

Article 14 *Prevention of Spread of Disease*

Each contracting State agrees to take effective measures to prevent the spread by means of air navigation of cholera, typhus (epidemic), smallpox, yellow fever, plague, and such other communicable diseases as the contracting States shall from time to time decide to designate, and to that end contracting States will keep in close consultation with the agencies concerned with international regulations relating to sanitary measures applicable to aircraft. Such consultation shall be without prejudice to the application of any existing international convention on this subject to which the contracting States may be parties.

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1 Foresight Regarding Airborne Diseases

This provision imposes a responsibility on States to take measures in preventing the spread of disease through air transport. It is a very resilient provision that was designed to address communicable diseases prevalent in 1944 but leaves the door open to be inclusive to modern day diseases, two of which that spread were SARS and the Avian Flu pandemic. This provision explicitly devolves primary responsibility on States to take effective measures to prevent airborne diseases in aircraft and implicitly requires States to issue guidelines for airlines, by liaising with the international agencies concerned. *Non obstante*, airlines have to face certain legal issues themselves in terms of their conduct. Primarily, airlines are expected to conform to applicable international health regulations and the laws of the countries in which their aircraft land.¹ Furthermore, the airline owes its passengers a duty of

¹World Health Organization, *International Health Regulations*, Third Annotated Edition, WHO: Geneva 1983.

care² to exercise all caution in protecting their rights, so that a blatant instance of a person who looks sickly and coughs incessantly at the check-in counter cannot be ignored. Common law principles of tort law vigorously distinguish between negligence, recklessness and wilful blindness. Of these elements of liability, wilful blindness is particularly relevant since it brings to bear the need for an airline to be vigilant in observing passenger profiles in potentially dangerous or threatening situations

2 SARS

Civil aviation has traditionally been used not only as the speediest means of communication and commercial transport between and beyond national boundaries, but also as a means of solace, particularly in providing relief to communities in distress whether from natural disaster, famine and ill health or war. Unfortunately, aviation has also been used as a weapon of mass destruction, particularly in the context of the catastrophic events of 11 September 2001. The latest concern of the international community may well be that, although aviation cannot be matched by other means of transportation in view of the speed inherent in air transport, it nonetheless portends certain threats to human health which may emerge as a result of its very nature, requiring the cloistering of a large number of humans in a limited space where ventilation and air pressure have to be provided in a contrived manner.

In this regard, the compelling concern in 2002 was the spread of Severe Acute Respiratory Syndrome (SARS) which has an alarmingly high and increasing morbidity rate, which approached 6 % at its peak. Although the spread of the disease abated to a manageable degree in a few months of its outbreak, the threat of a pandemic lingered on and it would not be surprising if it were to resurface after a lapse of time. A vaccine against this dreaded disease may be several years away and the prospects of a cure are not in sight. Some experts on communicable diseases have gone to the extent of predicting a global pandemic, along the lines of the Influenza which afflicted the world in 1919–20 killing 20 million worldwide despite its low morbidity rate of 1 %. The threat posed by SARS is compounded by the fact that already large countries such as China are severely affected, along with countries that have a high rate of trans-border communication such as Hong Kong and Singapore. It could be envisioned that, unless contained, the disease could spread to other large countries such as Australia, Canada (which has already shown susceptibility) and the United States, along with the States of Europe. Stringent measures have already been taken by the countries afflicted such as enforcement of quarantines on thousands of hospital employees and patients, together with isolation of those not ill but have had some contact with afflicted individuals.

²Air carrier liability in negligence is extensively discussed in Abeyratne (2002b), *R. v. Secretary of State for Trade Industry* Ex parte Lonrho plc [1989] 1 W.L.R. 325 at 65–78.

