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GERMS ON A PLANE!: LEGAL PROTECTIONS AFFORDED TO
INTERNATIONAL AIR TRAVELERS AND GOVERNMENTS IN
THE EVENT OF A SUSPECTED OR ACTUAL CONTAGIOUS
PASSENGER AND PROPOSALS TO STRENGTHEN THEM

ALEXANDRA R. HARRINGTON, ESQ.*

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PART I – INTRODUCTION

In August 2006, American moviegoers watched as passengers on an airplane were terrified by poisonous snakes in the movie “Snakes on a Plane.”¹ In May 2007, news watchers across the globe were riveted by the true story of an Atlanta lawyer who flew from the United States to several destinations in Europe while carrying a

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¹ See The Internet Movie Database, Snakes on a Plane, *available at* <http://imdb.com/title/t0417148/> (last visited Feb. 28, 2008).

drug-resistant strain of tuberculosis.² This event prompted a public outcry against the actions of the “tuberculosis traveler,”³ who failed to heed the warnings of various local, state, and federal officials. However, the implications of the tuberculosis incident reverberated throughout the aviation, legal, and medical communities in a way in which fictional killer snakes cannot. While few travelers might like to ponder it, germs on a plane, and associated issues immediately after disembarking, are a more realistic, if less glamorous, threat to the flying public than a Hollywood created movie. Although travelers are offered some measure of protection from illness through the terms of the World Health Organization’s International Health Regulations (“IHR”)⁴ and the actions of governments and air carriers,⁵ the tuberculosis traveler incident illustrates that there are several areas where travelers are protected by neither law nor medicine.

This article examines two issues which were highlighted by the tuberculosis traveler incident and its aftermath: 1) the effectiveness of the current legal regimes in international law in stopping the health threat posed by individual carriers of communicable diseases who attempt to travel on an aircraft and 2) the legal standards – or lack thereof – applicable to international travelers when their course of travel is interrupted because they are deemed to constitute a threat to public health by the nation to which they are traveling or at an intermediate point during their travels. Part II of this article describes the various applicable international law regimes and provisions which govern air travel and the identification, handling, and procedures to be used in the event of a suspected or confirmed outbreak of infectious disease.⁶ This Part also discusses the forms of infectious disease which concern public health experts. And, several of the infectious diseases which pose a prescient threat to air travelers, yet; are not contemplated in the international law regimes applicable to public health or air travel.⁷

Part III of this article discusses the issue of protecting travelers, and the global population at large, from infectious disease based threats posed by individual travelers who are carrying a disease at the time of their travels.⁸ In this Part, the author advocates the creation of a public health-based do-not-fly list akin to the terror based do-not-fly list currently used by the American government to ensure that travelers who pose a threat to public health do not board aircraft or engage in air travel until their health status can be confirmed, or they are deemed to be no longer

² See *TB Man ‘Sorry’ Over Plane Trips*, BBC NEWS, June 1, 2007, available at <http://news.bbc.co.uk/2/hi/americas/6712281.stm>.

³ In order to shift the focus of the tuberculosis traveler incident from the actions of an individual to the actions of the entire system, the author will not refer to the tuberculosis traveler by name throughout this article.

⁴ See International Health Regulations (2005), May 25, 2005, WHA58.3, available at http://www.who.int/gb/ebwha/pdf_files/WHA58/WHA58_3-en.pdf (last visited Feb. 28, 2008).

⁵ See *infra* Parts III, IV.

⁶ See *infra* Part II. B.

⁷ See *infra* Part II.A.

⁸ See *infra* Part III.

contagious to the general public.⁹ It is the author's belief that Interpol's effective use of such a list to track criminals around the globe serves as a better model per se than the American do-not-fly list. When used properly, a public health-based list is cost effective, a better preservation of the rights of travelers, and poses fewer legal issues at home and abroad than does the current vacuum of legality and procedure in this particular area.¹⁰

Part IV of this article discusses the issue of travelers who have left their home country en route to another country and are denied entry or detained by the destination country – or a third party country through which the traveler is to connect – on the ground of suspicion of illness.¹¹ Initially, there seems not to be an issue under the terms of the IHR, which allows a state to deny entry to any traveler or to hold them for observation, testing, or quarantine on suspicion of illness.¹² However, those are the only rules set forth by the IHR. Issues such as how to safely transport a traveler, denied entry on the grounds of illness, and home are not addressed.¹³ Further, the IHR regime does not address the rights or interests of State A when its citizen is detained in State B on suspicion of illness.¹⁴ The pandemic preparedness plans used by governments make it clear that, while diplomatic and consular officials may attempt to guide State B in its handling of State A's citizens who are present in State B temporarily or permanently during a pandemic, State A has no right to dictate treatment or handling of its citizens.¹⁵ In a situation where a citizen of State A is detained by State B on arrival for health reasons, there is little guidance for State A, State B, or the traveler as to State A's rights outside of standard diplomatic protocols.¹⁶ This lack of guidance might seem intuitive, and even appropriate, at first glance because it allows for situational fluidity and is sensitive to the particular complexities of diplomatic relations generally. However, the importance of clarity for this issue crystallizes, when remembering the tuberculosis traveler who exposed his fellow travelers and airline crew members to a drug-resistant strain of tuberculosis, all because he was in diplomatic limbo over treatment and was concerned that the treatment he received in Italy would not be equal to that available in the United States.¹⁷ In this Part, the author argues that simple amendments to the IHR regime and the Vienna Conventions on Diplomatic Relations of 1961,¹⁸ and on

⁹ See *infra* Part III.

¹⁰ See *infra* Part III.

¹¹ See *infra* Part IV.

¹² See *infra* Part IV.

¹³ See *infra* Part IV.

¹⁴ See *infra* Part IV.

¹⁵ See *infra* Part IV.

¹⁶ See *infra* Part IV.

¹⁷ See *US Steps Up Precautions Over TB*, BBC NEWS, May 30, 2007, available at <http://news.bbc.co.uk/2/hi/americas/6706437.stm>.

¹⁸ Vienna Convention on Diplomatic Relations, Apr. 18, 1961, 500 U.N.T.S. 95, available at http://untreaty.un.org/ilc/texts/instruments/english/conventions/9_1_1961.pdf (last visited Oct. 18, 2007).

Consular Relations of 1963¹⁹ would clarify these issues and spare future air travelers from uncertainty or unnecessary exposure to infectious disease.²⁰ These amendments would also reduce the chances of a diplomatic incident, especially in a situation where the threat of disease sparks an initial panic.²¹

Part V summarizes the issues and arguments made throughout this article.²² It concludes that addressing the issues raised is an immediate necessity because (1) the frequency of international air travel, (2) the devastation which both global pandemics and regional outbreaks of infectious disease have, can, and will cause at a variety of levels, and the (3) difficulty of making an informed, well-reasoned, rational and diplomatically sound decision regarding any of the issues raised in the middle of a crisis, regardless of magnitude. In so doing, travelers will be able to experience dangers on an airplane at a movie theatre rather than in the skies.

PART II – MEDICAL AND LEGAL BACKGROUND

A. *Infectious Diseases and Air Travel*

1. Infectious Diseases of Documented Concern

Perhaps the most memorable incidence of infectious disease being transmitted through air travel occurred with the SARS outbreak in 2003. Originating with a Chinese doctor who treated patients with symptoms of the disease which would become known as SARS, the disease spread quickly after this doctor unknowingly boarded a plane while infected with SARS himself, rapidly infecting many of his fellow passengers.²³ The weeks which followed saw cities such as Hong Kong and Toronto temporarily suspend air travel in an attempt to isolate the cases of SARS located in their jurisdiction and to stop further spread of the disease.²⁴ While the threat posed by the 2003 SARS outbreak was contained and air travel as usual resumed within several months, SARS has by no means been eradicated as an infectious disease.²⁵

¹⁹ Vienna Convention on Consular Relations, Apr. 24, 1963, 596 U.N.T.S. 261, available at http://untreaty.un.org/ilc/texts/instruments/english/conventions/9_2_1963.pdf (last visited Feb. 28, 2008).

²⁰ See *infra* Part IV.

²¹ See *infra* Part IV.

²² See *infra* Part V.

