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Infectious Disease as a Security Threat, With Particular Application to the Migration Context

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*Infectious Disease as a Security Threat, with Particular Application to the
Migration Context*

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Abstract

This paper analyzes the threat infectious diseases impose on global security, specifically in the migration context. Infectious diseases can threaten security through a variety of areas, and this paper aims to identify the global spread of infectious diseases through migration, international crises, humanitarian emergencies, HIV/AIDS, and emerging and re-emerging infectious diseases. This paper explores global health, security, and migration in an attempt to determine if combining these three areas can be meaningful. Generally, studies approach only two of the three areas to examine a topic, but this paper will assess and point out when combining all three fields is relevant. It also evaluates approaches of the World Health Organization, the International Organization for Migration, and specified individual actors to reduce infectious disease spread. Although all organizations have elaborate efforts, they may not all consider global health, security, and migration.

This paper continues to illustrate the need for Global Public Health Security through an analysis of three case studies: the recent Cholera outbreak in Haiti, the transmission of HIV/AIDS amongst seafarers, and the 2003 SARS epidemic. It also proposes actions to increase the perceived threat of infectious diseases on national and global security agendas and offers a positive vision for the future in terms of Global Public Health Security.

Introduction

In the wake of globalization and an increasing global population, the concept of security is evolving. It is no longer synonymous with military issues and defending areas from outside attackers. The understanding of security today has evolved to include protection of communities from internal threats, and the concept of security can no longer be understood purely in military terms. According to Kofi Annan, “peace means much more than the absence of war. Human security...must encompass economic development, social justice, environmental protection, democratization, disarmament, and respect for human rights and the rule of law.”¹

The evolving definition of security is a result of the rapid change of current times. Environments are continuously changing for humans, and infectious disease stands as the most important security threat because it affects and ends lives every day. It kills more than eleven million people a year and causes morbidity for countless others.² Infectious diseases cause 63 percent of all childhood deaths and 48 percent of premature deaths on a global scale.³

Infectious disease has become a hallmark of current times because of the rapidly changing environments for humans as well as microbes. There has been unprecedented population growth as well as rapid urbanization which governments and infrastructures have not been prepared for. This growth has led to an increase in slums without potable water or waste

¹“Definitions of Human Security,” Global Development Research Center, accessed November 8, 2011, <http://www.gdrc.org/sustdev/husec/Definitions.pdf>.

²“Infectious Diseases,” Disease Control Priorities Project, accessed November 2, 2011, <http://www.dcp2.org/file/6/DCPP-InfectiousDiseases.pdf>.

³“WHO Report on Global Surveillance of Epidemic-Prone Infectious Diseases,” WHO, accessed November 1, 2011, http://www.who.int/csr/resources/publications/surveillance/WHO_Report_Infectious_Diseases.pdf

management. Additionally, many of these migrants are from rural areas and have little immunity to diseases. Furthermore, globalization has increased the interconnectedness of poor and wealthy travelers, increasing the risk of infection spreading across the globe. These changes cultivate an environment ideal for the proliferation of infectious diseases.

Because of international travel and trade, diseases can spread across the world and all countries are vulnerable to a public health emergency. A health crisis in one country can easily affect economies and livelihoods in other countries since diseases have no borders. For example, a pandemic influenza represents one of the most dangerous threats to global health because it could be easily transmitted and poses an equal threat to all populations.⁴ Globalization has also increased countries' vulnerability and interdependence. According to WHO Director-General, Dr. Margaret Chan, "When the world is collectively at risk, defense becomes a shared responsibility of all nations."⁵ No country is protected from infectious diseases, and in order for states to protect their populations and their national interests, an effective global response is necessary.

While many countries have the capacities and capabilities to mitigate outbreaks of infectious disease within their own countries, a number of other countries do not have the financial or human resources to control such a pandemic. Therefore, it becomes extremely important for countries to work together and build capacities in less developed countries where resources are often minimal and infectious diseases are likely to spread.

With the pervasive spread of infectious diseases, health has become increasingly important on the security agenda, but it is not the primary security concern. According to Colum

⁴ Sara Davies, "Securitizing Infectious Disease," *International Affairs* 84 (2008): 1.

⁵ "High-level Debate Tackled Need for Improved International Health Security", WHO, accessed November 1, 2011, http://www.who.int/world-health-day/previous/2007/activities/global_event/en/index.html.

Murphy, President of the Geneva School of Diplomacy, infectious disease is third or fourth highest on the security agenda, but it should be higher.⁶

Infectious disease does not only impact the health of populations, but the economies of countries and the well-being of societies. When a society is plagued with an epidemic, its workforce drastically reduces and its economy suffers because health condition affects work status. Epidemics and pandemics also exhaust a great amount of resources, such as money and medical personnel. During an epidemic or natural disaster, medical and human resources may be stretched to the point of exhaustion.

For example, although it is nearly two years after Haiti's devastating earthquake, Haiti still has about half a million Internally Displaced Persons (IDPs) living in camps.⁷ Cholera is sweeping the region, but since it has been one year since the outbreak, Haiti is losing some of its funding and support due to the enormous consumption of resources. Cholera treatment structures are closing, which poses great difficulties for the long-term institutional response.⁸

If infectious diseases are higher on the security agenda, governments and international organizations may be more prepared to handle such outbreaks. Perhaps more money will be allotted for public health emergencies, and governments will be able to halt outbreaks sooner to avoid exhausting all resources.

This paper analyzes the threat infectious diseases impose on global security, specifically in the migration context. Infectious Diseases can threaten security through a variety of areas, and this paper aims to identify the global spread of infectious diseases through migration, international crises, humanitarian emergencies, HIV/AIDS, and emerging and re-emerging

⁶ Colum Murphy, Personal Interview. November 1, 2011.

⁷ WHO, "Cholera and Post-Earthquake Response in Haiti," *Health Cluster Bulletin*, November 7, 2011, accessed November 8, 2011.

⁸ Ibid.

infectious diseases. This paper explores global health, security, and migration in an attempt to determine if combining these three areas can be meaningful. Generally, studies approach only two of the three areas to examine a topic, but this paper will assess and point out when combining all three fields is relevant. It also evaluates approaches of the World Health Organization, the International Organization for Migration, and specified individual actors to reduce infectious disease spread. Although all organizations have elaborate efforts, they may not all consider global health, security, and migration.

This paper continues to illustrate the need for Global Public Health Security through an analysis of three case studies: the recent Cholera outbreak in Haiti, the transmission of HIV/AIDS amongst seafarers, and the 2003 SARS epidemic. It also proposes actions to increase the perceived threat of infectious diseases on national and global security agendas and offers a positive vision for the future in terms of Global Public Health Security. This study utilizes both primary and secondary sources to analyze the threat of infectious diseases in light of the health-security-migration nexus. Sources include information gathered from experts at a variety of international organizations, published United Nations documents and reports, and independent articles.