2.1 Health Implications of SARS

From an aviation perspective, it was important to be aware of the grave risk that may be posed by the SARS virus in an in-flight situation. To have full realization, the nature of the disease and the manner in which it spreads has to be fully understood. In general, SARS begins with a fever greater than 100.4 °F (>38.0 °C). Other symptoms may include headache, an overall feeling of discomfort, and body aches. Some people also experience mild respiratory symptoms. After 2–7 days, SARS patients may develop a dry cough and have trouble breathing.

The primary way through which SARS appeared to spread is by close person-to-person contact. Most cases of SARS have involved people who cared for or lived with someone with SARS, or had direct contact with infectious material (for example, respiratory secretions) from a person who has SARS. Potential ways in which SARS can be spread include touching the skin of other people or objects that are contaminated with infectious droplets and then touching your eye(s), nose, or mouth. This can happen when someone who is sick with SARS coughs or sneezes droplets onto themselves, other people, or nearby surfaces. It also is possible that SARS can be spread more broadly through the air or by other ways that are currently not known. Thus, the aircraft cabin environment is highly conducive to the spread of the SARS virus.

Cases of SARS continued to be reported mainly among people who have had direct close contact with an infected person, such as those sharing a household with a SARS patient and healthcare workers who did not use infection control procedures while taking care of a SARS patient. Any airborne disease such as SARS is impacted by the environment, particularly if such were to be an enclosed one as in an aircraft cabin. The ventilation system plays a critical part in this regard and therefore, it is crucial to an air carrier's conduct to determine the manner in which an air carrier decides on ventilation systems in its aircraft. For instance, early jet aircraft until the last decade offered 100 % fresh air in the cabin. However, in the 1990s, ironically with more evolved technology, ventilation systems in aircraft were built in such a way as to recycle stale air, thus increasing the chances of survival of bacteria in the aircraft cabin. Even if such a practice were ineluctable, in that recycling is a universal practice which is calculated to conserve fuel, a prudent airline would take other measures, such as change of air filters through which ventilation is provided.

Air in the cabin is usually dry and lacking in humidity since the outside air at cruising altitudes has an extremely low water content. The humidity level in the air of an aircraft cabin at cruising level has been recognized as being of 10–20 % humidity which is approximately the same as desert air. The lack of humidity *per se* does not facilitate the transmission of airborne vectors, but makes breathing difficult, particularly for persons suffering from respiratory diseases, such as Asthma. When dry air becomes stale through recycling, the chances of removing droplets of air which is usually accomplished by fresh air becomes remote. A suggested solution for a prudent airline to take in this regard is to reintroduce 100 % fresh air which is humidified.

One of the major preoccupations of the World Health Organization (WHO) is to ensure the international prevention of disease. Quarantine regulations, which was the first step toward this aim, has a long history, having been introduced during the tenth Century. WHO adopted International Health Regulations in 1951,³ the philosophy of which was recognized subsequently as:

The purpose of International Health Regulations is to prevent international spread of disease, and in the context of international travel, to do so with the minimum of inconvenience to the passenger. This requires international collaboration in the detection, reduction or elimination of the sources from which infection spreads rather than attempts to prevent the introduction of disease by legalistic barriers that over the years have proved to be ineffective.⁴

Of course, the purpose of this philosophy will be defeated if individual States have no willingness or the political will to notify the outbreak of communicable diseases to WHO, particularly in the absence of a monitoring body, incentives for States to notify or sanctions. Therefore the preeminent obligation of States is to ensure that the outbreak of any communicable disease is notified in a manner that would benefit the world and help prevent the spread of the disease across national boundaries. Regrettably, there have been instances recorded where WHO reports that no new instances of a communicable disease has been recorded while the news media give contrary information simultaneously.⁵ One of the reasons adduced for the lack of interest on the part of States to report the incidence of communicable diseases to a world body such as WHO has been identified as the lack of importance attributed to International Health Regulations (IHR) by States who consider the regulations as an obsolete relic.⁶

The international health dimension of SARS involves human rights issues as well. International human rights law has laid down two critical aspects relating to public health: that protection of public health constitutes legitimate grounds for limiting human rights in certain circumstances (such as detention of persons or house arrest tantamount to quarantine exercises would be justified in order to contain a disease); and individuals have an inherent right to health. In this context it is not only the State or nation that has an obligation to notify WHO of communicable disease but the human concerned as well, who has an abiding moral and legal obligation. In 1975, WHO issued a policy statement which subsumed its philosophy on health and human rights which stating:

³See Gear and Deutschman (1981), pp. 273–343.