²³ See *Testimony of Mark A. Gendreau, Senior Attending Physician, Lahey Clinic Medical Center, Blocking Global Spread of Disease Facilitated by Air Travel Before the House Transportation and Infrastructure Committee*, Apr. 6, 2005.

²⁴ See *id.* For a summary of the air travel policies adopted by China—where most incidents of SARS infections and deaths during the 2003 epidemic occurred—see International Civil Aviation Organization, Reinforce Management to Prevent the Spread of Communicable Diseases, A36-WP/196 (Sept. 19, 2007), available at http://www.icao.int/icao/en/assembly/a36/wp/wp196_en.pdf (last visited Feb. 28, 2008).

²⁵ See, e.g., *Air Passengers Return to the Skies*, BBC NEWS, Jul. 10, 2003, available at <http://news.bbc.co.uk/2/hi/business/3054925.stm>.

The majority of international public health and security focus and planning has centered on the threat of avian influenza and pandemic influenza. To date, there have been cases of bird to human transmission of the H1N1 strain of avian influenza. However the disease has not yet become capable of human to human transmission and remains a vector-borne²⁶ illness.²⁷ Since its appearance on an international scale, scientists, public health experts, and security analysts have focused on avian influenza as an emerging and likely pandemic threat should it reach the human to human transmission stage at some point in the future.²⁸ Governments across the world have created avian influenza strategies and awareness campaigns, while stressing that domestic planning cannot extend to citizens who travel to other states outside of standard diplomatic inquiry and suggestion allowances.²⁹ It is important to note that developed nations and international organizations have provided developing nations, especially those where avian influenza is already prevalent, with monetary, health care, and zoological support and infrastructural guidance in order to allow these nations to better monitor their avian and human populations for infection.³⁰ Despite these efforts, diagnosing avian and human infection with H1N1

²⁶ A vector-borne disease is one which is transmitted to a human being through an animate entity, such as poultry in the case of avian influenza or, as discussed below, mosquitoes in the case of malaria or dengue fever. The animate entity which spreads the particular disease is referred to as a vector. By contrast, the term phomite refers to an inanimate object – such as a door handle – which is necessary to spread disease from person to person through direct contact.

²⁷ See generally World Health Organization, Avian Influenza, available at http://www.who.int/csr/disease/avian_influenza/en/index.html (last visited Feb. 28, 2008).

²⁸ See generally, *id.*

²⁹ See e.g., Under Secretary for Democracy and Global Affairs, North American Plan for Avian and Pandemic Influenza (August 2007), available at <http://www.state.gov/g/avianflu/91242.htm> (last visited Feb. 28, 2008); Gouvernement de France, Grippe Aviaire, available at <http://www.grippeaviaire.gouv.fr/> (last visited Feb. 28, 2008) (translation of webpage by author); Ministerio de Salud (Peru), Conozca Todo Sobre la Gripe Aviar, available at <http://www.minsa.gob.pe/portal/Especiales/aviar/default.asp> (last visited Feb. 28, 2008) (translation of website by author); Ministerio de Salud (Gobierno de Chile), Preguntas Frecuentes Influenza Aviar, available at http://www.minsal.cl/ici/influenza_aviar/aviar.html (last visited Feb. 28, 2008) (translation of website by author); Government of Singapore, Flu, available at <http://www.crisis.gov.sg/flu/> (last visited Feb. 28, 2008); Ministerio de Salud (Mexico), Plan Nacional de Preparacion y Respuesta ante una Pandemia de Influenza, available at <http://www.dgepi.salud.gob.mx/pandemia/FLU-INDEX.html> (Feb. 28, 2008); Ministerio de Salud (Argentina), Influenza Gripe, available at <http://municipios.msal.gov.ar/aviar/> (Feb. 28, 2008); Office Federal de la Sante Publique (Switzerland), Grippe Aviaire, available at <http://www.bag.admin.ch/influenza/01119/index.html?lang=fr> (Feb. 28, 2008); Ministero della Salute (Italy), Influenza Aviaria, available at <http://www.ministerosalute.it/dettaglio/phPrimoPiano.jsp?id=303> (last visited Feb. 28, 2008); Department of Health and Aging (Australia), Avian Influenza, available at http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-avian_influenza-index.htm (last visited Feb. 28, 2007); Department of Disease Control (Thailand), Avian Influenza (Bird Flu), available at http://thaigcd.ddc.moph.go.th/Bird_Flu_main_en.html (last visited Feb. 28, 2008).

³⁰ See Robert F. Breiman, Abdulsalami Nasidi, Mark A. Katz, M. Kariuki Njenga, John Verteheuille, *Preparedness for Highly Pathogenic Avian Influenza Pandemic in Africa*, Emerg Infect Dis Vol. 13, No. 10. 2007 Oct, available at <http://www.cdc.gov/EID/content/13/10/>

is still a time consuming task, and often a final diagnosis is impossible until the bird or human has died or is symptomatically at the peak of infection.³¹ Due to the emerging nature of this disease, it is difficult to pinpoint an incubation period for avian influenza in bird or human populations.³²

With the knowledge that devastating pandemic influenza epidemics in 1918 and 1969 would have been far deadlier if air travel had been as prevalent as it is now, the international public health community has become increasingly focused on the specter of the next outbreak of pandemic influenza.³³ On the national, regional, and international scales, this realization has sparked the creation of national alliances, national and international pandemic influenza plans, and the revision of the IHR in the wake of the SARS outbreak.³⁴ However, none of these legal steps pinpoint the strain of influenza which will result in a pandemic; if one occurs, if it is likely to occur, or if the duration of the influenza strain gives rise to a pandemic.³⁵ As such, it

1453.htm (last visited Feb. 28, 2008) (discussing aide programs to Africa in the wake of a 2006 outbreak of avian influenza in fowl and its limitations).

³¹ See World Health Organization, *Recommendations and Laboratory Procedures for Detection of Avian Influenza A(H5N1) Virus in Specimens from Suspected Human Cases*, at 5 (Aug. 2007), available at http://www.who.int/csr/disease/avian_influenza/guidelines/labtests/en/index.html (last visited Feb. 28, 2008).

³² World Health Organization, *WHO Guidelines for Investigation of Human Avian Influenza A(H5N1)*, at 4 (Jan. 2007), available at http://www.who.int/csr/resources/publications/influenza/WHO_CDS_EPR_GIP_2006_4r1.pdf (last visited Feb. 28, 2008) (stating that the current estimate for the maximum incubation time for the H5N1 virus is estimated to be seven days, however this has not been established as a definite period).

³³ See Ben S. Cooper, Richard J. Pitman, W. John Edmunds, Nigel J. Gay (2006), *Delaying the International Spread of Pandemic Influenza*, PLoS Med. 3(6): e212, at 846-50, available at <http://medicine.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pmed.0030212> (last visited Feb. 28, 2008).

³⁴ See e.g., United States Department of Homeland Security, *National Strategy for Pandemic Influenza*, available at <http://www.whitehouse.gov/homeland/nspi.pdf> (last visited Feb. 28, 2008); General Secretariat for National Defence (France), *National Plan for the Prevention and Control "Influenza Pandemic,"* available at http://www.grippeaviaire.gouv.fr/IMG/pdf/plan_national_version_anglaise.pdf (last visited Feb. 28, 2008); Government of New Zealand, Find Information on Flu Pandemics, available at <http://newzealand.govt.nz/record?tid=1&treeid=805&recordid=28127> (last visited Feb. 28, 2008); Government of Singapore, Flu, available at <http://www.crisis.gov.sg/flu/> (last visited Feb. 28, 2008); Ministerio de Salud (Mexico), Plan Nacional de Preparacion y Respuesta ante una Pandemia de Influenza, available at <http://www.dgepi.salud.gob.mx/pandemia/FLU-INDEX.html> (Feb. 28, 2008); Ministerio de Salud (Argentina), Influenza Gripe, available at <http://municipios.msal.gov.ar/aviar/> (Feb. 28, 2008); Ministerio de Saude (Brazil), Gripe Influenza, available at http://dtr2001.saude.gov.br/influenza/principal_gripe.htm (last visited Feb. 28, 2008); Office Federal de la Sante Publique (Switzerland), Grippe Pandemique, available at <http://www.bag.admin.ch/influenza/01120/index.html?lang=fr> (Feb. 28, 2008); Government of Canada, Pandemic Influenza, available at http://www.influenza.gc.ca/index_e.html (last visited Feb. 28, 2008); Department of Health and Aging (Australia), Plan for Pandemic Influenza, available at <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/ohp-pandemic-ahmppi.htm> (last visited Feb. 28, 2008).

