RECOMMENDATION ECAC/29-2

PREVENTION OF THE SPREAD OF COMMUNICABLE DISEASES BY MEANS OF AIR TRAVEL

THE CONFERENCE

BEING CONSCIOUS that diseases of a pandemic nature, such as influenza, have potentially disastrous effects;

RECOGNISING that the air transport system, as other means of transport, may be a vector by which a communicable disease would be disseminated;

ACKNOWLEDGING the competence and expertise of the World Health Organization in developing international requirements to monitor and react to the outbreak of a communicable disease;

BEING COMMITTED to measures aiming at stopping or, should it not be possible, slowing the spread of the disease in order to "buy time" for the development of necessary medical interventions;

UNDERLINING that preparedness should be developed in a concerted manner at the highest level, in order that homogeneous and effective responses to an outbreak of communicable disease could be implemented without delay and in an orderly manner;

WELCOMING the co-operation between WHO, ICAO and airlines and airports representative bodies at world level, and as a result the establishment of globally harmonised guidelines;

STRESSING the importance that harmonised and effective preparedness measures be in place at the pan-European level, consistent with actions at world level;

RECOMMENDS

that Member States, in developing and implementing preparedness plans at the national level to respond to outbreaks of communicable diseases, should refer to the attached document, providing a framework for such measures.

RECOMMENDATIONS REGARDING PREPAREDNESS MEASURES TO PREVENT THE SPREAD OF COMMUNICABLE DISEASES BY MEANS OF AIR TRAVEL

GENERAL

1. Member States should have in place measures to prevent the spread of communicable diseases by means of air travel.
2. It is of utmost importance that every effort is made to prevent or — should this not be wholly possible due to the features of the disease, as may be the case in the event of an influenza pandemic — to slow the spread of the disease in order to 'buy time' for the development of effective medical interventions.
3. At the national level, aviation preparedness measures should be developed according to international requirements of the World Health Organization. This aviation preparedness plan should be part of (or co-ordinated with) the national preparedness plan.
4. The competent authority, responsible for developing and implementing the national preparedness plan, should work in co-ordination with the national civil aviation authority to develop and implement the aviation preparedness plan.
5. Member States should establish a contact point for aviation preparedness with clear lines of responsibility with other stakeholders. Generic guidance should be developed, and communication links between stakeholders and with the public should be established. Reliable communication is essential to effective planning and implementation.
6. Air transport should maintain its operations to the extent possible, as it may be required for vital supply purpose: unnecessary disruption should be avoided.
7. Member States should be aware of the importance of planning for the continuity of air navigation services provided to air operators, in the event of a pandemic spread of disease such as influenza.
8. Guidelines for States regarding aviation preparedness planning have been developed by ICAO in co-operation with WHO and industry representative bodies. It is recommended that Member States consult these guidelines for reference.
9. Member States should ensure that appropriate preparedness plans are in place in airlines and at airports in their constituency. The measures contained in these plans should be effective and practical and focus on key issues.
10. The following elements address preparedness plans by air carriers and at airports, and the information of the travelling public.

AIR CARRIERS

11. Member States should ensure that air carriers in their constituency have in place preparedness procedures which include:
    a. Check-in and boarding process
    b. In-flight procedures
    c. Cleaning of the aircraft
    d. Maintenance of the aircraft
    e. Cargo and baggage handling
    f. Dealing with a bird strike.
12. Harmonised guidelines for these procedures have been developed by the International Air Transport Association ((IATA) in co-ordination with ICAO, WHO and Airports Council International (ACI), and it is recommended that Member States refer to these in overseeing the contingency measures of air carriers in their constituency. The guidelines, respectively for passenger agents, cabin crew, cleaning crew, maintenance crew, cargo and baggage handlers, and in case of bird strike, are reproduced in **Attachment 1**.
13. In the particular case of influenza, a person may have contracted the virus and be infectious before developing any symptoms, and this person may not be detected by medical screening.