⁴World Health Organization, *Vaccination Certificate Requirements and Health Advice for International Travel*, Geneva, 1988, p. 7.

⁵See World Health Organization—Functioning of the International Health Regulations for the period January 1 to December 31 1984, 60 *Weekly Epidemiological Record*, December 13, 1985 at p. 386. It is also interesting to note that WHO reports that only 40 % of diagnosed cases of AIDS are reported to the Organization. See. Schachter and Joyner (1995), p. 865.

⁶See World Health Organization - Functioning of the International Health Regulations for the period January 1 to December 31 1985, Part 1, 61 *Weekly Epidemiological Record*, December 12, 1986 p. 303.

The individual is obliged to notify the health authorities when he is suffering from a communicable disease (including venereal diseases) or has been exposed to infection, and must undergo examination, treatment, surveillance, isolation or hospitalization. In particular, obligatory isolation or hospitalization in such cases constitutes a limitation on freedom of movement and the right to liberty and security of person.⁷

It is critical for an evaluation of the health and aeronautical implications of SARS that the term “health” be defined in context. While the WHO Constitution identifies as an objective of the Organization “attainment of the highest possible level of health”, the state of health is defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”.⁸ In an aeronautical perspective, as will be seen later in this chapter, this is a tough act to follow, as international responsibility in the carriage of persons extends only as far as the obligation to prevent injury, wounding or death, and not to the physical or mental well-being of a person.

2.2 Aeronautical Implications of SARS

During the period November 1 2002–22 April 2003, the WHO had recorded 78 SARS related deaths and 2,223 suspected cases of SARS in 18 countries.⁹ Following these statistics WHO declared that passengers with symptoms of SARS or those who may have been exposed to the virus should not be allowed to fly.¹⁰ Some countries took immediate action, one of the first being the United States which advised its citizens to defer non essential travel to affected regions. Canada declared a health emergency and Taiwan advised against travel to the mainland.¹¹ It was reported that Airbus Industries had revealed in early May 2003 that several airlines hit by the SARS crisis requested formal postponement of aircraft deliveries.¹² According to this report the SARS crisis was persistent and affected traffic figures adversely, compounding problems already caused by the war in Iraq. The enormity of the problem is brought to bear by the response of the International Civil Aviation Organization (ICAO) which issued guidelines on 2 May 2003 urging member States to:

⁷The Individual’s Duty to the Community and the Limitations on Human Rights and Freedoms Under Article 20 of the Universal Declaration of Human Rights, 100 UN Sales No. E.82.XIV.1 (1983)

⁸World Health Organization, Basic Documents, 1–2 (37th Ed. 1988).

⁹Fiorino (2003), p. 59.

¹⁰WHO Urges Screening of Air Pasengers for SARS on Some Flights, *Washington Aviation Summary*, April 2003 Edition (April 1 2003), Baker and Hostetler, LLP at p. 1.

¹¹. *Ibid.*

¹²Some SARS Hit Airlines Want Deliveries Postponed, *Air Letter*, Friday, 2 May 2003, No. 15,232, p. 3.