³⁵ See *id.*

is impossible to determine the exact symptoms of or incubation period for a pandemic influenza.

Hemorrhagic diseases are not new to medicine; however, the discovery of viciously fatal diseases such as Ebola has brought these diseases to the forefront of public health discourse. Transmission methods of hemorrhagic diseases vary, however these diseases are similar because they are communicable, especially in public and confined spaces such as an aircraft.³⁶ To the extent that there is any benefit of these diseases, from a public health and air travel perspective they are relatively easy to spot once the incubation period elapses and a patient becomes symptomatic.³⁷ However, confirming cases of hemorrhagic fevers, tracing back contacts of those who contracted the disease, and quarantine of those with the disease are still tedious processes, compounded by the geographical constraints found in many areas where such diseases are prevalent.³⁸

2. Other Diseases to be Considered as a Threat in Ar Travel

Largely eradicated in the United States, tuberculosis reemerged as a perceived public health hazard to the general public in the days and weeks following the tuberculosis traveler incident in May 2007.³⁹ For much of the world, however, this disease is as common as it is devastating.⁴⁰ Symptomatically, it is possible for those infected with tuberculosis to go for a long period of time without a diagnosis because its symptoms mirror so many other temporary illnesses and because of inadequate medical care in many areas where tuberculosis is present.⁴¹ Many patients, who are diagnosed and seek treatment, remain untreated because of the costs of the necessary medications.⁴² Even then, the fact that a patient is infected with a non-drug resistant strain of tuberculosis is not a guarantee that the disease, or an associated infection,

³⁶ For example, as discussed below, dengue fever is transmitted by a particular species of mosquito, while Ebola is primarily transmitted through contact with the bodily fluids of an infected person. See EBOLA HAEMORRHAGIC FEVER, WORLD HEALTH ORGANIZATION, available at <http://www.who.int/mediacentre/factsheets/fs103/en/index.html> (last visited Mar. 16, 2008). Given the use of shared restroom facilities during air travel, and the ability for bodily fluids to come in contact with seats and other shared parts of an aircraft, Ebola presents an immediate danger to travelers.

³⁷ See *id*

³⁸ See, e.g., EBOLA HEMORRHAGIC FEVER IN THE DEMOCRATIC REPUBLIC OF CONGO – UPDATE 4, WORLD HEALTH ORGANIZATION (Oct. 3, 2007), available at http://www.who.int/csr/don/2007_10_03a/en/index.html.

³⁹ See *US steps up precautions over TB*, BBC NEWS (May 30, 2007), available at <http://news.bbc.co.uk/2/hi/americas/6706437.stm>.

⁴⁰ TUBERCULOSIS, WORLD HEALTH ORGANIZATION, available at <http://www.who.int/mediacentre/factsheets/fs104/en/index.html> (last visited Mar. 16, 2008).

⁴¹ See *Tuberculosis Topic Overview*, WEBMD.COM, available at <http://www.webmd.com/a-to-z-guides/tuberculosis-tb-topic-overview> (last visited Mar. 16, 2008).

⁴² See *Addressing Poverty in TB Control. Options for National TB Control Programmes*, World Health Organization, available at <http://www.who.int/tb/challenges/poverty/en/index.html> (last visited Mar. 16, 2008).

will not be fatal to the particular patient.⁴³ The discovery that some forms of tuberculosis, such as that carried by the tuberculosis traveler, are drug-resistant, has only added to the public health dangers posed by this disease.⁴⁴ In some instances, a person wishing to travel internationally is required to complete a tuberculosis test in order to obtain the appropriate visa.⁴⁵ In terms of infection, tuberculosis is spread through person to person contact; such as droplets excreted during a coughing spasm.⁴⁶ Long before 2007, medical researchers were concerned at the possibility of tuberculosis being transmitted on an aircraft. Although the precise findings of studies addressing this issue vary, the consensus is that a person infected with any strain of tuberculosis is capable of, at the very least, transmitting the disease to passengers within three rows of his seat.⁴⁷

Whooping cough⁴⁸ is a disease where most Americans as something are vaccinated as a child. However, it has recently been discovered that the whooping cough vaccination administered to children will wear off by the time a person reaches their late teens or early twenties, leaving them open to the possibility of infection without a booster vaccination.⁴⁹ Since most patients, and even many physicians, are unaware that the whooping cough vaccination wears off over time, the Centers for Disease Control and Prevention (CDC) estimates that every year approximately one million cases of whooping cough go undiagnosed in America.⁵⁰ In other parts of the world, the disease is still prevalent.⁵¹ While not as prone to fatalities as the other diseases discussed, whooping cough is mentioned here because it is debilitating to those who develop it fully, and poses a threat to the lives and health of unimmunized children, elderly, and those with compromised immune

⁴³ See TUBERCULOSIS, *supra* note 40.

⁴⁴ See *id.*

⁴⁵ See, e.g., TEMPORARY VISITORS TO THE U.S., UNITED STATES DEPARTMENT OF STATE, available at http://travel.state.gov/visa/temp/temp_1305.html (last visited Mar. 16, 2008).

⁴⁶ See TUBERCULOSIS, *supra* note 40.

⁴⁷ See Diedre T. Hollingsworth, Neil M. Ferguson & Roy M. Anderson, *Frequent Travelers and Rate of Spread of Epidemics*, Volume 13, Number 9 (Sept. 2007), available at <http://www.2a.cdc.gov/ncidod/ts/print.asp>; Ben S. Cooper, Richard J. Pitman, John W. Edmunds & Nigel J. Gay, *Delaying the International Spread of Pandemic Influenza*, 3 PLoS Medicine issue 6 (Jun. 2006), available at www.plosmedicine.org.

⁴⁸ The term “whooping cough” is a colloquialism for pertussis, an infectious disease characterized by certain aspects of the cough it induces. See *Whooping Cough*, WEBMD.COM, available at <http://www.webmd.com/a-to-z-guides/whooping-cough> (last visited Mar. 16, 2008).

⁴⁹ See Salynn Boyles, *CDC: Adult Whooping Cough Cases May Hit 1 Million*, WEBMD MEDICAL NEWS, Oct. 12, 2005, available at <http://www.webmd.com/news/20051012/adult-whooping-cough-cases-may-hit-1-million>.

⁵⁰ See *id.*

⁵¹ See PERTUSSIS REPORTED CASES, WORLD HEALTH ORGANIZATION, available at http://www.who.int/immunization_monitoring/en/globalsummary/timeseries/tsincidenceper.htm (last visited Mar. 16, 2008) (providing data on reported pertussis infections by country for the years 1980 – 2006).

systems. It is a disease which frequently goes unnoticed and spreads easily from person to person and phomite-based contact.⁵² In the stages where a patient is contagious to the general public, whooping cough could easily present to other passengers, crew members, and even health officials screening passengers as an aggravated cold or bronchitis and not arouse suspicion as to its true nature until the time to control exposure dissipates. Thus, the author includes this type of infectious disease in the discussion because it demonstrates the inability of travelers, aircraft personnel, and even many medical personnel to detect infectious diseases of which a traveler's treating physician would stand to have better knowledge.

Malaria and dengue fever are two examples of vector-borne diseases which continue to ravage much of the world's population.⁵³ For instance, dengue fever has reemerged in South America.⁵⁴ Unlike other vector-borne diseases, such as avian influenza, malaria and dengue fever require a specific type of mosquito in order to be transmitted from vector to human.⁵⁵ The threats posed by vector-borne diseases in connection with travel are twofold. The first risk is that an unnoticeably infected traveler will travel to a place where the required transmitting mosquito is located, and transmit the disease to the mosquito after being bitten, and consequently cause an outbreak.⁵⁶ Second, and less explored, is the possibility of passenger infection while onboard a flight. Although the IHR regime requires disinfection and disinsection of aircraft prior to flight, this does not mean that a flight will be entirely free of vectors, particularly airborne vectors which can easily make their way onto an aircraft while passengers are being received.⁵⁷ Once onboard, it is only a few bites before a mosquito which previously did not carry malaria or dengue bites an infected passenger and goes on to transmit the disease to one or more passengers on the aircraft.