14. However, a person having the symptoms of influenza at check-in/boarding at the airport or during flight should be isolated and managed appropriately by passenger agents and cabin crew, according to the above-referred guidelines. Airlines should co-operate with airport and public health authorities on logistics in dealing with a sick passenger. This should include contact tracing, for which the use of passenger locator cards appear the best immediately available solution. The development of future systems using IT and/or Internet resources should be explored.

AIRPORTS

15. Member States should ensure that preparedness measures are in place at all airports in their constituency and not only at international hubs, as both the travelling public and air crew may have travelled from other areas, either by air or by other forms of transport.
16. Exit (departure) screening from an outbreak area may be helpful to limit and delay the spread of a communicable disease. In the case of influenza, this is recommended by the WHO when influenza of a pandemic potential is in WHO Phase 4 and above. Airports should establish the screening measures recommended by WHO, under the lead of the appropriate health authority.
17. Any passenger having the symptoms of influenza at the airport should be isolated and managed appropriately. Member States should also ensure that procedures at airports provide that all customer-facing staff at the airport including, for example, customs, immigration and security staff, are given training to enable them to recognise passengers who may be suffering from the said disease and to manage them appropriately. The general guidelines developed for airline passenger agents (reproduced in Attachment 1) should be used as a model and adapted as necessary to the situation.
18. In addition, as general hygienic measures such as personal hygiene and enhanced cleaning (especially toilets, restaurants, public premises) are essential to prevent the spread of a communicable disease, Member States should ensure that all staff working at the airport are instructed on such measures to protect themselves and to prevent the spread of the disease.
19. Harmonised guidelines for airport preparedness have been developed by Airports Council International (ACI) in co-ordination with ICAO, WHO and IATA and it is recommended that Member States refer to these in overseeing the preparedness measures at airports in their constituency. The guidelines are reproduced in **Attachment 2**.

INFORMATION OF THE TRAVELLING PUBLIC

20. Member States should ensure that the travelling public receive information which is up to date, practical and to the point, without causing any undue anxiety.
21. This information shall be co-ordinated by, and under the responsibility of, the competent authority at the national level. Reliable information should be readily available and easily accessible to the public.
22. Information should stress that general hygienic measures and a sense of personal responsibility are of utmost importance, and that travellers should be aware of the risk to themselves and to others.

ATTACHMENT 1

GENERAL GUIDELINES FOR AIRLINES

Note: These guidelines have been developed by the International Air Transport Association (IATA) in co-ordination with ICAO, the World Health Organization (WHO) and Airports Council International (ACI).

GENERAL GUIDELINES FOR PASSENGER AGENTS (CHECK IN AND GATE)

The following are general guidelines for passenger agents when facing a suspected case of communicable disease at the departure airport. During an outbreak of a specific communicable disease, the World Health Organization (WHO) or Member States may modify or add further procedures to these general guidelines. However, these general guidelines would always provide a basic framework of response that would reassure passenger agents and help them through any unplanned incident.

A communicable disease is suspected when a passenger:

- Has a visible skin rash or,
- Is obviously unwell and/or,
- Complains of any of the following:
  - Severe cough
  - High fever
  - High fever accompanied by abnormal bleeding
  - Persistent diarrhea
  - Skin rash.

It is well understood that most of these signs and/or symptoms may not be obvious at the counter. However, the point is when in doubt regarding the health of a passenger, especially during an outbreak, go back to an established procedure.

1. Call your supervisor.
2. If the supervisor agrees with your concerns and if medical support is available (own medical department or outside designated physician or group) contact that support immediately.
3. If the supervisor agrees with your concerns but medical support is not immediately available, deny boarding and ask the passenger to consult a physician and request a medical clearance before travel is accepted.
4. If assistance is required to escort a passenger, appropriate personal protective equipment (PPE) should be worn as necessary.

GENERAL GUIDELINES FOR CABIN CREW

The following are general guidelines for cabin crew when facing a suspected case of communicable disease on board. During an outbreak of a specific communicable disease, the World Health Organization (WHO) or Member States may modify or add further procedures to these general guidelines. However, these general guidelines would always provide a basic framework of response that would reassure cabin crew and help them through any unplanned incident.