- Implement pre-boarding medical screening of passengers at check-in;
- Provide all incoming passengers with a detailed information leaflet on SARS;
- Implement medical screening of passengers arriving directly from or via affected areas;
- Advise pilots to radio ahead if someone on board exhibits SARS symptoms;
- Instruct crew on dealing with suspected SARS-patients in flight; and
- Disinfect aircraft on which a suspected SARS-patient has travelled.¹³

The International Air Transport Association (IATA) as part of its response to the crisis, set up a SARS operations Centre in Singapore, one of the worst hit States, in order to help coordinate efforts in the region in containing the disease.¹⁴ IATA's aim was to assist in the establishment of effective and efficient screening processes that could be the result of combined public health expertise offered by Governments along with operational expertise of airports and airlines.¹⁵ Furthermore, IATA and WHO met in Bangkok in April 2003 to coordinate and refine plans to curb the possibility of the disease affecting air transport, where IATA identified the disease as a

global problem, requiring a global solution, needing the coordinated support and understanding of governments. . . which meant that the imposition of reactionary and inefficient countermeasures must be avoided¹⁶

IATA's official view pertaining to the effects of SARS on the air transport industry was that the virus posed the biggest threat the airlines have ever faced and that SARS related airline losses would overtake the \$10 billion loss suffered as a result of the Iraq war.¹⁷ According to IATA, passenger loads on all airlines plunged as a result directly or indirectly of SARS and Hong Kong carriers such as Cathay Pacific and Dragonair had suffered losses as much as 70 %.¹⁸

On the insurance front, the London underwriters were reported to have withdrawn aviation insurance coverage for travel to countries affected by SARS.¹⁹ The Air Transport Association of the United States announced that

the world situation continues to play havoc with the airline market place. . . and that for the week ending 6 April, systemwide traffic for the biggest US carriers had dropped by 17.4% and domestic travel had fallen almost 15% compared to the same period in 2002.²⁰

¹³ICAO Issues Guidelines Regarding SARS, *PIO 07/03*, Montreal, 02 May 2003.

¹⁴IATA Sets up Regional SARS Centre, *Air Letter*, Wednesday 30 April, 2003, No. 15,230, p. 3.

¹⁵*Ibid.*

¹⁶Airlines Refine Battle Plans to Fight SARS, *Washington Aviation Summary* (1 May 2003) May 2003 Edition, Baker & Hostetler LL., p. 1.

¹⁷IATA Predicts Tough Six Months head for Aviation Industry, *Aviation Daily*, Friday, April 25 2003, p. 5.

¹⁸*Ibid.*

¹⁹Travel Insurers Take Fright Over SARS, *Air Letter*, Monday 28 April 2003, No. 15,328, p. 1.

²⁰Iraq, SARS send Travel to New Low, *Air Letter*, Friday, 11 April 2003, No. 15,219, p. 1.

Elsewhere, there were at least two airlines which reduced scheduled flights or operations as a result of the crisis: KLM announced its reduction of flights to Asia and its intent to fly smaller aircraft with lesser capacity to Asian destinations, thus reducing its total capacity by 3 %²¹; and QANTAS delayed its aircraft orders and downsized its staff by 400.²² Cathay Pacific announced the most comprehensive and aggressive cabin health programme ever launched by a commercial carrier in order to ensure the health of passengers and reassure air crews of cabin safety despite the SARS threat.²³

3 The Avian Flu Crisis

The Avian flu crisis occurred in 2008. Although the World Health Organization (WHO) categorized the outbreak of the H5N1 avian flu virus as being in Phase 3²⁴ (which is by no means in the pandemic stage) the outbreak caused widespread fears of a human flu pandemic. Air carriers, particularly in Asia where the virus broke out in birds, have taken several measures, looking at specific countries where they consider health risks are high, and placing an embargo on the transport of live birds.²⁵ However, the above notwithstanding, Asian countries are not panicking.²⁶ Some have even cautioned that, in reality, the threat of an avian flu pandemic is no more real today than it was when the virus first broke out 8 years ago and that there is no cause to believe that a pandemic is upon the world.²⁷ At the time of writing, neither the WHO nor the United States Disease Control Centres had issued travel advisories urging the public to avoid travelling to infected areas, despite a request by President Bush of the US Congress for a \$7.1 billion fund injection for an avian flu preparedness plan.²⁸

Unfortunately for the air transport industry, although precipitate political action in a Phase 3 situation will be addressed by the international Organizations and governmental authorities with cautious restraint, the public at large will panic if the situation worsens, causing the sale of air transport to plummet worldwide. The

²¹KLM Cuts Flights to Asia due to SARS, *Air Letter*, Tuesday 29 April 2003, No 15,229, p. 3.