B. Legal Background

1. International Health Regulations

International health issues have been governed by some type of consensus-generated regulation since the mid-1800s, when the precursors to the IHR regime

⁵² See *Whooping Cough*, *supra* note 48.

⁵³ See MALARIA, WORLD HEALTH ORGANIZATION, available at <http://www.who.int/media/centre/factsheets/fs094/en/index.html> (last visited Mar. 16, 2008); DENGUE AND DENGUE HAEMORRHAGIC FEVER, WORLD HEALTH ORGANIZATION, available at <http://www.who.int/mediacentre/factsheets/fs117/en/> (last visited Mar. 16, 2008).

⁵⁴ Vladimir Hernandez, *Dengue Alert Issued in South America*, BBC News, Feb. 6, 2007, available at <http://news.bbc.co.uk/2/hi/americas/6335819.stm>.

⁵⁵ See *Dengue*, *supra* note 53; DENGUE FEVER FACT SHEET, CENTERS FOR DISEASE CONTROL AND PREVENTION, available at <http://www.cdc.gov/NCIDOD/DVBID/DENGUE/> (last visited Mar. 16, 2008).

⁵⁶ See *id.*

⁵⁷ International Health Regulations, WHO. Part I, art. I. 2005.

were created.⁵⁸ From a voluntary set of principles, the IHR regime emerged as a tool of the World Health Organization (WHO) that uses legally bind WHO member states and attempts to create parity in and norms for the handling of medical and health administration and issues.⁵⁹ The IHR regime remained largely unchanged for the forty years between 1965 and 2007.⁶⁰ In the aftermath of post-September 11th based concerns over the potential use of bioterrorism and the 2003 SARS epidemic, the WHO Assembly undertook rewriting the IHR to reflect these concerns as well as the possibility of avian and/or pandemic influenza. The result was the IHR regime which the WHO Assembly ratified in 2005 and came into legal effect in June, 2007.⁶¹

The IHR are a self-executing treaty that became binding on each signatory state as of the effective date.⁶² An exception to the terms of the IHR occurs when the signing state adds reservations to the treaty on signing. In this situation, however, the terms of the treaty, which are not subject to reservation, are still binding on the reserving state.⁶³ However, like many treaties, the IHR places limitations on enforcement mechanisms including prohibiting a state to require that another state fulfill its obligations under the IHR other than public condemnation.⁶⁴

The 2005 IHR devote much time to air and sea travel-related health issues and procedures.⁶⁵ Associated terms such as travelers,⁶⁶ affected,⁶⁷ baggage,⁶⁸ and health-related terms,⁶⁹ are explicitly defined under the IHR. The definitions of disease,⁷⁰

⁵⁸ See Lawrence O. Gostin, *International Infectious Disease Law: Revision of the World Health Organization's International Health Regulations*, 291 JAMA no. 21, 2623 (Jun. 2, 2004).

⁵⁹ See *id.*; INTERNATIONAL HEALTH REGULATIONS (2005), World Health Organization. International Health Regulations (1969). Third annotated edition, WHO (1983).

⁶⁰ See International Health Regulations, WHO. Part I, art. I. 2005.

⁶¹ See STATE PARTIES TO THE INTERNATIONAL HEALTH REGULATIONS (2005), WORLD HEALTH ORGANIZATION, available at http://www.who.int/csr/ihr/states_parties/en/index.html (last visited Mar. 16, 2008).

⁶² CONSTITUTION OF THE WORLD HEALTH ORGANIZATION, CH. V art. 22.

⁶³ See *id.*

⁶⁴ See International Health Regulations, *supra* note 57.

⁶⁵ *Id.* at Part IV, art. 20.

⁶⁶ *Id.* at Part I (defining a “traveler” for the purposes of the IHR as “a natural person undertaking an international voyage”).

⁶⁷ See *id.* (defining “affected” for the purposes of the IHR as “persons, baggage, cargo, containers, conveyances, goods, postal parcels or human remains that are infected or contaminated, or carry sources of infection or contamination, so as to constitute a public risk”).

⁶⁸ *Id.* (defining “baggage” for the purposes of the IHR as “the personal effects of a traveler”).

⁶⁹ *Id.*

event,⁷¹ health measure,⁷² ill person,⁷³ infection,⁷⁴ various types of medical examinations,⁷⁵ public health emergency of international concern,⁷⁶ public health observation,⁷⁷ public health risk,⁷⁸ quarantine,⁷⁹ suspect,⁸⁰ temporary recommendation,⁸¹ and verification, are particularly relevant to this article.⁸²

⁷⁰ International Health Regulations, *supra* note 57, at Part I (defining “disease” for the purposes of the IHR as “an illness or medical condition, irrespective of origin or source that presents or could present significant harm to humans”).

⁷¹ *Id.* at 12 (defining “event” for the purposes of the IHR as “a manifestation of disease or an occurrence that creates a potential for disease”).

⁷² *Id.* at 13. (defining “health measure” for the purposes of the IHR as “procedures applied to prevent the spread of disease or contamination; a health measure does not include law enforcement or security measures”).

⁷³ *Id.* (defining “ill person” for the purposes of the IHR as “an individual suffering from or affected with a physical ailment that may pose a public health risk”).

⁷⁴ *Id.* (defining “infection” for the purposes of the IHR as “the entry and development or multiplication of an infectious agent in the body of humans and animals that may constitute a public health risk”).

⁷⁵ *Id.*

⁷⁶ INT’L HEALTH REGULATIONS, *supra* note 70, at 14 (defining “public health emergency of international concern” for the purposes of the IHR as “an extraordinary event which is determined, as provided in these Regulations: i) to constitute a public health risk to other States through the international spread of disease and ii) to potentially require a coordinated international [health] response”).

⁷⁷ *Id.* at 14 (defining “public health observation” for the purposes of the IHR as “the monitoring of the health status of a traveler over time for the purpose of determining the risk of disease transmission”).

⁷⁸ *Id.* (defining “public health risk” for the purposes of the IHR as “a likelihood of an event that may affect adversely the health of human populations, with an emphasis on one which may spread internationally or may present a serious and direct danger”).

⁷⁹ *Id.* (defining “quarantine” for the purposes of the IHR as “the restriction of activities and/or separation from others of suspect persons who are not ill or of suspect baggage, containers, conveyances or goods in such a manner as to prevent the possible spread of infection or contamination”).

⁸⁰ *Id.* at 15 (defining “suspect” for the purposes of the IHR as “those persons, baggage, cargo, containers, conveyances, goods or postal parcels considered by a State Party as having been exposed, or possibly exposed, to a public health risk and that could be a possible source of spread of disease”).

⁸¹ *Id.* (defining “temporary recommendation” for the purposes of the IHR as “non-binding advice issued by WHO pursuant to Article 15 for application on a time-limited, risk-specific basis, in response to a public health emergency of international concern, so as to prevent or reduce the international spread of disease and minimize interference with international traffic”).

⁸² *Id.* (defining “verification” for the purposes of the IHR as “the provision of information by a State Party to WHO confirming the status of an event within the territory or territories of that State Party”).

The IHR require that aircraft be disinfected and disinsection at certain intervals in order to ensure parity in sanitary conditions during air travel.⁸³ They allow receiving states to require certain medical documentation from travelers prior to their entry into the state.⁸⁴ Although the IHR regime does not require it specifically, certain states, such as the U.S., require airline staff to determine whether a passenger meets the fever and other physical manifestation of illness requirements necessary to trigger a requirement to inform state officials.⁸⁵ In the event that a traveler is suspected of carrying a disease, the IHR allow receiving state officials to hold the passenger for non-invasive tests, observation, quarantine, medical treatment, or to deny entry to the passenger.⁸⁶ Perhaps the greatest innovations of the IHR are the extensive provisions addressing the identification, control, and WHO notification requirements in the event of a confirmed or suspected outbreak of infectious disease,⁸⁷ the reservation of a state's ability to restrict or stop air travel in the event of an outbreak or pandemic,⁸⁸ and the creation and use of a passenger identification and locator card.⁸⁹ Once a state informs the WHO that it has a suspected or confirmed outbreak of an infectious disease, the WHO then will work with the state, and others if necessary, to contain and treat the disease.⁹⁰ The use of a fluid concept of infectious disease triggering WHO notification and intervention is another change from the 1965 IHR, which named distinct diseases as being the sole triggers of these provisions.⁹¹ This fluidity is slightly tempered by the mandatory notification

⁸³ Int'l Health Regulations, *supra* note 70, Annex 5 at 57.