The Concept of Health Security

According to the World Health Report 2007, Global Public Health Security is defined 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.”⁹ Health security is an essential part of human security since infectious diseases, bio-terrorism, natural disasters, and humanitarian emergencies have the potential to threaten millions of people’s lives and damage several industries. In developing countries, the leading causes of mortality and morbidity come from infectious diseases.¹⁰ Globalization, in particular, has helped pandemic diseases spread. Additionally, globalization and the spread of infectious diseases can impact many aspects of society such as trade, tourism, agriculture, transportation, and retail. For example, the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 resulted in tremendous reduced consumer confidence, which was reflected in the significant drop in consumer confidence.¹¹ Consequently, the affected countries’ economies were drastically affected. Thus, there is growing evidence showing that investing in health can benefit economic growth.

According to Margaret Chan, Director General of the World Health Organization, “International public health security is both a collective aspiration and a mutual responsibility. As the determinants and consequences of health emergencies have become broader, so has the range of players with a stake in the security agenda.”¹² Better global security calls for global cohesion, and all countries have a responsibility. A multi-sectoral approach is needed; all classes, private businesses, and civil society need to play a part to actively maintain global security from diseases. There cannot be an isolated approach, because disease and pathogens have no limits. Traditional defenses at national borders cannot protect against the entry or invasion of a disease or vector. Modern media allows news of epidemics to spread across the world, and panic can

⁹ WHO, *The World Health Report 2007 a Safer Future: Global Public Health Security in the 21st Century* (Geneva: World Health Organization, 2007), ix.

¹⁰ Ya-Wen Chiu, Yi-Hao Weng, Yi-Yuan Su, Ching-Yi Huang, Ya-Chen Chang, Ken Kuo, “The Nature of International Health Security,” *Asia Pacific Journal of Clinical Nutrition* 18 (200): 680.

¹¹ *Ibid.*, 679

¹² WHO, *The World Health Report 2007 a Safer Future: Global Public Health Security in the 21st Century* (Geneva: World Health Organization, 2007), vii.

spread just as easily. Furthermore, shocks to health can impact economies and business communities in regions well beyond the affected areas. .¹³ *The Nature of International Health Security* states that “health security is the first line of defense against health emergencies.”¹⁴ Combining global health and security can be an important way to view the big picture of halting the spread of infectious diseases. However, a more in depth analysis is needed to discover the ways in which infectious diseases are spread and how that can threaten global security.

The Expansion of Infectious Disease

In recent decades, diseases have spread faster than ever before, facilitated by high speed travel and trade in goods and services between countries and continents. Often times, diseases will spread before the signs and symptoms of the disease are visible. Infectious diseases are spreading faster now than ever before because of the attraction and ease of migration, the vulnerable environments created in natural disaster and conflict situations, the HIV/AIDS epidemic, and the continuous emergence and re-emergence of infectious diseases.

Through migration, IDP and refugee populations are vulnerable to infectious diseases because of the repercussions of natural disasters and conflict situations. When a natural disaster occurs or governments or insurgent groups engage in armed conflict, a result is often the devastation or weakening of health systems. Consequently, health systems have a reduced capacity to detect, prevent, and respond to infectious disease in outbreaks, diminishing the population’s access to healthcare. Especially in recent years, a large-scale movement of human populations has been common as a result of war, conflict, or natural catastrophes. These

¹³ Ya-Wen Chiu, Yi-Hao Weng, Yi-Yuan Su, Ching-Yi Huang, Ya-Chen Chang, Ken Kuo, “The Nature of International Health Security,” *Asia Pacific Journal of Clinical Nutrition* 18 (200): 680.

¹⁴ *Ibid.*, 679

displaced people move from place to place, often carrying with them infectious disease microbes and vectors. Migrants also may not have immunity to diseases endemic in the new area; furthermore, they may bring with them diseases that are prevalent in their previous home but are not common in the new region. These displaced people are often forced to live in crowded, insanitary, and impoverished conditions which are conducive to infectious disease epidemics.

In addition to IDPs and refugees, migration occurs for economic reasons. Economic migrants make the great majority of all international migrants, but still add to the pool of people who are able to spread infectious diseases. According to Manuel Carballo, director of the International Center for Migration Health and Development, disease usually spreads within the migrant community because they typically interact, live, and work with each other. The disease spread from migrants to the host community is nearly zero.¹⁵ Economic migrants are distinguished from IDPs and refugees in the way that diseases are spread. While infectious diseases breed in camps for IDPs/refugees, they generally affect economic migrants through impoverished living conditions and association with other migrants.¹⁶

Since the beginning of the HIV/AIDS epidemic, the disease has spread throughout the world and has affected all types of people. HIV is spread through a variety of high risk behaviors, including engaging in unprotected sex, sharing needles and syringes while injecting drugs, and being exposed to the virus as a fetus or infant through birth or breastfeeding from an HIV infected mother.¹⁷

¹⁵ Manuel Carballo, Personal Interview, November 10, 2011.

¹⁶ Ibid.

¹⁷ "HIV Risk Factors," National Institute of Allergy and Infectious Diseases, accessed November 12 2011, <http://www.niaid.nih.gov/topics/HIVAIDS/Understanding/Pages/riskFactors.aspx>.

More than 33 million people worldwide have been infected with HIV, and approximately 21 percent of those infected are unaware of their infection.¹⁸ According to the UNAIDS 2010 Global Report, an estimated 370,000 children contracted HIV during the perinatal and breastfeeding period in 2009.¹⁹ In many countries, HIV continues to play a big role in maternal and child mortality. In these cases, death as a result of HIV/AIDS occurs primarily because of a lack of access to services.²⁰

Stigmatization and criminalization of people with HIV/AIDS plays a large role in spreading HIV/AIDS. For example, more than 80 countries have laws against same-sex behavior, and the free travel of people diagnosed with HIV/AIDS is restricted in 51 countries and territories.²¹ Not only is this discriminatory and unjust, it drives high-risk behavior and the migration of people with HIV/AIDS underground, hindering efforts to expand HIV/AIDS prevention, treatment, care, and support.

As HIV/AIDS has evolved into a pandemic and has become more familiar among the international community, it is becoming more of a chronic disease and less of a communicable disease because of the management of HIV/AIDS and modern medications.²² These days, many people are able to live with HIV/AIDS if they are receiving sufficient treatment and are educated about the transmission and effects of the disease.

HIV/AIDS prevention efforts are being implemented all over the world, and on the cusp of the fourth decade of the HIV/AIDS epidemic, the world has begun to reverse the spread of

¹⁸ Ya-Wen Chiu, Yi-Hao Weng, Yi-Yuan Su, Ching-Yi Huang, Ya-Chen Chang, Ken Kuo, "The Nature of International Health Security," *Asia Pacific Journal of Clinical Nutrition* 18 (200): 681.

¹⁹ "UNAIDS Global Report 2010," UNAIDS, accessed November 16, 2011, http://www.unaids.org/globalreport/Global_report.htm

²⁰ *Ibid.*

²¹ *Ibid.*

²² Haley West, Personal Interview, November 17, 2011.