²²Qantas May Delay Orders Due to SARS, *Air Letter*, Friday 25 April 2003, No. 15,227 p. 2.

²³Risk of Deadly Respiratory Infection Fuels Fear of Air Travel, *Air Safety Week*, April 14, 2003: Washington DC, Vol. 17, No. 15 p. 1.

²⁴According to WHO, Phase 3 represents human infections of a new sub type, but no human to human spread or at more rare instances of spread to a close contact. In Phase 3, the virus subsides in initially affected countries but not in other countries to which it has spread. See *WHO Global Influenza Preparedness Plan*, WHO/CD/CSR/GIP/2005.5, World Health Organization, Department of Communicable Disease Surveillance and Response, Global Influenza Programme WHO: Geneva, at 7.

²⁵Mathews (2005) at 38.

²⁶*Ibid.*

²⁷May (2005) at 7.

²⁸*Ibid.*

example of Thailand when the outbreak of avian flu was in its incipient stage is a good one. When Thailand, which is the fourth largest exporter of poultry in the world, announced on 17 January 2004 the presence of highly pathogenic H5N1 avian influenza in both humans and poultry, the population of the country became bewildered and dismayed, which brought immediate and drastic consequences on the economy and tourism. The announcement percolated overseas, having dramatic results on the international community.²⁹

A rapidly spreading pandemic would be as disastrous to the industry as the aftermath of the events of 11 September 2001, where States rallied together under the auspices of ICAO as well as by themselves to keep the air transport industry afloat.³⁰ As during the SARS outbreak, aviation insurance underwriters may review the situation in terms of aircraft fleet coverage³¹ calling for the protection of the air transport industry by the global aviation community. It is incontrovertible that responsibility for curbing the spread of contagious diseases primarily devolves upon States and international organizations concerned. They would at least have a moral obligation to watch the interests of the air transport industry in the face of a global pandemic of avian flu.

Avian influenza or “bird flu” is a contagious disease of animals caused by viruses that normally infect only birds and, less commonly pigs. These viruses are normally highly species specific, but on rare occasions have crossed the species barrier to infect humans.³² When the avian flu virus infects domestic poultry, the birds could show low pathogenic mild symptoms (ruffled feathers or a drop in egg production) which may not be easily detected, or show highly pathogenic symptoms affecting the entire poultry run.

Bird flu viruses do not usually affect humans but several cases of human infection through different strains of viruses have been detected since 1997.³³ The main concern is that the virus could gain the ability to spread easily from one person to another. As these viruses do not commonly infect humans, there is little or no immune protection against them in the human population.

²⁹*Outbreak Communication, Best Practices for Communicating With The Public During an Outbreak*, Report of the WHO Expert Consultation on Outbreak Communications, Held in Singapore, 21–23 September 2004, WHO: Geneva 2004 at 17.

³⁰See Abeyratne (2002a) at 84.

³¹Abeyratne (2002b) at 62.

³²*Weekly Epidemiological Record*, 4 November 2005, No. 44, 2005, 80:377–388, World Health Organization: Geneva, at 377. Laboratory confirmed human cases have been reported in 5 countries – Cambodia, Indonesia, Thailand, Vietnam and Turkey, *Id* 379.