A communicable disease is suspected when a passenger or a crew member exhibits one or more of the following signs or symptoms:

- Appearing obviously unwell
- Persistent coughing
- Impaired breathing
- Persistent diarrhea

- Persistent vomiting
- Skin rash
- Abnormal bleeding
- Reduced mental clarity.

If associated with a fever (temperature of 38° C or greater), the likelihood that the passenger is suffering a communicable disease is increased.

NOTE: If in-flight food poisoning is suspected, proceed as per company-established protocol.

1. If medical support from the ground is available, contact that ground support immediately and/or
2. Page for medical assistance on board (as per company policy).
3. If medical ground support and/or on board health professional agrees with your suspicion or no support is available:
   a. Relocate the passenger to a more isolated area if space is available. If the passenger is relocated, make sure that the cleaning crew at the destination will be advised to clean both locations.
   b. Designate one cabin crew to look after the sick passenger, preferably the cabin crew that has already been dealing with this passenger. More than one cabin crew may be necessary if more care is required.
   c. When possible, designate a specific lavatory for the exclusive use of the sick passenger. If not possible, clean the commonly touched surfaces of the lavatories (faucet, door handles, waste bin cover, counter top) with soap and water or available disinfectant after use by the ill passenger.
   d. If the sick passenger is coughing, ask him/her to wear a surgical mask. If no mask is available or the sick passenger cannot tolerate the mask because of severe difficulty breathing, provide tissues and ask him/her to cover the mouth and nose when coughing. Tell the sick passenger to use a sick bag to collect the used tissues.
   e. If the sick passenger cannot tolerate a mask and the airline recommends that designated cabin crew should do so, the airline should ensure that their cabin crew have adequate training in its use to ensure they do not increase the risk (for example by more frequent hand-face contact or adjusting and removing the mask). The designated cabin crew should wear disposable gloves when assisting the sick passenger and when in direct contact with blood or other body fluids. Gloves are not intended to replace proper hand hygiene. (A general term referring to any action of hand cleansing, performed by means of applying an antiseptic hand rub (i.e., alcohol-based hand rub) if hands are not visibly soiled, or washing one's hands with soap and water for at least 15 seconds. Avoid touching the face with hands.) In fact, immediately after activities involving contact with a suspect case or any body fluids, gloves should be carefully removed as per training syllabus and discarded as per paragraph f. and hands should be washed with soap and water. An alcohol-based hand rub can be used if the hands are not visibly soiled.
   f. Store soiled items (disposable masks, oxygen mask and tubing, linen, pillows, blankets, seat pocket items, etc.) in a biohazard bag if one is available. If not, use a sealed plastic bag.
   g. Ask accompanying passenger(s) (spouse, children, friends, etc.) if they have all or some of the same symptoms.
4. As soon as possible, advise the captain of the situation because he/she is required by the International Civil Aviation Organization regulations to report the illness to the destination station before arrival.

5. Unless stated otherwise by ground medical support or quarantine officials, ask the passengers 3 rows in front and 3 rows behind the sick passenger to fill in a passenger locator card if those cards are available in the aircraft or at the arrival station.

GENERAL GUIDELINES FOR CLEANING CREW

The following are general guidelines for cleaning crew who has to clean an arriving aircraft with a suspected case of communicable disease. During an outbreak of a specific communicable disease, the World Health Organization (WHO) or Member States may modify or add further procedures to these general guidelines. However, these general guidelines would always provide a basic framework of response that would reassure the cleaning crew and help them through any unplanned incident.

