Pandemic: Tracking Contagions, From Cholera to Coronaviruses and Beyond* by Sonia Shah (2016). Pg 38-39.
[11] *The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian War. (1996).* Edited by Robert B. Strassler. Free Press: New York. See also Andrew T. Price-Smith. 2002. *The Health of Nations: Infectious Disease, Environmental Change, and Their Effects on National Security and Development.* The MIT Press, Cambridge, Massachusetts.
[12] Thucydides, pg. 119. The Peloponnesian War occurred between 431-404 BC. It was a conflict fought between the Athenians and Sparta, and its principal cause was the Spartan's fear of Athens' growth in power and imperialism.

[13] Thucydides, pg. 202
[14] "New Insights on Havana Syndrome," Chris Gilbert, M.D., Ph.D., Head of the Mind to Heal the Body, *Psychology Today*, Posted February 18, 2022, available at New Insights on Havana Syndrome | Psychology Today
[15] Commander Jerry L. Mothershead, USN (Ret.), MD, is an Emergency Medicine Physician at Applied Research Associates. Colonel Zygmunt F. Dembek, USAR (Ret.), Ph.D., is a Senior Scientist at the Battelle Memorial Institute, Todd A. Hann is Chief of the Technical Reachback Division at the Defense Threat Reduction Agency (DTRA), Colonel Christopher G. Owens, USA (Ret.), is Program Manager at Applied Research Associates, Dr. Aiguo Wu, MD, Ph.D., is Medical Team Lead for DTRA Technical Reachback. "Havana Syndrome: Directed Attack or Cricket Noise?" Joint Force Quarterly (JFQ), Issue 1008, 1st Quarter 2023: 16-20. Available at Havana Syndrome: Directed Attack or Cricket Noise? > National Defense University Press > Article (ndu.edu). Accessed February 21, 2023
[16] "Global Health Diplomacy Amid the COVID-19 Pandemic: A Strategic Opportunity for Improving Health, Peace, and Well-Being in the CARICOM Region—A Systematic Review," Vijay Kumar Chattu and Georgiana Chami, *Social Sciences* 2020, 9, 88; doi:10.3390/socsci9050088
[17] Kickbusch, Ilona, Silberschmidt, Gaudenz & Buss, Paulo. (2007). Global health diplomacy: the need for new perspectives, strategic approaches and skills in global health. Bulletin of the World Health Organization, 85 (3), 230 - 232. World Health Organization. http://dx.doi.org/10.2471/BLT.06.039222
[18] "The Case for Strategic Health Diplomacy" A Study of PEPFAR," Bipartisan Policy Center (November 2015). Available at The Case for Strategic Health Diplomacy: A Study of PEPFAR | Bipartisan Policy Center
[19] Joseph S. Nye (2021) Soft power: the evolution of a concept, Journal of Political Power, 14:1, 196-208, DOI: 10.1080/2158379X.2021.1879572. See also, Repnikova, Maria. "The Balance of Soft Power." *Foreign Affairs*, 21 June 2022, Available at https://www.foreignaffairs.com/china/soft-power-balance-america-china. Accessed 18 February 2023.
[20] Joseph S. Nye. 2004. *Soft Power: The Means to Success in World Politics.* New York: Public Affairs. Pg. 5.
[21] KATZ, R., KORNBLET, S., ARNOLD, G., LIEF, E., & FISCHER, J. E. (2011). Defining Health Diplomacy: Changing Demands in the Era of Globalization. *The Milbank Quarterly*, *89*(3), 503–523. http://www.jstor.org/stable/23036208, pg. 511
[22] Ibid., 511
[23] Repnikova, Maria. "The Balance of Soft Power." *Foreign Affairs*, 21 June 2022, Available at https://www.foreignaffairs.com/china/soft-power-balance-america-china. Accessed 18 February 2023.
[24] Ibid.,
[25] Nang, R. N., and Keith Martin. "Global Health Diplomacy: A New Strategic Defense Pillar." *Military medicine* 182 1 (2017): 1456-1460, pg. 1456
[26] Department of Defense (June 2005). Strategy for Homeland Defense and Civil Support. Available at Microsoft Word - Final Strategy for Homeland Defense and Civil Support 06-27-05_FINAL FOR PRINT.doc (dtic.mil). Accessed February 18, 2023