⁸⁴ *Id.* ANNEX 7 at 59.

⁸⁵ See Anne Schuchat, M.D., Acting Dir., Nat'l Ctr. for Infectious Diseases, Ctr. for Disease Control and Prevention, U.S. Dep't of Health and Human Serv., Testimony before Comm. on Transp. and Infrastructure, Subcomm. on Aviation at U.S. House of Representatives, CDC Efforts to Prevent Pandemics by Air Travel (Apr. 6, 2005) (transcript available at <http://www.hhs.gov/asl/testify/t050422.html>) (blocking global spread of disease facilitated by air travel).

⁸⁶ INT'L HEALTH REGULATIONS, *supra* note 70; see Part III, Art. 18, at 26; see also Part V, Ch. I, Art. 23, at 22.

⁸⁷ *Id.* Part II, Art. 6, at 17. The IHR also require a state to provide notice to the WHO within twenty-four hours when it has evidence of a public health risk existing in a third-party. *Id.* Part II, Art. 9(2), at 17. However, there is a greater amount of time allotted to the verification process used by the WHO in the event that there is a potential health issue which does not stem from a public health event. *Id.* Part II, Art. 10, at 18.

⁸⁸ *Id.* Part VIII, Art. 43, at 34. It should be noted, however, that the IHR regime generally seems to disfavor the idea of intense and/or prolonged travel restrictions by a state. See *id.* This attitude toward travel restrictions makes alternative measures, such as the public health do-not-fly list proposed in Part III important to the maintenance of the goals of the IHR regime. See *id.*; See *infra* p. 23..

⁸⁹ See INT'L HEALTH REGULATIONS, *supra* note 70, ANNEX 9 at 66.

⁹⁰ See generally INT'L HEALTH REGULATIONS, *supra* note 70.

⁹¹ See David L. Heymann, Director, Div. of Emerging & Other Communicable Diseases, World Health Org., Testimony Before Comm. on Int'l Relations House of Representatives, Threat to the U.S. from Emerging Infectious Diseases (Jul. 30, 1997) (explaining the terms of the 1965 IHR regime's definition of diseases which would trigger the provisions of the IHR)

requirements for certain diseases; however, outside of a new strain of influenza or SARS, the diseases subject to the mandatory reporting requirement are not those addressed in this article.⁹² The IHR explain that the goal of the passenger locator card is to allow an airline or state to contact a passenger in the event that it is determined that the passenger was potentially exposed to an infectious disease while in flight.⁹³

Concerns over the spread of avian or other forms of influenza, and their morphing into a pandemic exacerbated by air travel, permeate the IHR.⁹⁴ Importantly for the issues studied in this article, the IHR seem to be implicated largely in situations of mass infection which is coterminous and has been identified at some level.⁹⁵ Thus, the IHR are more concerned with a mass outbreak than with the potential of an individual traveler to spread infectious disease during the course of air travel.

2. Regional Organizations

The IHR represent the agreement of the world health and legal community through the WHO Assembly. Outside of this, however, is a system of regional organizations which impact on the way in which a state manages public health and travel issues; however, regional organizations generally do not attempt to enter into areas of jurisdiction which are claimed by the WHO.

Although the Organization of American States (OAS) has promulgated, and most of its members have ratified, conventions addressing air traffic safety, it has done so almost exclusively with the goal of preventing terrorist action involving aircraft, not issues of air travel and public health.⁹⁶ The public health conventions, promulgated by the OAS, are largely aimed at the eradication of common and treatable diseases, improving the health care and conditions of impoverished citizens of OAS member states, and ensuring access to health care in the future.⁹⁷ Infectious diseases outside of HIV/AIDS, pandemic influenza, and avian influenza are not specifically addressed by OAS convention or working group.⁹⁸

(transcript available at http://commdocs.house.gov/committees/intrel/hfa46765.000/hfa46765_0.HTM); See Lawrence Gostin, *The International Health Regulations and beyond*, 4 *Lancet* 606 (Oct. 2004).

⁹² Notification and other reporting requirements under the IHR (2005), IHR Brief No. 2, World Health Organization, available at <http://www.who.int/ihr> (last visited Oct. 18, 2007). The other diseases subject to mandatory reporting requirements are polio and smallpox. *Id.*

⁹³ See INT'L HEALTH REGULATIONS, *supra* note 70, ANNEX 9 at 66.

⁹⁴ See generally INT'L HEALTH REGULATIONS, *supra* note 70.

⁹⁵ *Id.*

⁹⁶ See Inter-American Convention Against Terrorism, Org. of Am. States (June 3, 2002), available at http://www.oas.org/xxxiiga/english/docs_en/docs_items/AGres1840_02.htm.

⁹⁷ See, e.g., Seventh Pan Am. Sanitary Conference, Organization of Am. States, Additional Protocol to the Pan Am. Sanitary Code, Havana, Cuba, (Nov. 14, 1924), available at http://www.paho.org/English/D/OD_308_ch1-3.htm.

⁹⁸ See generally Organization of Am. States, available at <http://www.oas.org/main/english/> (last visited Oct. 18, 2007).

Currently, the European Union (EU) is in a state of jurisdictional flux over the IHR and the overall public health. As a regional organization, the EU has no membership in the WHO Assembly and cannot make the IHR effective; only states themselves may sign and ratify the IHR regime.⁹⁹ All EU member states have ratified the IHR.¹⁰⁰ The key jurisdictional issues between the EU and its members are notification, interrelation of certain IHR provisions with EU regulations, and the ability of an individual EU member state to reserve on the IHR.¹⁰¹ Prior to their effective date, an EU Committee issued a memorandum to member states requiring member states to commit to notifying the EU prior to or coterminously with the WHO in the event of a suspected or confirmed outbreak, in order to meet their EU-based obligations.¹⁰² This memorandum further opined that several provisions of the IHR were in conflict with EU regulations and that a memorandum of understanding between the EU and member states would be necessary in regards to these provisions and the potential for member states to reserve on certain IHR provisions.¹⁰³ Reaction to this memorandum ranges from marked disagreement by the British Parliament, to tacit ignoring¹⁰⁴ as adopted by most member states when they ratified the IHR without a memorandum of understanding with the EU.¹⁰⁵ Interestingly, the EU has had little policy involvement with the issue of infectious disease and air travel outside of general concerns over pandemic influenza and avian influenza.¹⁰⁶ Instead, member states promulgated their own rules and plans for pandemic or avian influenza.¹⁰⁷

Both the Association of Southeast Asian Nations (“ASEAN”) and Asia-Pacific Economic Community (“APEC”) have committees which work to further regional coordination in the event of a pandemic or avian influenza.¹⁰⁸ The goal of both

⁹⁹ See CONSTITUTION OF THE WORLD HEALTH ORGANIZATION, CH. III ART. 3 (“Membership in the Organization shall be open to all States.”).

¹⁰⁰ See STATE PARTIES TO THE INTERNATIONAL HEALTH REGULATIONS (2005), WORLD HEALTH ORGANIZATION, available at http://www.who.int/csr/ihr/states_parties/en/index.html (last visited Feb. 28, 2008).

¹⁰¹ See House of Commons, European Scrutiny Comm., Implementation of Int’l Health Regulations, 33rd Rpt. § 5., Session 2006-7, Jul. 25, 2007, available at <http://www.publications.parliament.uk/pa/cm200607/cmselect/cmeuleg/41-xxxii/41-xxxii.pdf>.

¹⁰² Comm. of the European Communities, Comm’n from the Comm. to the European Parliament and the Council on the Int’l Health Regulations (Sept. 26, 2006).

¹⁰³ See *id.*

¹⁰⁴ See *supra* note 101.

¹⁰⁵ See *supra* note 100.

¹⁰⁶ See, e.g., EUROPA, THREATS TO HEALTH, EARLY WARNING AND RESPONSE SYSTEM FOR THE PREVENTION AND CONTROL OF COMMUNICABLE DISEASES, available at http://ec.europa.eu/health/ph_threats/com/early_warning_en.htm (last visited Mar. 16, 2008).

¹⁰⁷ See *supra* Part II. A.