HIV/AIDS.²³ HIV/AIDS incidence has fallen in 33 countries by more than 25 percent between 2001 and 2009. However, several regions do not follow the global trend. In seven countries, most of them in Eastern Europe and Central Asia, HIV/AIDS incidence increased by more than 25 percent between 2001 and 2009.²⁴ As prevention and treatment efforts continue to address the spread of HIV/AIDS, it is important not to also ignore the growing presence of emerging and re-emerging diseases in the world.

Global health security is becoming progressively more important because of the emergence and re-emergence of infectious diseases. As indicated by the Center for Comparative Epidemiology at Michigan State University,

“An emerging or re-emerging infectious disease is a disease whose incidence has increased in a defined time period and location. If the disease was unknown in the location before, the disease is considered to be emerging. However, if the disease had been present at the location in the past and was considered eradicated or controlled, the disease is considered to be re-emerging.”²⁵

According to Gregory Hartl of the WHO, there is a continuing and increasing evolution of antibiotic resistance occurring since microbes and bacteria also mutate and adapt in order to survive.²⁶ The spread and variety of resistant bacteria are facilitated by over-prescribing or under-prescribing drugs, inadequate observance of recommended dosages, and unregulated sale by unqualified workers.²⁷ Although antibiotics were originally developed to treat infectious diseases in people, the same medicines are used to treat animals and plants. Often times, the same

²³ “UNAIDS Global Report 2010,” UNAIDS, accessed November 16, 2011, http://www.unaids.org/globalreport/Global_report.htm

²⁴ UNAIDS Global Report P.8

²⁵ “Emerging and Re-emerging Infectious Diseases,” Center for Comparative Epidemiology at Michigan State University, accessed November 17, 2011, <http://cvm.msu.edu/research/research-centers/center-for-comparative-epidemiology-1/emerging-and-re-emerging-infectious-diseases>

²⁶ Gregory Hartl, Personal Interview, November 14, 2011.

²⁷ WHO, *The World Health Report 2007 a Safer Future: Global Public Health Security in the 21st Century* (Geneva: World Health Organization, 2007), 22-23.

microbes travel from people to plants to animals, increasing the opportunity for the transfer of resistant genes, and consequently supporting the development and spread of resistance.²⁸ The spread of resistance worldwide is a rising problem which increases the threat of emerging and re-emerging diseases.

Migration

Because migration can be viewed as an illustration of the global spread of diseases, migration and global health are often analyzed together. Migration is a topic of concern when considering the spread of infectious diseases, because people who move are vectors for disease. Migrants (including IDPs, refugees, and economic migrants) are also subject to vulnerabilities along their journey, including but not limited to poverty, health inequities, and loneliness, which can serve as risk factors to infectious diseases.

People carry their “healthprint” with them – their immunities, history of diseases, and germs they picked up along the way. Migrants can introduce new diseases to an area or bring back diseases when they return to their homeland. Additionally, with modern technology, people are traveling faster and are able to visit what used to be remote parts of the world. As different regions of the world develop, more people are likely to migrate in search of employment of a better quality of life. As written in *The Impact of Globalization on Infectious Disease Emergence and Control*, “migrant populations are among the most vulnerable to emerging and reemerging infectious diseases and have been implicated as a key causal factor in the global spread of such diseases.”²⁹ However, when speaking about migrants and health, one must be careful not to

²⁸ Ibid., 23.

²⁹ “The Impact of Globalization on Infectious Disease Emergence and Control: Exploring the Consequences and Opportunities, Workshop Summary – Forum on Microbial Threats,” The National

stigmatize populations. The situations that result from migration are the risk, not the people in these “spaces of vulnerability.”³⁰ With 214 million international migrants and 740 million internal migrants worldwide, the spread of infectious diseases becomes a topmost concern.³¹

Millions of migrants face health risks including poor access to health care, poverty, and exploitation during their journeys in search of a better life. Migration does not always lead to poor health; in fact, most migrants are healthy. However, undocumented migrants, internally displaced people, refugees, and groups such as victims of human trafficking often have little access to health care and suffer from exploitation, physical, and mental abuse which exacerbates their vulnerability to infectious diseases. Many migrants, especially undocumented ones, hesitate to come forward and receive the medical assistance they deserve. The right to health applies to all people, irrespective of their migratory status. Many migrants of low socio-economic backgrounds move from poor countries to richer ones, and have poor living conditions in their new home – crowded spaces, poor ventilation, and unhygienic areas. They also often have two or three jobs to survive and be able to send money back home. A major result is that their health suffers as they are exposed to high and chronic stress.³² Because of all the risks migration brings, post-industrial states are weary of migration and are implementing more legal and social barriers to migrants, which make the migration process more difficult and make migrants feel unwanted. However, movies and the internet among other media spread images of life in developed countries across the world, and migrants are tempted to move in search of a better life. The

Academies Press, accessed November 20, 2011,
http://www.nap.edu/openbook.php?record_id=11588&page=21

³⁰ Expert in Migration in Emergency Situations, Personal Interview, November 10, 2011.

³¹ “Challenges Facing Health of Migrants to be Tackled at Key Meeting,” World Health Organization, accessed November 20, 2011,

http://www.who.int/hac/events/migrant_consultation_madrid_3march2010.pdf

³² Manuel Carballo, Personal Interview, November 10, 2011.

increase in migration barriers in conjunction with more people wanting to migrate has led to an increase in undocumented migrants, who do not have adequate access to healthcare.³³

Health inequities within and between countries exist because of discrimination and marginalization, an unequal distribution of resources, and an unequal access to education, jobs, healthcare, and other social services. Migrants are especially vulnerable to health inequities because of their living and working conditions in their home and destination countries and because of the nature of the migration cycle. Migrants may be exposed to an increased amount of health risks and negative health outcomes, especially with the increase of restrictive migration policies. Irregular means of transportation, labor and economic downturns, and anti-migrant sentiment often cause migrants to be stuck with a low socio-economic status, which gives them less access to healthcare, education, and safe working conditions.

Migrants, whether internally displaced persons, refugees, asylum seekers, or victims of trafficking, have varying levels of risks and vulnerabilities based on their individual migration circumstance. The health of a migrant is shaped by experiences and situations surrounding the migrant's journey – in the place of origin, in transit, in the place of destination, and sometimes on the return journey to the place of origin. All migrants, even those with legal documents and a higher socio-economic position, may experience challenges to accessing services due to language and cultural differences, institutional or structural obstacles, or psycho-social stressors. Because of the increasing change in the social demographics of migration, about 50 percent of migrants are women, and many of them travel without family members. Gender and age-related vulnerabilities are also becoming widely recognized. Often times, migrants are excluded from health systems and/or health policies in destination countries without access to the health care services. Because they often also suffer from poverty and discrimination, they may not have the

³³ Ibid.

autonomy, empowerment, or freedom to live according to their own cultural norms or obtain the services they need. Their opportunities to make healthy choices and live a healthy lifestyle may be limited. They are often also exposed to risk factors for communicable diseases in the living and working environments.

Efforts made by International Organizations

International organizations and governments have been making efforts to reduce the spread of infectious disease, but they are not doing enough to remove infectious disease as a threat to global security. The World Health Organization (WHO) and the International Organization for Migration (IOM) play a major role in containing infectious diseases, especially through migration. Governments also have their own methods in tracking and responding to outbreaks of infectious diseases. Furthermore, independent actors have implemented projects to mitigate the movement of disease.