³³*Highly Pathogenic H5N1 Avian Influenza Outbreaks in Poultry and in Humans: Food Safety Implications*, World Health Organization: Geneva, 4 November 2005, INFOSAN Information Note No 7/2005 at 3. This virus first infected people in 1997 in Hong Kong. In late 2003 and early 2004, outbreaks of avian influenza were reported among poultry in eight countries in Asia (Cambodia, China, Indonesia, Japan, Laos, South Korea, Thailand and Vietnam), resulting in more than hundred million bird deaths in the affected countries either from disease or from culling to try to control the outbreak.

In the past century, there were three known major influenza pandemics in 1918, 1957 and 1968. Although no one can accurately predict when the next pandemic will occur, since the spread of avian flu is so extensive and appears to be growing, and in view of the proven durability of the virus' persistence over the past several years, concern about a pandemic is the highest since 1969. At the time of writing there were 150 confirmed case of humans affected, half of which were fatal. The exact way in which people get infected by influenza viruses is not clear, but most cases appear to involve direct contact between the person affected and the infected bird. Among birds, infected birds are thought to contaminate the environment by shedding the virus in their faeces. However, some avian viruses appear also to spread among birds by respiratory transmission.

The symptoms of avian flu have ranged from relatively mild and self resolving fever and respiratory illness to rapid respiratory failure and death. The currently active viruses are seemingly sensitive to two antiviral medications—Oseltamivir (Tamiflu) and Zanamavir, although these mediations may not take effect unless used very early when symptoms first appear. There is still very little direct experience with these drugs when used to treat people affected by avian flu. Efforts to develop a vaccine against the flu are under way. However, at the time of writing, there was no commercially available vaccine to protect humans against the avian flu virus.

Governments are having trouble with stopping the spread of the avian flu virus, since the manner in which the virus spreads within and between domestic and wild bird populations is not entirely clear. This makes it very difficult to develop fully effective control strategies. What is known, however, is that the widespread persistence of H5N1 in poultry populations poses two risks for humans: the first being when the virus passes from poultry to humans; and the second being when the virus changes, if given opportunity enough, into a strain which will spread from person to person. The second type of risk is most threatening to air transport, since such a change would not only start a global outbreak (pandemic) but would also make air transport a conduit between nations for the global transmission of the disease across boundaries.

3.1 Consequences of an Influenza Pandemic

The greatest influenza pandemic occurred in 1918–1919 and caused an estimated forty to fifty million deaths worldwide.³⁴ Although healthcare has significantly improved in the past decades, epidemiological models developed in the US Centres

³⁴*WHO Global Influenza Preparedness Plan, R. v. Secretary of State ex parte Factorframe Ltd.* [1990] 2 A.C. 85 at 13.

for Disease Control and Prevention in Atlanta project that an avian flu pandemic will likely cause 2–7.4 million deaths globally³⁵ WHO's estimates are consistent with these figures.³⁶

As for the potential economic impact of an avian flu pandemic, any conjecture on the possible human and economic impact would be fundamentally flawed if the nature of the pandemic and possible economic fallout are not fully certain³⁷ It has been estimated that the gross attack rate (infection rate), which reflects the percentage of the population that will be infected and become clinically ill will be typical to influenza rates usually seen at 20–40 %³⁸ In the case of the Spanish Flu, the mortality rate was between 2.5 % and 5 %.³⁹

From an economic perspective, a flu pandemic may have different consequences from the SARS outbreak which occurred earlier this century. Whereas the impact of SARS was on the demand side, in the form of consumption and the demand for services contracted,⁴⁰ a flu pandemic will also affect and impact the supply side, as members of the labour force fall sick and in some cases succumb to the disease. A flu pandemic will also destroy human and physical capital, reducing global growth potential and having a significant impact on the global economy. Furthermore, such a pandemic will make investment drop significantly and will not allow a revival for a long time. Deaths resulting from avian flu will reduce the work force drastically and a widespread pandemic could lower the world GDP by 3.6 points than in a case where there is no pandemic.