¹⁰⁸ See TASK FORCE FOR EMERGENCY PREPAREDNESS, ASIA-PACIFIC ECONOMIC COOPERATION, available at http://www.apec.org/apec/apec_groups/som_committee_on_economic/som_special_task_groups/emergency_preparedness.html (last visited Mar. 16, 2008); see also HEALTH TASK FORCE, ASIA-PACIFIC ECONOMIC COOPERATION, available at

organizations is to assure that the economic and infrastructural stature of their members is not harmed in the event of any such outbreak, while at the same time seeking to promote inter-regional cooperation and assistance in the event of an outbreak.¹⁰⁹ While APEC pays particular attention to the role which aviation and aviation control had in the spread and control of SARS, the organization has not directly promulgated rules or agreements addressing aviation and infectious disease.¹¹⁰ ASEAN is particularly concerned with the threat of avian influenza and with bringing parity to the health care systems of its member states; aviation and infectious disease are not stated priorities of ASEAN or its committees.¹¹¹

The African Union (“AU”) works extensively with issues of poverty eradication and the associated health care issues which relate to poverty.¹¹² Within the AU member states and in their interaction with other nations, the demonstrated focus of public health concern and policy have been the treatment and prevention of HIV/AIDS and the documentation and control of avian influenza in humans and birds.¹¹³ The AU has not taken affirmative steps to address issues associated with aviation and infectious disease.¹¹⁴

3. Applicable Diplomatic Protocols and Conventions

Customary international law establishes the ability of states to conduct diplomatic and consular affairs within other states, and extends certain rights, privileges and protections to diplomatic and consular staff and foreign travelers. In 1961, the Vienna Convention on Diplomatic Relations attempted to codify the customary international law of diplomatic and consular affairs. In 1963, a further convention was created to expand the diplomatic and consular rights, privileges, and protections.¹¹⁵ These conventions make it clear that a traveler from State A who is

http://www.apec.org/apec/apec_groups/som_committee_on_economic/working_groups/health.html (last visited Mar. 16, 2008).

¹⁰⁹ *See id.*

¹¹⁰ *See* TASK FORCE FOR EMERGENCY PREPAREDNESS, *supra* note 108; *available at* http://www.apec.org/content/apec/apec_groups/som_special_task_groups/emergency_prepare_dness.html (last visited Mar. 16, 2008); *see also* HEALTH TASK FORCE, *supra* note 108; *available at* http://www.apec.org/content/apec/apec_groups/som_special_task_groups/health_task_force.html (last visited Mar. 16, 2008).

¹¹¹ *See* JOINT DECLARATION, SPECIAL ASEAN LEADERS MEETING OF SEVERE ACUTE RESPIRATORY SYNDROME (SARS), BANGKOK, THAILAND (Apr. 29, 2003), *available at* <http://www.aseansec.org/14750.htm> (last visited Mar. 16, 2008); *see also* DECLARATION OF THE 8TH ASEAN HEALTH MINISTERS MEETING, ASEAN UNITY IN HEALTH EMERGENCIES, YANGON, BURMA (Jun. 21, 2006).

¹¹² *See* THE SPECIALIZED TECHNICAL COMMITTEES, AFRICAN UNION, *available at* http://www.africa-union.org/root/au/organs/Specialized_Technical_Committee_en.htm (last visited Mar. 16, 2008).

¹¹³ *See supra* Part II. A.

¹¹⁴ *See generally* AFRICAN UNION, *available at* <http://www.africa-union.org/root/au/index/index.htm> (last visited Oct. 18, 2007).

¹¹⁵ *See* VIENNA CONVENTION ON DIPLOMATIC RELATIONS 1961, *available at* http://untreaty.un.org/ilc/texts/instruments/english/conventions/9_1_1961.pdf (last visited Mar. 16, 2008); VIENNA CONVENTION ON CONSULAR RELATIONS 1963, *see also available at*

located in State B has the right to contact diplomatic personnel from State A in the event of criminal detention.¹¹⁶ Inferentially, these conventions and customary international law establish in the diplomatic personnel of State A the right to petition the government of State B on behalf of their citizens in the event that a citizen is subject to pandemic or other healthcare regulations.¹¹⁷ It may be inferred that such rights would also extend to a citizen-traveler of State A who is held by State B for health reasons or denied entry to State B.¹¹⁸ However, neither the conventions nor customary international law establish protocols for the handling of such situations.¹¹⁹

PART III

A. *Background Information on the Tuberculosis Traveler Incident*

The tuberculosis traveler incident occurred in May 2007, a month before the 2005 IHR regime became legally effective.¹²⁰ The exact details of the incident remain a matter of controversy; however, it is clear that, even had the 2005 IHR regime been in effect at the time, it would not have eased the situation. It has been determined that the tuberculosis traveler was an Atlanta lawyer.¹²¹ The tuberculosis traveler was engaged to be married around the time of his diagnosis and had planned a wedding in Greece followed by a European honeymoon.¹²² It is at this point where stories differ. Some versions have the tuberculosis traveler being unaware of the severity of his tuberculosis infection until he left the country for his wedding.¹²³ Variants on this story have him asking if he would be able to travel and being advised against it but not barred by local, state, or national health authorities.¹²⁴ In another version, the Fulton County health department, in conjunction with the State of Georgia and the CDC, warned the tuberculosis traveler that he should not leave the country for his wedding and that the appropriate course of action was to voluntarily enter into quarantine for treatment.¹²⁵ Regardless which of these stories

http://untreaty.un.org/ilc/texts/instruments/english/conventions/9_2_1963.pdf (last visited Mar. 16, 2008).

¹¹⁶ *See id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ *See TB patient faces months in care*, BBC NEWS, May 31, 2007, available at <http://news.bbc.co.uk/2/hi/americas/6709289.stm> (last visited Mar. 16, 2008).

¹²¹ *See id.*

¹²² *See TB man 'sorry' over plane trips*, *supra* note 2.

¹²³ *See Exclusive: TB Patient Asks Forgiveness but Defends Travel*, ABC NEWS, Jun. 1, 2007, available at <http://abcnews.go.com/GMA/OnCall/story?id=3231184> (last visited Mar. 16, 2008).

¹²⁴ *See id.*; *see also TB patient faces months in care*, *supra* note 120., available at <http://news.bbc.co.uk/2/hi/americas/6709289.stm> (last visited Mar. 16, 2008).

¹²⁵ *See id.*; *see also Testimony of Julie L. Gerberding, Director, U.S. Department of Health and Human Services Before House Homeland Security Committee*, Jun. 6, 2007, available at <http://www.hhs.gov/asl/testify/2007/06/t20070606a.html> (last visited Feb. 21, 2008).

is believed or true, the facts support only that the tuberculosis traveler was able to travel to Greece for his wedding, making connecting flights in Germany, then venturing around Europe before arriving in Rome, where the US embassy made contact with him.¹²⁶ At this point, the supposition is that the diplomatic officials warned the tuberculosis traveler that he was infected with the drug-resistant strain of tuberculosis, potentially contagious and suggested that he remain in Rome for treatment.¹²⁷ Reportedly, diplomatic personnel and the tuberculosis traveler's family attempted to secure his flight to the US on a chartered jet.¹²⁸ Fearing that he would be required to stay in quarantine in Italy, and concerned with the quality of medical care he would receive, the tuberculosis traveler was able to board a flight offered by an American carrier from Rome to Montreal, Canada.¹²⁹ The tuberculosis traveler was again found by US authorities when he attempted to cross the Canadian border, apparently because the US government became aware that he was on the flight to Montreal and were able to disseminate his name to border crossings.¹³⁰ This story became national and international news when the airlines on which the tuberculosis traveler flew attempted to find passengers who might have been exposed to the tuberculosis traveler.¹³¹ The actions of the tuberculosis traveler, state, local, and federal authorities, and the aviation system itself came under intense scrutiny in the wake of the story. The matter became the subject of Congressional hearings in the United States, yet to date there have been no major national or international measures relating to air travel which have been adopted in the aftermath of the tuberculosis traveler incident.