1. Wear non-sterile impermeable disposable gloves.
2. Remove and discard gloves if they become soiled or damaged, and after cleaning.
3. Wash hands with soap and water immediately after gloves are removed. An alcohol-based hand sanitiser can be used if the hands are not visibly soiled.
4. Surfaces to be cleaned (affected seat, adjacent seats same row, back of the seats in the row in front),
   - Armrests
   - Seatbacks (the plastic and/or metal part)
   - Tray tables and trays if still in place
   - Light and air controls
   - Adjacent walls and windows
   - Individual video monitor
   - Lavatory(ies) used by the sick passenger: door handle, locking device, toilet seat, - faucet, wash basin, adjacent walls and counter.
5. Special cleaning of upholstery, carpets, or storage compartments is not indicated unless they have been soiled by body fluids.
6. Use only cleaning agents/disinfectants that have been approved by aircraft manufacturers.
7. Dispose of soiled material and gloves in a biohazard bag if one is available. If not, use a sealed plastic bag.
8. Do not use compressed air. It might re-aerosolise infectious material.

GENERAL GUIDELINES FOR MAINTENANCE CREW

The following are general guidelines for maintenance crew who have to do maintenance on an arriving aircraft with a suspected case of communicable disease. During an outbreak of a specific communicable disease, the World Health Organization (WHO) or Member States may modify or add further procedures to these general guidelines. However, these general guidelines would always provide a basic framework of response that would reassure the maintenance crew and help them through any unplanned incident.

High Efficiency Particulate Air (HEPA) filters

About 50% of the air in most modern aircraft is re-circulated. However, air is only reused after having gone through HEPA filters. Additionally, due to the low humidity found in aircraft, influenza-type viruses are quickly rendered non-infectious. Microorganisms suspended in air, including bacteria and viruses, are captured by HEPA filters applied to aircraft air circulation systems. Just like HEPA filters used in containment laboratories, the best HEPA cabin air filters have a microbial removal efficiency of >99.999% with bacteria and viruses. As used filters are likely to contain microorganisms trapped in their meshes after hours of filtering activity, it is good routine practice to apply reasonable precautions when handling them, e.g. during their exchange.

It is recommended that maintenance staff keep following regular practices when replacing HEPA filters:

1. Wear disposable gloves.
2. When removing the filter, avoid hitting, dropping or shaking the filter.
3. Do not use compressed air to try and clean a filter.
4. The used HEPA filter should be placed and sealed in a plastic bag. A specific biohazard bag is not required for disposal of the HEPA filter. Put the disposable gloves in the same plastic bag.
5. Wash hands with soap and water when the task is finished.

Furthermore, there is no need to change HEPA filters on an arriving aircraft with a suspected case of communicable disease. HEPA filters should rather be changed at the original intervals recommended by the manufacturers.

Vacuum waste tank
Since the external venting of the vacuum waste tanks is not equipped with filtering devices capable of preventing the spread of viral or bacterial contamination, it is not recommended to vent the vacuum waste tanks inside a hangar. If venting of the vacuum waste tanks has to be done inside a hangar, it is recommended to use a technique that exhausts the air outside of the hangar.

GENERAL GUIDELINES FOR CARGO AND BAGGAGE HANDLERS
The following are general guidelines for cargo and baggage handlers who have to handle cargo or baggage transported by an aircraft arriving from an affected area or carrying a suspected case of communicable disease. During an outbreak of a specific communicable disease, the World Health Organization (WHO) or Member States may modify or add further procedures to these general guidelines. However, these general guidelines would always provide a basic framework of response that would reassure the cargo and baggage handlers and help them through any unplanned incident.

During the SARS outbreak, the WHO reviewed the situation as it related to cargo handling and declared that there was no evidence that the infection had been or could be transmitted by cargo or baggage handling. Whilst the WHO has not made a similar statement regarding influenza so far, the United States Center for Disease Control and Prevention has made the following statement on this particular issue:

> "There is no evidence that avian influenza is spread through contact with baggage, packages, or other objects, including items arriving from areas where influenza cases have been reported. Special handling of cargo arriving from areas where avian influenza cases have been reported is, therefore, not necessary. Cargo handlers should wash their hands frequently for the prevention of any possible infectious disease."

Therefore, unless stated otherwise by the WHO or a National Public Health Authority in the case of a new communicable disease, special handling of cargo and baggage is not necessary at this time.

BIRD STRIKE
The issue of a potential health risk to personnel involved in maintenance tasks following a bird strike has been discussed with bio-safety specialists at the World Health Organization and the following measures are recommended:

- Wear disposable gloves.