Another factor that would affect the global economy and in turn the air transport industry is the psychological factor. Regionally, a virulent global pandemic could have serious results on the confidence of Europe, North America and Asia which have built their economies on their growth potential. There will be a significant loss to business as importers, exporters and the service industry experience a serious drop in demand. A direct corollary to this trend would be the closure of many businesses, lowering future investment and employment.

3.2 What Can Be Done?

The major role in combating a possible avian flu pandemic should be played by both governments and international Organizations, by preventing and mitigating a flu pandemic. Such an effort would naturally require cooperation and coordination,

³⁵<http://www.who.int/csr/disease/influenza/pandemic/en/index.html>. The forecast also includes the probability of 134 to 233 million outpatient visits to hospitals and a million hospital admissions.

³⁶Bloom et al. (2005), at 2.

³⁷*Ibid.*

³⁸Taubenberger (2005) at 24.

³⁹J. Barry, 1918 Revisited: Lessons and Suggestions for Further Inquiry, published in *The Threat of Pandemic Influenza: Are We Ready?* http://users.lmi.net/wfanca/pp_annan_on_sov.html, at 33.

⁴⁰Fan (2003) at 5.

along with a concerted effort on the part of the international community to coordinate assistance with a view to ensuring support for all major areas while obviating duplication of efforts. A key support area would lie in financing, particularly poor countries and the provision of critical commodities to them. Needless to say, air transport would be playing a key role in this endeavour, which is all the more reason to have a contingency plan for the sustenance of global air transport in a crisis situation.

The Avian flu situation was different from earlier outbreaks of an influenza pandemic. Firstly, the world had been warned in advance. Secondly, this warning gave us ample opportunity to prepare for an outbreak. WHO observed that, since late 2003, the world had progressively moved closer to a pandemic since 1968 when the last pandemic of the twentieth century occurred. WHO also said that, during 2005, ominous changes have been observed in the epidemiology of the disease in animals.⁴¹ WHO advised that, as a response to a pandemic threat, the world should take advantage of the gradual process of the adaptive mutation of the virus and implement early intervention with antiviral drugs, supported by other public health measures.⁴²

In this regard, measures had already been proposed both by the Food and Agriculture Organization (FAO) and the World Organization for Animal Health (OIE)⁴³ along with a draft global strategy.⁴⁴ WHO had prepared a comprehensive avian influenza preparedness plan which recognizes that air travel might hasten the spread of a new virus and decrease the time available for preparing intervention.⁴⁵ At an international meeting of health ministers held in Ottawa in October 2005, it was stressed that there was a need for a multi sectoral approach calculated to: strengthen the capacity for surveillance; develop a global approach to vaccine and anti-viral policy for research and development; and, above all, achieve full transparency between countries and institutions involved in responding to the risk of a pandemic, while carrying out a global programme to conduct disease surveillance.⁴⁶

3.3 The Air Transport Perspective

On 18 November 2005, temperature screening of people arriving at Hong Kong at Lowu and Lok Ma Chau were activated⁴⁷ using infra-red thermo imagery techniques. This measure amply demonstrates that, from an air transport perspective,

⁴¹*Responding to the Avian Influenza Pandemic Threat: Recommended Strategic Actions*, World Health Organization Communicable Disease Surveillance and Response to the Global Influenza Programme: Geneva, 2005, at 3.

⁴²*Ibid.*

⁴³<http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/27septrecom.pdf>.

⁴⁴<http://www.fao.org/ag/againfo/resources/documents/empres/AIglobalstrategy.pdf>.

⁴⁵*WHO Global Influenza Preparedness Plan*, WHO/CDS/CSR/GIP/2005.5, Preamble (*supra* note 5) at 3.

⁴⁶*Ottawa 2005: Global Pandemic Influenza Readiness – An International Meeting of Health Ministers*, Health Canada News Release, October 25, 2005; at 7.