B. Implications and Suggestions

Why should lawyers and public health practitioners study the tuberculosis traveler incident? The media frenzy surrounding the incident has subsided, the tuberculosis traveler is currently being treated in quarantine, and the state, local, and federal agencies claim that they have each learned a valuable lesson from the incident. Studying the tuberculosis traveler incident is not important because of these individual components, however; it is important because the same situation could happen anywhere in the world and it is possible that no one would be the wiser. It is a tragedy which could be repeated with a host of infectious diseases, especially those discussed in detail in Part II.A. of this article. It is a tragedy which exposes a fatal flaw in the IHR and the international public health system.

As a regime to combat the prescient threat of outbreak or pandemic involving an identifiable and observable disease, the IHR are arguably as appropriate a legal solution as could be fashioned under international law in view of the complexities of infectious disease diagnosis and treatment. The fatal flaw in the IHR regime is the presumption that an outbreak or pandemic will be readily observable and identifiable

¹²⁶ *See id.*

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *See Exclusive: TB Patient Asks Forgiveness but Defends Travel, supra* note 123.

¹³⁰ *See Testimony of Julie L. Gerberding, supra* note 125.

¹³¹ *See TB patient faces months in care, supra* note 120.

before or during air travel and that an outbreak or pandemic will necessarily involve multiple patients suffering from an infectious disease at the same time.¹³² Certainly, diseases such as Ebola are observable when a patient becomes symptomatic, but before this stage it is virtually impossible for a state to quarantine the entire area in which a suspected outbreak has occurred. Beyond this, the IHR regime does not clearly envision a person carrying a disease such as drug-resistant tuberculosis, malaria, whooping cough, or even influenza to trigger the reporting and protection requirements unless he is part of a larger cell of disease activity which has been noticed by national officials.¹³³ In regards to air travel and infectious disease, the most power the IHR regime gives to states and air carriers is a reporting requirement on behalf of the air carrier if a member of its personnel determines that the symptoms manifested by a passenger merit further investigation and the receiving state's ability to detain, test, quarantine, treat, or deny entry to a passenger reasonably suspected of posing a threat to public health.¹³⁴ Even in instances where the threshold for IHR reporting and containment procedures has been met, the state is only under a voluntary obligation to fulfill its commitments.¹³⁵ By allowing the state to report to the WHO within twenty-four hours of reasonable suspicion of an outbreak, the IHR regime sacrifices efficiency for certainty and creates the possibility of the suspected disease being spread through air travel before it has been confirmed.¹³⁶

In a highly publicized attempt to regulate the safety of airline travel after September 11th, the United States created what has come to be known as the "no-fly-list," a list of persons suspected of having terror or other suspicious connections who are to be refused the ability to travel domestically or to the United States by air.¹³⁷ This list has had several attention getting gaffes, such as barring United States Senator Edward Kennedy from travel,¹³⁸ however, there has been no argument that this list is not successful in its stated goal. The United States is not alone in its use of lists to target individuals deemed to pose a threat to public safety. One of the best known users of such lists is Interpol, which has used criminal and terrorist lists to track suspect individuals for years.¹³⁹ Interpol's use of lists also alerts states to the

¹³² See generally INTERNATIONAL HEALTH REGULATIONS (2005), WORLD HEALTH ORGANIZATION, available at <http://www.who.int/csr/ihr/en/> (last visited Feb. 21, 2008).

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ See QUESTIONS AND ANSWERS: SECURE FLIGHT PROGRAM, U.S. DEPARTMENT OF HOMELAND SECURITY, TRANSPORTATION SAFETY ADMINISTRATION, available at http://www.tsa.gov/what_we_do/layers/secureflight/qanda.shtm (last visited Mar. 16, 2008).

¹³⁸ See Sara Kehaulani Goo, *Sen. Kennedy Flagged by No-Fly List*, WASHINGTON POST, Aug. 20, 2004, available at <http://www.washingtonpost.com/wp-dyn/articles/A17073-2004Aug19.html> (last visited Mar. 16, 2008).

¹³⁹ See OPERATIONAL DATA SERVICES AND DATABASES FOR POLICE, INTERPOL, available at <http://www.interpol.int/Public/icpo/corefunctions/databases.asp> (last visited Mar. 16, 2008).

identities of persons believed to be potential threats to public security and allows them to screen entering and exiting travelers against the list.¹⁴⁰

With this in mind, the author suggests the creation of an international do-not-fly list based on public health concerns (public health list), to be maintained by a dedicated unit of the WHO, with contacts in every state. Unlike the terror-related do-not-fly list and Interpol's lists, the placement of a person on the public health list would be temporary unless the person's illness is such that it would require a constant bar from public air travel. The list would not serve as a bar to private air travel; such as by chartered jet, provided that the flight crew and any potential co-passengers were made aware of the person's health status. A person would be placed on the list when a confirmed diagnosis of infectious disease is made or when there is a high suspicion of such an illness. Placement would be made by the person's own physician or hospital, and the listed person would have the right to a second opinion if he believed that the diagnosis was in error. A person could also be placed on the public health list in the event that she lived in, had traveled to, or was otherwise in contact with an area of suspected or confirmed infectious disease outbreak. Unlike the IHR regime's twenty-four hour grace period, a state would be required to list places which are potentially or actually affected by an infectious disease outbreak on the public health list and all air carriers in the state would be required to screen passengers for contacts with the affected area. A person would be removed from the public health list when (1) it is determined by certified medical personnel that the person is not infected with the disease claimed; (2) the person has successfully been treated for the infectious disease and is no longer contagious; (3) the person demonstrates that he has not in fact had contact with the area of suspected or established outbreak; and (4) the area with which the person has had contact is certified as no longer being the site of an outbreak.

It is undeniable that this public health list system would cause inconvenience to some air travelers, especially when the medical issue occurred close to a scheduled flight time or was the result of misdiagnosis. However, the public health list represents a prompt, verifiable method for containing the potential spread of infectious disease through air travel at a time when an infectious disease is at its most threatening and potentially devastating. To use the example of the tuberculosis traveler incident, if the public health list had been in place, the physician who diagnosed tuberculosis of any type would have placed the tuberculosis traveler's name on the public health list and, while agencies and the patient haggled over the best form of treatment, the flying public would have been protected from the threat posed by this disease. In another example, the public health list would have barred people in the affected area of the Democratic Republic of the Congo from flying on the suspicion that there was an outbreak of Ebola in the area. This might have caused an inconvenience to the traveler who was not infected; however, considering that over two-thirds of the suspected cases of Ebola were confirmed as such and the area was later placed in affective quarantine, this individual inconvenience would, on a grand scale, be dwarfed by the illness and economic devastation which could have been transmitted had the passenger been infected with the Ebola virus and had boarded an aircraft prior to his diagnosis.

¹⁴⁰ *See id.*

PART IV

A. Scenarios

Arnold is an American from New York. Arnold is an architect and has been hired to work on a building project in France. As a child, he received the requisite immunizations for children; his parents were Catholic and had no objections to medical care. When Arnold was a teenager, his parents died and he was taken in by his aunt, who exposed him to many forms of religion in an attempt to broaden his horizons. Now, he belongs to a religion which regards medical treatment, including medical tests of any sort, as sinful. Because of these beliefs, Arnold has not been able to receive the immunizations necessary for him to be able to see the world as he has always dreamed of doing; he is particularly excited to go to France because it does not require such pre-travel immunizations for Americans. For all of his life, Arnold has been afflicted by environmental allergies. His friends have urged him to seek medical help to alleviate the symptoms; sneezing, watery eyes, a dry cough, and flushing, but he has politely declined these suggestions because of his religious beliefs. Arnold is enjoying his business class seat and the in-flight movie when he begins to sneeze and cough repeatedly. He assumes that he is allergic to the seat covers or his pillow and thinks nothing of it. Fifi, the flight attendant, notices these symptoms and becomes concerned that Arnold is carrying influenza. She attempts to question him and does not believe his assertions that his symptoms are the result of allergies. On arrival in Paris, Fifi informs the French authorities of Arnold's symptoms and her suspicions. Arnold is then taken to an airport medical clinic where the doctors explain that they need to perform routine tests to rule out influenza. Arnold refuses to give consent to these tests because of his religious beliefs and asks to telephone the United States embassy. The doctors grant this request and the embassy officials attempt to reason with the doctors to no avail. Unable to conduct tests, the airport doctors and French authorities decide to hold Arnold for observation despite the embassy's protests and Arnold's explanation that he will be fired if he does not arrive at work in three hours. Arnold remains under surveillance for two days.