The member states of the WHO created the International Health Regulations (2005) with a view to enhance national, regional, and global public health security. The International Health Regulations (IHR) is an international legal instrument that binds 194 countries, including all WHO Member States. Its purpose is to help the global community prevent and respond to severe public health risks and emergencies that can spread internationally and threaten all people.³⁴ The newly updated IHR, which came into force in June 2007, requires countries to report all events that may constitute a public health emergency of international concern to the WHO. It also defines the rights and obligations of countries in a number of areas, including with regard to the

³⁴ “What are the International Health Regulations,” World Health Organization, accessed November 18, 2011, <http://www.who.int/features/qa/39/en/index.html>

reporting and verification of public health events and in the establishment of core capacities for surveillance report.³⁵

The IHR provides a good framework for an international response to public health risks and emergencies, including those involving infectious disease outbreaks. The IHR also authorizes the Director-General of WHO to determine public health emergencies of international concern, which are events that “constitute a public health risk to other States through the international spread of disease and...potentially require as coordinated international response”.³⁶

The IHR expands the focus of a combined defense strategy to include any emergency with international health consequences in addition to “quarantinable” diseases. Such risks and emergencies may include outbreaks of emerging diseases, outbreaks of foodborne diseases, and natural disasters, chemical or radio-nuclear events, whether naturally occurring, accidental, or intentionally caused.³⁷ The IHR also focuses on proactive risk management instead of passive control at land borders, airports, and seaports. The aim of this strategy is to detect a public health event early and stop it at its source.

The aim of the old IHR (1969) was to achieve maximum prevention against the global spread of disease with minimum disruption to travel and trade. It was based mainly as an effort to stop the spread of diseases through international border control. However, it only offered a legal framework for the notification and response to six diseases: cholera, plague, relapsing fever, smallpox, typhus, and yellow fever. By 1981, with eradication of smallpox, it only required the reporting of confirmed cases of cholera, plague, and yellow fever. The revised IHR (or IHR [2005]) aims to meet the challenges that developed in the face of emerging and re-emerging

³⁵ Ibid.

³⁶ WHO, *International Health Regulations (2005)* (Geneva: World Health Organization), 9.

³⁷ WHO, *The World Health Report 2007 a Safer Future: Global Public Health Security in the 21st Century* (Geneva: World Health Organization, 2007), vii.

infectious diseases. It also takes into consideration threats beyond infectious diseases, such as the accidental or intentional release of pathogens or chemical/radioactive material. The current IHR is a major stepping stone in combating infectious diseases and setting a standard for health security across the world.

Because the IHR (2005) entered into force in 2007, it is hard to measure its successes yet. A first milestone of the IHR's success is the requirement that each State Party has specific surveillance and response core capacities by June 2012. If governments feel they cannot meet their goal on time, based on a justified need and a new plan of action to meet their core capacities, they can ask for a two year extension. With that said, some countries see IHR core capacities as a ceiling and others as a floor. Countries may consider the capacities set out in Annex 1 of the IHR as the bare minimum whereas others may consider these capacities to represent a higher standard. Regarding the former, these countries will go above and beyond the said requirements. This can depend on the stage of development of the country, its resources, its capacities, and its finances to improve public health.

As per the WHO March 2008 Bulletin, "the success of the IHR as a new approach...will ultimately be determined by the ability of countries to live up to the obligations they assumed in approving the new international strategy. However, doing so may be particularly challenging for decentralized countries."³⁸ Another feature of the IHR is its detailed method of responding to outbreaks; WHO usually does not invoke public health emergencies of international concern because of the large number of procedural mechanisms required by the IHR. Perhaps the biggest success of the IHR is the establishment of a network of National IHR Focal Points.³⁹ The International Health Regulations defines a National IHR Focal Point as "the national center,

³⁸ "Strategies for Implementing the New International Health Regulations in Federal Countries," World Health Organization, accessed November 18, 2011, www.who.int/bulletin/volumes/86/3/07-042838.pdf.

³⁹ Expert in International Health Regulations, Personal Interview, November 17, 2011.

designated by each State Party, which shall be accessible at all times for communications with WHO IHR Contact Points” under rules established in the IHR.⁴⁰ Almost every member state of the WHO has established a National IHR Focal Point which is responsible for urgent communications with WHO and to implement other aspects of the IHR.

WHO’s focus in handling infectious disease outbreaks and other risks to public health is to build capacities and capabilities in countries to handle pandemics and other public health events, risks, and emergencies. Whether infectious diseases are spread through bioterrorism, animal agents, or migration, the resulting mortality and morbidity caused by the disease is WHO’s primary concern.⁴¹ It works to build stronger surveillance and response systems across the world, which are necessary to prevent and control outbreaks of diseases. WHO also works closely with countries to provide technical guidance and support to mobilize the resources needed to implement the IHR in an effective way.⁴²

So far, the IHR has been the key mechanism for coordinating the response to international public health risks and emergencies, including the spread of infectious diseases across the world. While the threat of these diseases remains everpresent, the IHR provides a foundation on which countries can develop public health security strategies. In many countries, the Ministry of Health is not a high profile department, and the IHR can provide an opportunity raise that profile within governments that do not always see health as a strategic priority. Although the IHR does not have a formal enforcement mechanism or penalty for failing to comply, it is in every state’s interest to observe the IHR. As stated in a report by the Stimson Global Health Security Program and George Washington University,

⁴⁰ WHO, *International Health Regulations (2005)* (Geneva: World Health Organization), 8.

⁴¹ Expert in Global Public Health Security, Personal Interview, November 11, 2011.

⁴² Ibid.

“information and communication technologies play an important role in encouraging transparent and timely reporting....The revised regulations give national leaders a mechanism to report potential public health crises before the news can be disclosed – or exaggerated – by unofficial sources. The increasing certainty that States Parties not acting in good faith will eventually be outed serves as a ‘shaming mechanism’ to reinforce the revised IHR.”⁴³

Ultimately, during a public health crises, all states risk economic losses in tourism and trade. If a country adequately reports under the IHR and abides by recommendations made by WHO, states can at least gain leverage in arguments over unjustifiable trade or travel restrictions, if it reaches an assembly such as the World Trade Organization.⁴⁴

Like WHO, IOM has also implemented approaches to curb disease spread. IOM’s main goal is to assist the movement of migrants, whether due to natural disasters, conflict, or other reasons. IOM has three pillars through which it promotes migrant health.⁴⁵ The first is health assessments, in which IOM assists refugees, asylees, or migrants who belong to assisted voluntary return programs. IOM makes sure they are fit and healthy to travel and meet all the health requirements of their receiving country.⁴⁶ Because IOM is a rights-based organization, it works to ensure that the selected migrants are healthy and that the journey will be managed in a way conducive to the migrant’s wellbeing. IOM emphasizes the importance of continuity of care throughout a migrant’s journey. The second pillar provides emergency care, for example in crisis situations, and the third pillar promotes general migrant health. It covers anything not included in the previous two pillars, such as HIV, maternal health, and gender-based violence.⁴⁷

⁴³ Julie E. Fischer and Sarah Kornblat, *The International Health Regulations (2005) Surveillance and Response in an Era of Globalization* (Washington, DC: Henry L. Stimson Center, 2011).