- If body contact is unavoidable while cleaning the engine, wear a disposable coverall.
- Do not use air or water under pressure to clean the part of the aircraft that was hit by the bird.
- Remove the bird remains and put them in a plastic bag.
- Do not touch face, eyes, nose, etc. with your gloves.
- Remove the gloves and the disposable coverall (if used) and put them in the same plastic bag as the remains and seal the bag.
- Dispose of the bag as for normal garbage.
- Wash hands thoroughly with soap and water.

ATTACHMENT 2

AIRPORT PREPAREDNESS GUIDELINES FOR OUTBREAK OF COMMUNICABLE DISEASE

Note: These guidelines have been developed by Airports Council International (ACI), in co-operation with ICAO, the World Health Organization (WHO) and the International Air Transport Association (IATA).

INTRODUCTION

1. The primary issue with respect to airport preparedness planning is to protect the health and welfare of passengers, staff and the public. To achieve this, the airport preparedness plan should address aspects such as communication (especially with the public), screening, logistics (transport of passengers to health facilities), equipment, entry/exit controls and co-ordination with the local public health authority. A particularly important requirement is for adequate supplies of appropriate personal protective equipment (including hand-washing facilities or sanitising gels) to be available for airport staff. They should be adequately trained in aspects of preparedness planning relevant to their specific role.
2. The following guidance may serve to facilitate the development of an airport specific plan. It is not designed to be adopted as written but to be modified to the local situation as necessary.

COMMUNICATION

3. Airports should establish:

   a) A clear contact point for policy formulation and operational organisation of preparedness; and,
   b) A position with responsibility for the operational implementation of the airport preparedness plan, having reasonable autonomy/flexibility for rapid policy and decision-making.

4. Communication links should be established, directly or indirectly, with the following entities:

   1) **Internal**
      – airlines
      – handling agents
      – air traffic management
      – local public health agency
      – local hospital(s)
      – police
      – customs
      – immigration
      – security
      – travel agents
      – airport retailers
      – information/customer relations services
      – other stakeholders as necessary.

   2) **External**
      – passengers:
         – before reaching the airport
         – in the terminal building
      – other airports in same State/region
      – other airports outside State/region
      – media.

COMMUNICATION WITH DEPARTING PASSENGERS IN THE EVENT OF A COMMUNICABLE DISEASE OUTBREAK

- Before arrival at the airport terminal building, information can be provided to passengers by means of an airport Web site (or by electronic link to a public health Web site), by recorded telephone message or by printed media. A telephone message may give health information directly and possibly refer the listener to further sources of information.
- Passengers and health professionals should have access to consistent information about postponing travel if the potential passenger has an illness prior to arrival at the airport and whether screening measures may be in place at the airport. Such information will usually be taken from a public health information site or developed in close collaboration with the public health authority. Passengers who have medical conditions that will not prevent travel should have their attending physician complete the International Air Transport Association Medical Information 'MEDIF' Form (or the form in use by the airline) and discuss the situation with airline medical staff should they have questions.
- When in the airport, information can be given by posters or electronic displays, and by public address. A sample text is:
  - "This airport has XXXX (name of disease) screening in place. Passengers that may be suffering from XXXX will not be permitted to board any flight. The main symptoms of XXXX are……." The text would be adjusted according to the information to be conveyed. The WHO will provide the information on symptoms.
  - Public announcements should be provided in the languages used by persons most frequently travelling through the airport, including English, as well as the State's own language(s).
- The media can play a useful role in informing passengers of the situation at an airport and links with the media should be established so that journalists can obtain information at short notice.

SCREENING

5. Screening of travellers on departure will vary according to the nature of the communicable disease in question. The most appropriate screening method will be determined by the current scope of the outbreak, the characteristics of the targeted population, how effective screening is likely to be, the quality of the science on which a decision to screen is taken, and the cost.
6. A 'toolbox' of screening methods is available, including visual inspection, questionnaire and temperature measurement (using thermal scanners or other suitable methods). Details of requirements cannot be determined in advance of an outbreak and will be advised by the WHO, based on the symptoms and signs of the disease, its epidemiology and possible exposure history of individuals being screened.
7. Consequently, public health agencies, in collaboration with the World Health Organization, may recommend airport screening, including temperature measurement and questionnaires about symptoms and travel history.