[27] Andrew T. Price-Smith (2002). *The Health of Nations: Infectious Disease, Environmental Change, and Their Effects on National Security and Development.* Cambridge, Massachusetts: The MIT Press. Pg. 118.
[28] Gro Harlem Brundtland, "The Globalization of Health," *Seton Hall Journal of Diplomacy and International Relations Vol. IV, No. 2 (Summer/Fall 2003): 7-12.*
[29] Ullman, R. H. (1983). Redefining Security. *International Security, 8*(1), 129–153. https://doi.org/10.2307/2538489, pg. 129
[30] Steven Metz, "Special Commentary: Long-Term Implications of the COVID-19 Pandemic for the US Army," Strategic Studies Institute available at COVID-19-Army-Implications_Metz_v1.4_post.pdf (armywarcollege.edu). Accessed February 19, 2023
[31] Jose Miguel Cruz and Brian Fonseca, "How Transnational Crime Is Mutating in the Age of COVID-19 in Latin America," available at How Transnational Crime Is Mutating in the Age of COVID-19 in Latin America (americasquarterly.org). Accessed February 19, 2023
[32] Jose Miguel Cruz and Brian Fonseca, "How Transnational Crime Is Mutating in the Age of COVID-19 in Latin America," available at How Transnational Crime Is Mutating in the Age of COVID-19 in Latin America (americasquarterly.org)
[33] Nikos Passas, webinar "Corruption, Global Trade, and COVID-19," available at Corruption, Global Trade, & COVID-19 - Center for International Private Enterprise (cipe.org). Accessed February 19, 2023
[34] Eric Hobsbawm, *Bandits*. New York: The New Press, 2000, 1969 and John P. Sullivan, "Criminal Insurgency: Narco Cultura, Social Banditry, and Information Operations." *Small Wars Journal*, 3 December 2012, https://smallwarsjournal.com/jrnl/art/criminal-insurgency-narcocultura-social-banditry-and-information-operations.
[35] John P. Sullivan and Robert J. Bunker, "Third Generation Gangs Strategic Note No. 24: COVID-19, Gangs and Lockdown in Cape Town," available at Third Generation Gangs Strategic Note No. 24: COVID-19, Gangs and Lockdown in Cape Town | Small Wars Journal Accessed February 19, 2023
[36] Alexandra Phelan, John P. Sullivan and Robert J. Bunker, "Third Generation Gangs Strategic Note No. 26: COVID-19, Revolutionaries and BACRIM in Colombia," available at Third Generation Gangs Strategic Note No. 26: COVID-19, Revolutionaries and BACRIM in Colombia | Small Wars Journal; John P. Sullivan, Robert J. Bunker and Juan Ricardo Gómez Hecht, "Third Generation Gangs Strategic Note No. 23: El Salvadoran Gangs (Maras) Enforce Domestic Quarantine / Stay at Home Orders (Cuarentena domiciliar). Available at Third Generation Gangs Strategic Note No. 23: El Salvadoran Gangs (Maras) Enforce Domestic Quarantine / Stay at Home Orders (Cuarentena domiciliar) | Small Wars Journal Accessed February 19, 2023
[37] Nang, R. N. and Keith Martin. "Global Health Diplomacy: A New Strategic Defense Pillar." Military medicine 182 1 (2017): 1456-1460, pg. 1456
[38] *Apollo's Arrow: The Profound and Enduring Impact of Coronavirus on the Way We Live* by Nicholas A. Christaskis (2021), pg. 192
[39] Ibid.,
[40] Gro Harlem Brundtland, "The Globalization of Health," *Seton Hall Journal of Diplomacy and International Relations Vol. IV, No. 2 (Summer/Fall 2003): 7-12.*
[41] "Leaving no one behind," Available at Leaving no one behind | United Nations

