

ASMA POSITION STATEMENT

Emerging Infectious Diseases Including Severe Acute Respiratory Syndrome (SARS): Guidelines for Commercial Air Travel and Air Medical Transport

AEROSPACE MEDICAL ASSOCIATION TASK FORCE

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A TASK FORCE of six members convened at the Home Office of the Aerospace Medical Association (AsMA) on June 17, 2003 with a mandate to prepare an AsMA position statement on emerging infectious diseases, including SARS, and air travel. The deliberations addressed only two issues: commercial air travel (passengers and crew) and air medical transport (patients and crew). The intent was not to reiterate guidelines and recommendations already published by such organizations as the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC), but rather to approach both issues de nouveau. Nor was it intended to be prescriptive and directive, but rather to present general overarching principles for consideration by the commercial air and air medical transport communities. Although SARS was uppermost in mind during the preparation of this paper, the Task Force members felt that what is written herein would have some applicability to any significant contagious respiratory disease.

COMMERCIAL AIR TRAVEL

Passengers

The Task Force members recognized that hundreds of millions of commercial passengers fly worldwide every year. Consequently, it would be costly, inconvenient, and most likely unnecessary to recommend or impose rigid, inflexible guidelines. Common sense, rationale, and a reasonable system to ensure a manageable risk is paramount.

Based upon a number of cabin air quality studies published during the past 15 yr, as well as the very few cases of suspected SARS believed to have been transmitted inflight (possibility of only four flights) (2), the Task Force felt that transmission, if it occurs, is due to person-to-person contact, i.e., proximity, and not due to dispersion of organisms such as the coronavirus through the aircraft ventilation system. This view is supported by the CDC (1). Although up to 50% of cabin

air is recirculated on some aircraft (there is no recirculated air on older aircraft), it passes through highly efficient air filters (HEPA) before being introduced into the cabin, thereby filtering out biological particles (including viruses that tend to clump together or adhere to large respiratory droplets or protein substrates). If the ventilation filtration system were not efficient, one would expect many more cases of inflight transmission of infectious diseases such as SARS.

Even though the likelihood of disease transmission is low, efforts should be made to prevent individuals with an acute infectious illness from traveling by air until the illness is in full remission. This applies particularly to any individual with SARS. It is recommended that passengers departing from a WHO SARS designated area be screened. (See WHO website (3). This can be accomplished by questionnaire, the observation by gate agents of SARS symptoms such as cough, and by thermal readings of every passenger with the chosen instrument(s) for screening at the discretion of the regulatory authority. It is emphasized that it would be impractical and unnecessary to screen passengers traveling between non-WHO SARS areas. (These guidelines are applicable to any significant infectious disease.)

In addition, it is recommended that brief and easily understandable, relevant health information be provided to passengers going into or departing from a WHO notified area of infectious disease, including a SARS designated area. This could be done by health alert advisories or by locally prepared information. Basic information should be included as well as symptoms with an admonition to notify a physician if such symptoms develop within 10 day days of flight. In the case of SARS, symptoms are fever greater than 100.4°F, cough, shortness of breath, and respiratory distress. In the event that a passenger with SARS (or SARS-like symptoms) goes undetected by screening, but develops

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SARS & AIR TRAVEL GUIDELINES—ASMA TASK FORCE

symptoms in flight, it is recommended that this passenger be separated, if possible, from other passengers and given a mask. A mask might also be given to passengers who are seated in proximity to the suspected infected passenger. Prior to landing, the pilot should notify the appropriate public health authority. Furthermore, health alert advisories such as described above should be given to all other passengers advising them to see their physician if SARS-like symptoms develop within 10 d.

Crew

For the crew, especially the cabin crew, hand washing cannot be over emphasized, particularly if a passenger onboard is suspected of having SARS. Flight attendants rendering care or support to a suspected SARS passengers requiring close and frequent contact should consider wearing barrier protection such as gloves and a respirator. (This would be at the discretion of the health regulatory authority or the airline.) For aircraft that have transported a suspected SARS passenger, decontamination of the area where the SARS passenger sat or other contaminated surfaces, in accordance with appropriately sanctioned procedures, is recommended as well as appropriate protection of the cleaning crew. In addition, the aircraft should be ventilated well post-flight.

AIR MEDICAL TRANSPORT

Patients

In general, it is recommended that cases of suspected infectious disease, including SARS, should not be transported by air in order to minimize the risk of disease transmission. Rather, it is advisable to care for the patient locally. However, air medical transport (AMT) aboard dedicated aircraft may be necessary in some cases due to inadequate medical care facilities locally or to the patient's desire to be treated elsewhere. If there is a need for AMT, it is advisable to transport as early on as possible before the patient is extremely ill.

If movement of the patient is deemed necessary, certain procedures should be followed to minimize the risk of disease transmission. One expedient method is to utilize a portable isolation unit that keeps the patient isolated, but allows treatment in flight through a series of glove boxes or portals within the unit. It is also highly recommended that the patient be provided with a respiratory barrier such as a mask. Because there are

many types available, the choice of respiratory barrier must be at the discretion of the AMT Unit. It is also advisable to employ a minimum number of medical attendants. In most cases, one attendant, for example a nurse or physician depending upon the circumstances, should suffice. The patient's body fluids and any refuse should be isolated and properly disposed of as clinical waste.

Crew

In order to protect the cockpit crew, the patient should be positioned as far away as possible from the cockpit. It is also recommended that the cockpit and medical crew wear respirators. It should be assured that the crew is fit-tested and trained to wear the respiratory barrier safely and properly and that the barrier can be worn comfortably, particularly for long haul flights. (Compatibility of the chosen respirator with the crew oxygen system must be given careful consideration.) In addition, goggles and gowns are recommended only for the medical crew. As further precaution, there should be no food or beverages in the vicinity of the patient and contact lenses should not be worn. We recommend that aircraft be utilized that provide forward to aft airflow.

The cockpit and medical crew must be made fully aware of the symptoms of the disease and should be advised to report to a physician immediately if such symptoms occur within 10 days of the flight. Furthermore, AMT units should have a policy regarding post-flight flying status for a crew that transported a patient with an infectious disease. Following the flight, the aircraft should be decontaminated per established guidelines with appropriate protection of the cleaning crew.

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