⁴⁴ *Ibid.*

⁴⁵ Haley West, Personal Interview, November 17, 2011.

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

In crisis situations, IOM implements its comprehensive “Migrant Health Prevention and Care Package in Crises”. The system is implemented in three stages: Pre-departure, Transit, and Upon Return. The Pre-departure stage involves individual screenings with a focus on communicable diseases and continuity of care for chronic conditions as well as public and environment health in areas of displacement.

Migrants are assessed if they are fit-to-travel, and medical support is provided when needed. If migration cannot be delayed and a migrant has a chronic condition, a medical escort is assigned to an individual or a group of travelers to provide continuous healthcare throughout the journey and on their way back to their home country.

The receiving community is also informed and prepared for the arrival of people with known chronic conditions. Medical care and specialized assistance await their arrival. The Transit stage includes providing hygiene, environmental health, and general healthcare in reception centers. It also involves raising awareness about health behaviors and training health and immigration personnel to recognize and respond to migrants with contagious or life-threatening diseases. The final stage, Upon return, provides health referrals and continuity of care for chronic conditions. It also assists migrants with psycho-social support for reintegration into their home community.⁴⁸

IOM has developed five building blocks for action to address the health inequities of migrants. Because biological factors, lifestyle factors, social and community factors, living and working conditions, and structural and policy factors all contribute to poor health of migrants, IOM advocates for better governance, migrant participation in the community, a more active health sector, global action on social determinants, and a way to monitor progress. IOM believes

⁴⁸ International Organization of Migration. *Migration Crises*, Geneva: IOM, 2011.

that governance can tackle the root causes of health inequities, so it promotes migrant sensitive health policies that improve migrants' access to social services, regardless of their legal migration status. It also pushes for governments to implement a multi-sector approach that address factors that affect migrant living conditions, such as safe housing, access to education, and access to clean water and food.

It is important that migrant integration and disease prevention strategies are not only adopted at the local level, but at the regional and national level as well. With better governance, social exclusion, stigmatization, and discrimination of migrant populations is likely to decrease. The second building block involves promoting participation among the migrant community for action on social determinants. Migrant communities can participate in health service delivery to ensure that services are culturally appropriate and that they reflect the communities' needs.

The third building block is to improve the health sector in reducing health inequities. To improve migrant access to health promotion, prevention, care, and treatment services despite their legal migration status, countries should create national legislation that respects migrants' health rights. The fourth building block – expanding global action on social determinants – consists of strengthening inter-country partnerships and multi-country frameworks to tackle shared migration challenges that affect migrant health.

IOM also strives to engage migrant destination and host countries in a dialogue about social determinants, priorities, and stakeholders. Monitoring progress, the last building block, is a way to improve national and international surveillance systems to allow an evaluation of health

outcomes data based on migration status. Research and analysis is also an important tool in determining how national and regional policies affect health outcomes of migrant populations.⁴⁹

While IOM does a great deal to address the growing health concerns of migrants and their potential to spread diseases, it does not concern itself with the security side of global health. Perhaps this is because its primary goal is to improve the health of migrants instead of reducing the spread of global diseases. If IOM worked with migration health in the greater security context, perhaps it would be able to partner with national governments on the basis of protecting national health security, thereby receiving opportunities to access more migrants.

Independent Projects – Increasing Public Health Safety Along Eastern European Borders

In addition to efforts made by international organizations, there are also independent projects and actors that aim to decrease the spread of disease. As developed by former IOM's Regional Health Officer for Europe, Professor Istvan Szilard from the University of Pécs, a Project has been implemented to minimize public health risks caused by migration along the enlarged European Union.⁵⁰ Especially with the creation of the new Eastern Schengen border, there are increased risks of infectious diseases spreading through the EU through migration.

The project is jointly funded by the IOM, the University of Pécs, and the European Commission. Entitled "Increasing Public Health Safety Alongside the New Eastern European Border Line," the Project strives to "minimize public health risks, build capacity for border management and public health staff, and facilitate appropriate healthcare to migrants as a

⁴⁹ International Organization of Migration. *Migration: A Social Determinant of the Health of Migrants*, Geneva: IOM, 2011.

⁵⁰ "Increasing Public Health Safety Alongside The New EU Eastern Borders," PHBLM, accessed November 8, 2011, <http://www.mighealth-unipecs.hu/phblm>

fundamental human right.”⁵¹ The Project began with the development of a procedure to analyze and record the current public health situation at borders regarding management and detention.⁵²

Based on the findings, the Project is developing guidelines for public health management at borders and recommendations for structural changes to health services in the chosen border sectors. An important component of maintaining national and global health security is civil protection; border guards are responsible for the legal entrance and exit of travelers who may carry infectious diseases. Thus, the Project also trains health professionals and border guards with the required tools they need in order to improve public health security. The Project assists infected migrants and provides them with non-discriminatory, appropriate, and adequate healthcare. It also offers occupational health assistance to border officials since they are usually first to come into contact with infected migrants

Case Studies

Haiti – Infectious disease through natural disasters

After the devastating earthquake over one year ago, Haiti still suffers from a cholera outbreak that kills people every day. Because of the 2010 earthquake which killed an estimated 230,000 people and injured 300,000, the outbreak is made more complex by the humanitarian situation. Almost 1.5 million people lost their homes and consequently moved into temporary settlement housing throughout major cities.⁵³ The poor living conditions in Haiti, especially those in displacement camps, make the country vulnerable to diseases. Sites have poor hygiene

⁵¹ “Increasing Public Health Safety Alongside the New Eastern European Border Line,” International Organization for Migration, accessed November 21, 2011, <http://www.iom.int/jahia/Jahia/increasing-public-health-safety-alongside-new-eastern-european-border-line/lang/en>

⁵² Ibid.

⁵³ “Cholera Inter-Sector Response Strategy for Haiti,” United Nations, accessed November 18, 2011, <http://business.un.org/en/assets/67b50158-4751-4b72-9638-85eb8cdf1289.pdf>

and sanitation conditions, which increase the risk for water-borne diseases. Mitigating the spread of disease is difficult because treatment is challenging in an area where the health system is weakened by the earthquake and the health workers are inexperienced.

The reported cholera cases and deaths in Haiti have not occurred in the areas directly affected by the Earthquake, but rather where there are vulnerable people living in impoverished situations.⁵⁴ Cholera is transmitted through fecal contamination of water and food. In regions with infrastructure damage, the risk of cholera can increase with a lack of safe drinking water and poor sanitation and hygiene. As of November 7, 2011, there is an average of 500 cholera cases per day. There are 550,000 people living in a total of 802 camps, hosting about 500,000 internally displaced persons in at least 626 of those camps.⁵⁵ In a study done by IOM hygiene promotion teams to educate communities about cholera, it was found that a surprisingly high number of cases and deaths go unreported in the national statistics. The communities in rural areas have almost no water and sanitation infrastructure, extremely little health knowledge, and frequently no access to medical care. In order to break the transmission chain in the community, clean water and sanitary living conditions must be provided. However, there has been a withdrawal of humanitarian actors and a lack of funds, which has led to a lack of drainage services, and poor maintenance and repair of infrastructures and latrines. This is increasing the likelihood for the spread of cholera.