Betsy is a British citizen. Before her wedding, Betsy decides to do one last thing with her friends as a single woman and arranges to meet them in Turkey for a cultural tour. Her fiancé, Bobby, a school teacher, sees her off at Heathrow airport and returns home to make some chicken soup because he has caught a cold from one of his students. Betsy is feeling under the weather when she boards her flight to Istanbul and castigates herself for not having allotted herself enough time to stop by her doctor's office for a consultation prior to her leaving for Turkey. Determined to enjoy her vacation, she asks the flight attendant for a cup of tea and takes a nap. Upon arrival, Betsy sneezes and coughs her way to the front of the customs line. Recip, the customs agent, notices Betsy's symptoms and thinks that she looks rather clammy. He politely engages in a conversation with her while waiting for the medics to arrive. The medics bring Betsy to a room where they explain their concerns that she might have a communicable disease. Tired and rather frightened, Betsy confesses that she has felt unwell. Unfortunately, her attempts to speak in Turkish overstate her symptoms and she is denied entry to the country. Betsy remains in solitary confinement while the Turkish and British authorities attempt to resolve the issue of transporting Betsy to England. Several days later, Betsy is

escorted to a chartered jet which flies her to England, where it is determined that she has a mild influenza.

Brenda, Bobby's cousin and Betsy's best friend, is scheduled to arrive in Turkey for the tour several days after Betsy. Brenda is a professional photographer and a well-known forgetful person. After having dinner with Bobby and Betsy the night before Betsy's flight, Brenda went on assignment to the Scottish highlands, leaving her cell phone in London. As usual, she fails to inform her family where she will be and has never learned to check her voice mail. Her plan was to fly from London to Libya for a quick photo shoot and then from Libya to Turkey to meet up with Betsy. By the time she arrives in Libya, Brenda has the same symptoms as Betsy and is denied entry as well. However, a diplomatic argument between the British and Libyan governments over terrorism issues has resulted in England recalling its diplomatic personnel from Libya. Betsy is held for observation for several days until it is determined that she has a head cold. She is then allowed to proceed to Turkey.

Jimmy, as he is known to his friends, is a Japanese citizen studying law in America. He returns to Tokyo for the summer to work at a prestigious transnational law firm. Jimmy's father, a world renowned physician specializing in infectious diseases, is very proud of his son and sends him on trips around Asia over his vacation so that Jimmy can further his love of travel. Jimmy's father receives an urgent call from the CDC requesting that he consult on a case and he leaves before Jimmy returns from one of his trips. Jimmy's mother gives him tickets to Vietnam for the following weekend. Jimmy's mother, also an infectious disease doctor, is concerned by Jimmy's cough but attributes it to too many billable hours. When she says that she would like to visit her sister in Kyoto for a few days, Jimmy assures his mother that he will be fine and she leaves. Jimmy's cough continues and he feels ill but he is determined to visit Vietnam and complete his tour of Asia since he knows that he will have to study for the bar exam the following summer. Being a conscientious man, he wears a face mask when he boards the air plane to Hanoi on the chance that he might be contagious. The face mask concerns Vicky the flight attendant, who informs Victor the pilot of a potentially ill passenger. Victor then informs the appropriate authorities in Hanoi and Jimmy is escorted to a holding area when he disembarks. The doctors tell him that they believe he has tuberculosis and want to quarantine him for treatment. Jimmy telephones the Japanese embassy frantically, pleading with staff to help him arrange for a trip back to Japan. He has no problem with the idea of quarantine, knowing that he will not be allowed to return to America for school until he is deemed free of tuberculosis, but wants to be treated by his father and mother. Jimmy's father promises that he will pay all costs associated with his son's transportation to Japan. The embassy is in a quandary until the Vietnamese government allows a jet chartered by Jimmy's father to fly Jimmy home for treatment.

B. Implications and Suggestions

The above scenarios illustrate the prevalence of air travel and the ease with which the inadequacies of the IHR regime and current diplomatic conventions can be found in everyday situations. While the drafters of the 2005 IHR regime accomplished their goal of targeting pandemic detection and response with international governance and regulation, they did not address individual or even group issues which necessarily arise in less dire situations yet are still an issue to air travel,

infectious disease control, and diplomatic relations. Likewise, the Vienna Conventions of 1961 and 1963 accomplished the goal of codifying and clarifying customary international law in regards to diplomatic and consular affairs but did not contemplate the role of diplomatic staff in issues of aviation and infectious disease *per se*. The faults of the IHR and Vienna Conventions do not apply solely to isolated incidents such as those described in the scenarios above. At the onset of a pandemic, there will necessarily be panic on the part of travelers and uncertainty on the part of State A and the diplomatic personnel of State B stationed in State A as to how to proceed in the event that a traveler from State B is thought to be infected with the pandemic disease. The uncertainty and lack of planning and guidance for such an event was personified in the tuberculosis traveler incident, where United States embassy officials were uncertain as to the requisite protocol for treating or transporting the tuberculosis traveler. Because of the potential harm to passengers, public health, and diplomatic relations, it is necessary for these problems to be addressed immediately so that they do not become an impediment in the event of a legitimate pandemic event. It is the author's belief that two simple amendments to existing treaties could remedy the majority of these faults.

Insertion of language in the Vienna Convention which clearly defines the rights of a sending state to contact, counsel, provide medical assistance, and facilitate transportation to the sending state would crystallize the rights of sending states and the obligations of receiving states. Such an amendment would avoid confrontation, especially during times of tension caused by an outbreak or pandemic, and would provide travelers with the assurance that they would not be in limbo while the respective governments involved decided how to handle their illness. This will avoid horror stories of detention and illness which could easily undermine international air travel and spoil international relations.

An amendment to the IHR would also clarify the status of travelers and states for the purposes of infectious disease and air travel. Such an amendment should provide the boundaries for individual choice of treatment, for example, whether the traveler wants to be returned to his country of residence for treatment or to remain in the state to which he traveled, as well as a procedure for personnel of the sending and receiving state to follow when faced with such questions. In times of stress and uncertainty, it is possible that states will not agree on the appropriate course of treatment for travelers who are suspected of carrying infectious diseases regardless of the insertion of an amendment to the IHR regime. Therefore, the IHR amendment should include a fast-track procedure for the issue to be brought before the WHO's governing officers for a decision on the best course of action for the individual traveler and the public health generally. This process would be aided by the designation of a WHO officer competent to decide such cases at each of the WHO's regional offices.

These suggested amendments would likely not solve every issue involved in the juxtaposition of aviation, infectious disease, and diplomatic relations. However, these amendments would solve many of the issues attendant in this juxtaposition and would provide guidance for the unexpected situations which can foreseeably arise given the nature of infectious disease and the rapidity of air travel.

PART V – CONCLUSION

Air travel has truly opened a new frontier for business and pleasure across the globe. It is an essential part of the world economy in many ways and has been

instrumental in bringing prosperity and modernization to areas of the globe which were previously isolated. Unfortunately, this interconnectedness brings with it risks, including the spread of highly infectious diseases at an unprecedented speed and scale. While the tuberculosis traveler incident has been categorized by some as being the result of placing personal interests above public good, it serves as an instructive method to evaluate many of the flaws in the current international system governing air travel and infectious disease. As demonstrated above, issues will arise even in instances where a traveler does not purposefully travel while ill.

This article calls for the creation of an international public health do-not-fly list akin to those used by Interpol and the United States government as a stop-gap measure to ensure that passengers who have been diagnosed with infectious diseases or have been exposed to infectious diseases are unable to travel until it is established that it is medically safe for them to do so. This article has also called for amendments to the IHR and the Vienna Conventions to clarify the rights and obligations of travelers and states in the event of a suspected or established case of infectious disease in air travel. Although such measures could be adopted through regional agreements without amending any of these documents, a regional solution is inappropriate both because it would not establish uniformity and because most regional organizations have shied away from issues involving aviation and infectious disease in favor of the IHR regime and WHO actions.

It would be undeniably naïve to think that law or medicine can create an environment in which it is impossible for infectious disease to spread through air travel. By adopting the proposals made in this article, however, the WHO and Vienna Convention signatories would substantially reduce the risks of infectious disease spreading through air travel. This would increase the likelihood that the flying public will be able to experience fear in the movie theatre rather than the cabin.