⁴⁷*Temperature Screening for Incoming Travellers Activated in Phases*, Hong Kong Department of Health Bulletin 05117, 18 November 2005.

technology is available to combat an outbreak of flu around the world as States will find it increasingly easier to implement measures once used during the SARS crisis, particularly as both ICAO and IATA carried out an exhaustive programme of action when the SARS crisis erupted. Both Organizations worked closely with WHO during that crisis and are continuing their efforts at present in the context of the new threat to public health. IATA's Medical Advisory Group has worked with WHO to develop guidelines for check-in agents, cabin crew, cleaning staff and maintenance staff. ICAO has already put into action a systemic approach to a possible outbreak of communicable disease. At the 35th Session of the ICAO Assembly, held in September/October 2004, ICAO Contracting States adopted Resolution A 35-12,⁴⁸ which declares that the protection of the health of passengers and crews on international flights is an integral element of safe air travel and that conditions should be in place to ensure its preservation in a timely and cost effective manner. Through this Resolution, the Council has been requested to review existing Standards and Recommended Practices (SARPs) of relevant Annexes to the Chicago Convention and adopt new SARPs as necessary, while maintaining institutional arrangements to coordinate efforts by Contracting States and other members of the international civil aviation community.

It is quite evident that both ICAO and IATA are concentrating on protecting the health of passengers and crew on the basis that the spread of a communicable disease within the aircraft should be avoided. Much has already been done regarding this area of concern in a technological context so much so that it can now be reasonably assumed that there is little possibility of the spread of a communicable disease through the ventilation system of an aircraft. As one commentator has observed:

...there is nothing about an aircraft cabin that makes it easier to contract a communicable disease. In fact, quite the opposite appears to be true. The ventilation patterns on aircraft, combined with the circulation of air through High Efficiency Particulate Air (HEPA) filters reduces the spread of airborne pathogens, especially when compared with other public places⁴⁹

While all this is well and good, the question is whether, as was experienced during the outbreak of SARS in Toronto, where two Toronto residents brought SARS from Hong Kong to Toronto after travelling by air, the international community should be more concerned with the transmission of the disease across boundaries, which is the real danger and not merely within the aircraft itself.

3.4 International Regime Relating to Public Health

The international health dimension of avian flu involves human rights issues as well. International human rights law has laid down two critical aspects relating to public health: that protection of public health constitutes legitimate grounds for

⁴⁸*Protection of the health of the passengers and crews and prevention of the spread of communicable diseases through international travel*, Assembly Resolutions in Force (as of 8 October 2004), ICAO Doc 9848, at 1-50.

⁴⁹May (2005) at 7.

limiting human rights in certain circumstances (such as detention of persons or house arrest tantamount to quarantine exercises would be justified in order to contain a disease); and individuals have an inherent right to health. In this context it is not only the State or nation that has an obligation to notify WHO of communicable disease but the human concerned as well, who has an abiding moral and legal obligation. In 1975, WHO issued a policy statement which subsumed its philosophy on health and human rights which stated:

The individual is obliged to notify the health authorities when he is suffering from a communicable disease (including venereal diseases) or has been exposed to infection, and must undergo examination, treatment, surveillance, isolation or hospitalization. In particular, obligatory isolation or hospitalization in such cases constitutes a limitation on freedom of movement and the right to liberty and security of person.⁵⁰

It is critical for an evaluation of the health and aeronautical implications of avian flu that the term “health” be defined in context. While the WHO Constitution identifies as an objective of the Organization “attainment of the highest possible level of health”, the state of health is defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”.⁵¹ In an aeronautical perspective, this is a tough act to follow, as international responsibility in the carriage of persons extends only as far as the obligation to prevent injury, wounding or death, and not to the physical or mental well-being of a person.⁵²

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⁵⁰The Individual’s Duty to the Community and the Limitations on Human Rights and Freedoms Under Article 20 of the Universal Declaration of Human Rights, 100 UN Sales No. E.82.XIV.1 (1983).

⁵¹World Health Organization, Basic Documents, 37th Ed. 1988, 1–2.

⁵²See Abeyratne (1999).

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