The WHO utilized the UN's Cluster System for interagency coordination to control the outbreak in Haiti. The main purpose of applying the cluster response was the limit mortality and

⁵⁴ "Press Briefing by PAHO Deputy Director Jon Andrus on the Cholera Outbreak in Haiti," PAHO/WHO – OPS/OMS, accessed November 20, 2011,

http://new.paho.org/hq/index.php?option=com_content&task=view&id=4369&Itemid=1926

⁵⁵ "Cholera Outbreak on the Island of Hispaniola," PAHO/WHO – OPS/OMS, accessed November 20, 2011,

http://new.paho.org/hq/index.php?option=com_content&task=view&id=4500&Itemid=3527&lang=en

morbidity by reducing the impact of Cholera in Haiti. In October of 2010 when it began, the humanitarian response was led by the Ministry of Public Health and Populations in Haiti and WHO's Region for the Americas (PAHO).⁵⁶ PAHO mobilized international experts, including epidemiologists, risk communication, case management, laboratory, and water and sanitation to Haiti and the Dominican Republic.⁵⁷ Other governmental institutions were involved such as Direction Nationale de l'Eau Potable et de l'Assainissement, Département de la Protection Civile, United Nations agencies, non-governmental organizations, and the UN Stabilization Mission in Haiti.⁵⁸ The cluster system is a fairly recent and evolving concept. There are no regulations that state who can or cannot be a part of it. In Haiti's case, there are so many different actors in the Cluster that the Cluster has become fairly inefficient. There is an overlap of roles and responsibilities between organizations, and too many organizations to effectively carry out their duties.⁵⁹

The Cholera outbreak in Haiti illustrates how infectious diseases can flourish in the wake of a natural disaster and among internally displaced people. National security in Haiti is being threatened every day as Haitians, NGOs, UN agencies, and governments fight to stop the spread of Cholera to the entire country in order to save people's lives. The epidemiological tendency of Cholera in Haiti has been to break out in highly populated urban areas and then spread to rural

⁵⁶“Cholera Inter-Sector Response Strategy for Haiti,” United Nations, accessed November 18, 2011, <http://business.un.org/en/assets/67b50158-4751-4b72-9638-85eb8cdf1289.pdf>

⁵⁷ “Cholera in Haiti,” WHO, accessed November 20, 2011, http://www.who.int/csr/don/2010_10_26/en/index.html

⁵⁸ “Cholera Inter-Sector Response Strategy for Haiti,” United Nations, accessed November 18, 2011, <http://business.un.org/en/assets/67b50158-4751-4b72-9638-85eb8cdf1289.pdf>

⁵⁹ Haley West, Personal Interview, November 17, 2011.

regions. WHO estimates that this epidemic tendency will continue for the next two to three years, with smaller outbreaks, until a stabilized phase is reached.⁶⁰

It is feared that cholera will spread elsewhere, especially to the Dominican Republic. It is a mystery how cholera appeared in Haiti in the first place, as it has not been there in decades. It is possible that an infected person could have brought the bacteria in from another country, or that it could have arrived in food or even on board a ship that discharged infected waste into a local waterway.⁶¹ These speculations make it even more important to contain the disease in Haiti so it does not flourish in impoverished countries throughout the world.

HIV/AIDS – a global pandemic

HIV/AIDS affects populations across the world. An increasingly large cause of new HIV infections has been through the movement of migrant workers, specifically seafarers, from low prevalence to high prevalence HIV areas. They often travel in order to send money back home and support their families. According to a World Bank report, migrant workers sent \$440 billion in remittances in 2010.⁶² However, many migrant workers are vulnerable to ill health because of discrimination, lack of education, and lack of services. For example, seafarers could travel from the Philippines to South Africa. The Philippines is a low prevalence country with an estimated HIV adult prevalence rate (2009) of less than 0.1 percent.⁶³ Conversely, South Africa has an HIV adult prevalence rate of approximately 17.8 percent.⁶⁴

⁶⁰ WHO, “Cholera and Post-Earthquake Response in Haiti,” *Health Cluster Bulletin*, November 7, 2011, accessed November 8, 2011.

⁶¹ Denise Grady, “In Haiti, Rush to Stem Spread of Cholera,” *New York Times*, October 25, 2010, accessed November 20, 2011, <http://www.nytimes.com/2010/10/26/world/americas/26cholera.html>

⁶² Haley West, Personal Interview, November 17, 2011.

⁶³ “At a Glance: Philippines – Statistics,” UNICEF, accessed November 22, 2011, http://www.unicef.org/infobycountry/philippines_statistics.html#76

⁶⁴ “At a Glance: South Africa – Statistics,” UNICEF, accessed November 22, 2011, http://www.unicef.org/infobycountry/southafrica_statistics.html#76

According to Haley West, an expert in HIV/AIDS at IOM, migrants are often healthy when they start their journey, and they are at a high risk for spreading infectious diseases because of the vulnerabilities exposed to them along their journey.⁶⁵ For example, a point of vulnerability for a seafarer is a port because of the mixture of people present— other seafarers, truckers, and members of the host community to name a few. Cheap commercial sex, alcohol, and illicit drugs are often easily accessible at ports and surrounding communities. Combined with the low knowledge many seafarers have of HIV prevention, this circumstance leads to high-risk behaviors.⁶⁶ Seafarers following the Philippines to South Africa route may pick up HIV in South Africa and then go back to the Philippines and spread it to their spouses. This would lead to an increase in the HIV prevalence rate in the Philippines because of migration.

Emerging and re-emerging diseases – SARS

In 2003, SARS became the first new disease of the 21st century. It spread from person to person, required no vector, did not stay in one geographic region, incubated silently for over a week, displayed the symptoms of other diseases, had the heaviest impact on hospital staff, and killed about ten percent of infected people.⁶⁷ In total, there were 8422 cases with a case-fatality ratio of eleven percent. SARS illustrates the potential damage emerging diseases can cause in a world where financial markets and businesses are tightly intertwined, where airlines carry more than 2 billion passengers yearly, and where information is easily obtainable.⁶⁸ The level of media coverage received by the SARS epidemic showed people all over the world the adverse effects

⁶⁵ Ibid.

⁶⁶ “Seafarers Initiative,” UNICEF, accessed November 20, 2011, <http://www.unicef.org/eapro-hiv/aids/regpro/seafarers.htm>

⁶⁷ WHO, *The World Health Report 2007 a Safer Future: Global Public Health Security in the 21st Century* (Geneva: World Health Organization, 2007), 37-38.

⁶⁸ Ibid., 38.

that a health problem was having on economies, societies, politics, and the international image of countries.