[42] Steven Grattan, "Venezuelan migrants face rising xenophobia in Latin America," Available at The New Humanitarian | Venezuelan migrants face rising xenophobia in Latin America Accessed February 19, 2023
[43] John Otis, "Large Venezuelan Migration Sparks Xenophobic Backlash In Colombia," available at Large Venezuelan Migration Sparks Xenophobic Backlash In Colombia : NPR Accessed February 19, 2020
[44] Liliana Lyra Jubilut and Joao Carlos Jarochinski Silva, "COVID-19 at the Brazil-Venezuela borders: the good, the bad and the ugly," Available at COVID-19 at the Brazil-Venezuela borders: the good, the bad and the ugly | openDemocracy Accessed February 19, 2023
[45] Francis Fukuyama, "The Pandemic and Political Order: It Takes a State," *Foreign Affairs* July/August 2020. Available at http://www.foreignaffairs.com/articles/world/2020-06-09/pandemic-and-political-order Accessed February 19, 2023
[46] *Apollo's Arrow: The Profound and Enduring Impact of Coronavirus on the Way We Live* by Nicholas A. Christaskis (2021), pg. 317
[47] John Kemp, "Column: Megacities after coronavirus," Reuters available at Column: Megacities after coronavirus | Reuters. Accessed February 21, 2023
[48] Robert Muggah and Richar Florida, "A Billion people live in the slums of the worlds megacities and they're being missed by the coronavirus plans," Available at https://www.fastcompany.com/90505690/a-billion-people-live-in-the-slums-of-the-worlds-megacities-and-theyre-being-missed-by-coronavirus-plans Accessed February 19, 2023
[49] Congressional Research Service (CRS) "COVID-19 and Foreign Assistance: Issues for Congress," IN FOCUS April 6, 2020. Available at COVID-19 and Foreign Assistance: Issues for Congress Accessed February 21, 2023
[50] *Pandemic: Tracking Contagions, From Cholera to Coronaviruses and Beyond* by Sonia Shah (2016), pg. 81
[51] The Annual Threat Assessment of the U.S. Intelligence Community Office of the Director of National Intelligence February 2022. Available at 2022 Annual Threat Assessment of the U.S. Intelligence Community (dni.gov) Accessed February 21, 2023
[52] U.S. Department of Defense 2022 National Defense Strategy of the United States of America. Available at 2022 National Defense Strategy | Office of Local Defense Community Cooperation (oldcc.gov). Accessed February 21, 2023
[53] Address at United Nations Special Session on HIV/AIDS." U.S. Department of State Archive. June 25, 2001. Accessed February 21, 2023. Available at http://2001-2009.state.gov/secretary/former/powell/remarks/2001/3756
[54] *Apollo's Arrow: The Profound and Enduring Impact of Coronavirus on the Way We Live* by Nicholas A. Christaskis (2021), pg. 318
[55] Robert M. Gates, "The Overmilitarization of American Foreign Policy," Foreign Affairs July/August 2020. Available at Robert Gates: The United States Must Recover the Full Range of Its Power (foreignaffairs.com) Accessed February 21, 2023
[56] Ibid.,
[57] Ibid.,
[58] Nang, R. N. and Keith Martin. "Global Health Diplomacy: A New Strategic Defense Pillar." Military medicine 182 1 (2017): 1456-1460, pg. 1460
[59] "Global Health Diplomacy Amid the COVID-19 Pandemic: A Strategic Opportunity for Improving Health, Peace, and Well-Being in the CARICOM Region—A Systematic Review,"

Vijay Kumar Chattu and Georgiana Chami, *Social Sciences* 2020, 9, 88; doi:10.3390/socsci9050088

[60] "DHS Establishes New Office of Health Security." Available at DHS Establishes New Office of Health Security | Homeland Security Accessed February 21, 2023

[61] Michael H. Fuchs, "A Foreign Policy for the Post-Pandemic World: How to Prepare for the Nex Crisis," Foreign Affairs July 23, 2020. Available at A Foreign Policy for the Post-Pandemic World| Foreign Affairs. Accessed February 21, 2023

[62] Congressional Research Service (CRS) "COVID-19 and Foreign Assistance: Issues for Congress," IN FOCUS April 6, 2020. Available at COVID-19 and Foreign Assistance: Issues for Congress Accessed February 21, 2023

[63] Kimberly Sandberg, Kevin Pickard, Jr., Jay Zwirblis, and Speight H. Caroon, "Health Diplomacy: A Powerful Tool in Great Power Competition," Joint Force Quarterly 107, 4th Quarter, October 2022. Available at Health Diplomacy: A Powerful Tool in Great Power Competition > National Defense University Press > Article (ndu.edu) Accessed February 21, 2023

[64] Sharon Y. Kim et. al., "U.S. Forces Korea's Operation Kill the Virus: Combating COVID-19 Together and Sustaining Readiness," Joint Force Quarterly 106, 3rd Quarter 2022. Available at U.S. Forces Korea's Operation Kill the Virus: Combating COVID-19 Together and Sustaining Readiness > National Defense University Press > News Article View (ndu.edu) Accessed February 21, 2023

[65] General Stephen J. Townsend, USA, Commander, U.S. Africa Command, Statement Before the House Armed Services Committee, Africa: Securing U.S. Interests, Preserving Strategic Options, 117th Cong., 1st sess., April 20, 2021. Available at https://www.africom.mil/document/33691/usafricom-statement-for-record-hasc-20-apr-2021-gen-townsendpdf Accessed February 21, 2023.

[66] Michael T. Plehn, "U.S. SOUTHCOM Fights Through COVID-19," PRISM 9, No. 4 January 20, 2022. Available at U.S. SOUTHCOM Fights Through COVID-19 > National Defense University Press > News Article View (ndu.edu) Accessed February 21, 2023