The epidemic of SARS in 2003 could have spread across the globe and killed millions of people. Although its effects were not detrimental to the global population, they were damaging to many economies. For Asian countries, the estimated cost of the epidemic was US \$20 billion in GDP terms for 2003. Even more drastic, the amount of gross expenditure and business losses was US \$60 billion.⁶⁹ Although the number of SARS cases was relatively small, the fear of transmission caused tourists to choose different holiday locations, and the local population felt safer avoiding restaurants and other public locations.

The total cost of the SARS epidemic to Asian countries divides to over US \$2 million per infected person. When compared to the possible impact of an influenza pandemic on the global economy, the economic implications of the SARS epidemic reach far beyond that of a one year, global influenza pandemic.⁷⁰

SARS emphasized the fact that no single country is safe from the danger of emerging diseases. Each country, despite its wealth, levels of education, standards of living, quality of healthcare, or security at border crossings is exposed to the threat of an arrival of a new disease or the consequent disruption it can cause. Diseases do not have borders and are free to travel across the world. Countries should not only be concerned with improving public health security in their own countries, but strengthening it in other countries as well.

According to the World Health Report 2007, SARS was stopped as a result of it being recognized as an international threat. “Had SARS been allowed to establish a foothold in a resource-poor setting, it is doubtful whether the demanding measures, facilities and technologies

⁶⁹ Ibid., 39.

⁷⁰ Ibid.

needed to interrupt chains of transmission could have been fully deployed”.⁷¹ It is essential for governments and international organizations to securitize infectious diseases, such as SARS, so that global pandemics do not occur.

What Next? Analysis and Recommendations

Although infectious diseases pose a severe threat to security, it is not the primary security concern in many states since it is difficult to measure the success of fighting infectious disease expansion with prevention efforts.⁷² If an investor had the choice of funding the development of a medication that could fight an emerging microbe for which there is an uncertain market or supporting the creation of a new Viagra or a better Lipitor, he would likely choose the second market in which his profits are more likely.⁷³

It is much easier to measure success with reactive efforts towards outbreaks where rewards are quantifiable. In developing a new vaccine or treatment, it is impossible to determine how many lives will be saved or the total economic losses prevented if there was an outbreak. It is also hard to gauge the potential impact of diseases since they are so widespread.

If a disease is thought of as the “enemy”, then prevention efforts are extremely difficult since the “enemy” can attack anywhere. Even the most educated, prosperous, and health-conscious areas are susceptible to diseases. It is impossible to determine where or when the “enemy” will target populations. Infectious diseases are extremely difficult to locate; it is impossible to track

⁷¹ WHO, *The World Health Report 2007 a Safer Future: Global Public Health Security in the 21st Century* (Geneva: World Health Organization, 2007), 40.

⁷² Expert in Global Public Health Security, Personal Interview, November 11, 2011.

⁷³ Anthony Fauci, “Emerging and Re-emerging Infectious Diseases,” Milbank Memorial Fund, accessed on November 20, 2011, <http://www.milbank.org/reports/0601fauci/0601fauci.html>

their movement since they can travel through a variety of vectors and easily move across borders.

Furthermore, the “enemy” can cause a wide range of ramifications that may be difficult to counteract. In terms of issues that are higher on the security agenda in many countries, concerns such as war or nuclear attacks may seem more severe since their impact is direct and quantifiable. Governments can calculate costs for military defense tactics, predict where insurgents are likely to target, and assess and repair damage caused by armed forces. It is much trickier to fund research for vaccines and antibiotics for emerging and re-emerging diseases that constantly develop resistance and may or may not be a problem in the future.

In order to raise the position of infectious diseases on the security agenda, more advocacy and education about the potential effects of outbreaks is needed. For example, businesses, politicians, governments, and civil society should be aware of the implications of public health events on the workforce, national resources, the economy, trade, and travel. Global Public Health Security is a particularly multidimensional topic that considers natural disasters, conflict situations, migration, and the emergence and re-emergence of diseases. Public health risks and impacts are not always known to the public, and greater awareness could educate people about the real danger of infectious diseases.

WHO, other international organizations, and governments of developed countries should continue working to build capacities within poorer countries. While developed nations spend anywhere between \$1,500 and \$5,000 per capita per year on health, the least developed countries only spend between \$1 and \$25.⁷⁴ Strengthening weaker health systems is of vital importance

⁷⁴Lawrence Gostin and Robert Archer, “The Duty of States to Assist Other States in Need: Ethics, Human Rights, and International Law,” Georgetown Law The Scholarly Commons, accessed November 21, 2011, http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1006&context=ois_papers.

since it ensures that national populations receive the best possible public health and establishes Global Public Health Security. According to the World Health Report 2007,

“during public health emergencies, local communities are the first to respond, followed by district and national governments. Many societies do not have the resources to be adequately prepared at all times, and countries do not always have the resources to manage a major emergency or outbreak without external assistance. Qualified, experienced, and well-prepared international health personnel are often needed to help. Cooperation between countries is necessary to ensure the safety net provided for in IHR (2005).”⁷⁵

Strengthening capacities and capabilities in Surveillance is an important component in public health safety, so that public health systems can detect public health events, monitor for their likely impact, and determine the effectiveness of interventions in place to counter them.⁷⁶

With new diseases emerging each year and HIV/AIDS massively spreading, governments and populations are becoming more aware of infectious diseases. Countries such as the United States and Canada have already recognized potential health emergencies as a threat to security and are investing in prevention measures. In August 2009, the United States government released a report entitled *United States Government Efforts to Support Global Capacity for Disease Surveillance and Response*. It affirmed that the Department of Defense includes the Global Emerging Infections Surveillance and Response System, “which promotes and facilitates preparedness for emerging infections...strengthening laboratory capacity...and providing field epidemiology and laboratory services around the world.”⁷⁷ With the implementation of the International Health Regulations and the upcoming deadline for countries to meet health

⁷⁵ WHO, *The World Health Report 2007 a Safer Future: Global Public Health Security in the 21st Century* (Geneva: World Health Organization, 2007), 62

⁷⁶ *Ibid.*, 18.

⁷⁷ “United States Government Efforts to Support Global Capacity for Disease Surveillance and Response,” *The Biological and Toxic Weapons Convention*, accessed October 24, 2011, http://www.opbw.org/new_process/mx2009/BWC_MSP_2009_MX_WP23_E.pdf

requirements, global public health is gaining weight on national agendas. With new and powerful infectious diseases emerging, health security awareness being promoted by governments and international organizations, and international coordination systems being developed, health as a security issue is gaining importance.

Conclusion

As illustrated by this paper, combining global health, security, and migration are extremely valuable when analyzing the spread of infectious diseases. It is impossible to consider the threat infectious diseases pose to global security without first considering the effects of IDPs, refugees, and economic migrants. Because the world is getting smaller through globalization, global public health security should be a top priority for governments and international organizations. As shown in the case studies about cholera, HIV/AIDS and SARS, infectious diseases are constantly creating public health emergencies, and a collective, unified, and global response can prevent or quickly halt resulting mortality and morbidity. As Global Public Health Security evolves into a more complicated and multifaceted issue, a greater understanding of its elements is needed. Building capacities and capabilities in less developed countries and spreading awareness about the true dangers of infectious diseases are the most important efforts in raising health on the security agenda.

Bibliography

Murphy, Colum. Interview by author. Personal interview. The Geneva School of Diplomacy and International Relations, November 1, 2011.

Carballo, Manuel. Interview by author. Personal interview. International Center for Migration Health and Development, November 10, 2011.

Expert in Migration in Emergency Situations. Interview by author. Personal interview. November 10, 2011.

Expert in Global Public Health Security, ar. Interview by author. Personal interview. November 11, 2011.

Hartl, Gregory. Interview by author. Personal interview. WHO, November 14, 2011.

West, Haley. Interview by author. Personal interview. IOM, November 17, 2011.

Expert in International Health Regulations, ar. Interview by author. Personal interview. November 17, 2011.

"At a glance: Philippines - Statistics." UNICEF .

http://www.unicef.org/infobycountry/philippines_statistics.html#76 (accessed November 22, 2011).

"At a glance: South Africa - Statistics." UNICEF .

http://www.unicef.org/infobycountry/southafrica_statistics.html#76

"Challenges Facing Health of Migrants to be Tackled at Key Meeting." World Health

Organization. www.who.int/hac/events/migrant_consultation_madrid_3march2010.pdf (accessed November 20, 2011).

Chiu, Ya-Wen, Yi-Hao Weng, Yi-Yuan Su, Ching-Yi Huang, Ya-Chen Chang, and Ken Kuo.

"The Nature of International Health Security." *Asia Pacific Journal of Clinical Nutrition* 18 (2009): 679-683.

"Cholera Inter-Sector Response Strategy for Haiti." United Nations.

business.un.org/en/assets/67b50158-4751-4b72-9638-85eb8cdf1289.pdf (accessed November 18, 2011).

"Cholera Outbreak on the Island of Hispaniola." PAHO/WHO - OPS/OMS.

new.paho.org/hq/index.php?option=com_content&task=view&id=4500&Itemid=3527&lang=en (accessed November 20, 2011).

"Cholera in Haiti." WHO. www.who.int/csr/don/2010_10_26/en/index.html (accessed November 20, 2011).

Davies, Sara. "Securitizing Infectious Disease." *International Affairs* 84, no. 2 (2008): 295-313.

Global Development Research Center. "Definitions of Human Security." Definitions.

www.gdrc.org/sustdev/husec/Definitions.pdf. (accessed November 8, 2011).

"Emerging and Re-emerging Infectious Diseases." Center for Comparative Epidemiology at

Michigan State University. <http://cvm.msu.edu/research/research-centers/center-for-comparative-epidemiology-1/emerging-and-re-emerging-infectious-diseases> (accessed November 17, 2011).

Fauci, Anthony . "Emerging and Re-emerging Infectious Diseases." Milbank Memorial Fund .

<http://www.milbank.org/reports/0601fauci/0601fauci.html> (accessed November 20, 2011).

Fischer, Julie E., and Sarah Kornblet. *The International Health Regulations (2005) surveillance and response in an era of globalization*. Washington, DC: Henry L. Stimson Center, 2011.

Grady, Denise. "In Haiti, A Rush to Stem the Spread of Cholera." *The New York Times*.

<http://www.nytimes.com/2010/10/26/world/americas/26cholera.html> (accessed November 20, 2011).

Gostin, Lawrence , and Robert Archer. "The Duty of States to Assist Other States in Need: Ethics, Human Rights, and International Law." *Georgetown Law The Scholarly Commons*.

scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=1006&context=ois_papers (accessed November 21, 2011).

"HIV Risk Factors." *National Institute of Allergy and Infectious Diseases Home Page* .

<http://www.niaid.nih.gov/topics/HIVAIDS/Understanding/Pages/riskFactors.aspx> (accessed November 12, 2011).

"High-level Debate Tackled Need for Improved International Health Security." *World Health Organization*. [www.who.int/world-health-](http://www.who.int/world-health-day/previous/2007/activities/global_event/en/index.html)

[day/previous/2007/activities/global_event/en/index.html](http://www.who.int/world-health-day/previous/2007/activities/global_event/en/index.html) (accessed November 1, 2011).

"Increasing Public Health Safety Alongside the New EU Eastern Borders." *PHBLM*.

<http://www.mighealth-unipecs.hu/phblm> (accessed November 8, 2011).

"Increasing Public Health Safety Alongside the New Eastern European Border Line."

International Organization for Migration. www.iom.int/jahia/Jahia/increasing-public-health-safety-alongside-new-eastern-european-border-line/lang/en (accessed November 21, 2011).

Disease Control Priorities Project . "Infectious Diseases." *Infectious Diseases*.

www.dcp2.org/file/6/DCPP-InfectiousDiseases.pdf (accessed November 2, 2011).

International Health Regulations (2005). 2nd ed. Geneva: World Health Organization, 2008.

"Press briefing by PAHO Deputy Director Jon Andrus on the cholera outbreak in Haiti."

PAHO/WHO - OPS/OMS.

http://new.paho.org/hq/index.php?option=com_content&task=view&id=4369&Itemid=1926 (accessed November 15, 2011).

"Seafarers Initiative." UNICEF. <http://www.unicef.org/eapro-hiv aids/regpro/seafarers.htm>

(accessed November 20, 2011).

"The Impact of Globalization on Infectious Disease Emergence and Control: Exploring the Consequences and Opportunities, Workshop Summary - Forum on Microbial Threats."

The National Academies Press.

http://www.nap.edu/openbook.php?record_id=11588&page=21 (accessed November 20, 2011).

The World Health Report 2007 a Safer Future: Global Public Health Security in the 21st Century.. Geneva: World Health Organization, 2007.

"UNAIDS Global report 2010 ." UNAIDS.

http://www.unaids.org/globalreport/Global_report.htm (accessed November 16, 2011).

"United States Government Efforts to Support Global Capacity for Disease Surveillance and Response." The Biological and Toxin Weapons Convention.

www.opbw.org/new_process/mx2009/BWC_MSP_2009_MX_WP23_E.pdf (accessed October 24, 2011).

World Health Organization. "WHO Report on Global Surveillance of Epidemic-Prone Infectious Diseases." WHO Report on Global Surveillance of Epidemic-Prone Infectious Diseases. www.who.int/csr/resources/publications/surveillance/WHO_Report_Infectious_Diseases.pdf (accessed November 1, 2011).

World Health Organization. "Cholera and Post-Earthquake Response in Haiti." *Health Cluster Bulletin*, November 7, 2011.

"What are the International Health Regulations?." World Health Organization.

www.who.int/features/qa/39/en/index.html (accessed November 18, 2011).

Wilson, Kumanan, Christopher McDougall, David Fidler, and Harvey Lazar. "Strategies for Implementing the New International Health Regulations in Federal Countries." World Health Organization. www.who.int/bulletin/volumes/86/3/07-042838.pdf (accessed November 18, 2011).