- Screening is likely to be of most value for departing passengers. It should be undertaken as soon as possible after passengers have arrived at the airport, and before passengers pass through to airside.
- Screening of arriving passengers may also be useful:
  - for geographically isolated infection free areas (islands)
  - when epidemiological data indicates the need to do so
  - if departure screening is deemed inadequate
  - for passengers arriving from defined outbreak areas.
- If the public health authority determines that screening is to be employed, airport operators should discuss the issues with the local public health authority in order to develop acceptable plans. Costs associated with providing screening equipment and

airport space and infrastructure support would normally be met by the public health authority.

- Passengers thought to be at increased risk of having a communicable disease posing a potentially serious public health risk should undergo secondary screening by a qualified individual, e.g. medical practitioner. If the assessment is positive i.e. the passenger is thought to be suffering from a communicable disease which poses a serious public health risk he/she should not be permitted to depart. Measures should be taken to refer the individual for appropriate diagnosis, treatment, if available, and appropriate case management, in accordance with the IHR (2005) (http://www.who.int/gb/ebwha/pdf_files/WHA58/A58_55-en.pdf), with a view to protecting the public from potential infection, i.e. by isolation. In the event of negative secondary screening the passenger should be allowed to continue on his/her way.
- A private isolation area where a passenger with symptoms can be personally distanced from transmitting any potential disease to other individuals needs to be pre-identified.
- Passengers arriving or departing from an 'at risk' area should be provided with information about symptoms and safeguards to take, as appropriate to the disease. They should be given guidance on when to contact a health professional and with appropriate public health contact telephone numbers, if available.

INBOUND AIRCRAFT CARRYING A SICK PASSENGER WITH A COMMUNICABLE DISEASE WHICH MAY POSE A SERIOUS PUBLIC HEALTH RISK

8. A number of considerations must be taken into account when an aircraft arrives carrying a suspected case of a communicable disease which may pose a serious public health risk. There follows some guidance on possible action to take:
   - The pilot in command (PIC) needs to be advised of where to park the aircraft – such information will normally be communicated to the PIC by air traffic control. The decision will normally be taken by the public health agency in consultation with airline and airport authorities. This may be on a remote stand, or, depending on the situation, on the apron, not attached to a passenger boarding bridge, or on a stand with a passenger boarding bridge attached. Action should be taken to disembark the passengers as soon as possible after the situation has been evaluated and a public health response has been instituted, if needed.
   - Flight and ground crew need to be advised concerning the opening of aircraft doors, disembarkation and what information should be given to passengers prior to the arrival of the medical team.
   - Public health officials need quick and efficient access to the aircraft.
   - Personal protective equipment (PPE) appropriate to the suspected communicable disease, the mode of transmission and the nature of duties being performed by aviation personnel, should be worn. For many communicable diseases, disposable gloves and good hand hygiene (at times in combination with surgical masks) are sufficient unless otherwise specified by the national public health authority.
   - A passenger having a respiratory disease should wear a surgical mask unless the passenger is unable to tolerate it. If a mask is worn consistently by the ill passenger, this obviates the need for others to wear a mask. All disposable materials in potential contact with a sick passenger need to be disposed of with biohazard precautions.
   - All surfaces potentially contaminated by the sick passenger should be cleaned and disinfected (a list of suitable cleaning agents/disinfectants will be included when available).
   - A sick passenger should be taken, by a medical escort, from the aircraft to an area for further assessment/treatment. He/she should use appropriate infection control measures, e.g. a mask if coughing, and be isolated from other passengers and staff.

- Passengers and crew on the same aircraft as the sick passenger should be segregated until contact information has been obtained and they have been advised by public health authority staff of the precautionary measures necessary.
- Procedures need to be in place for obtaining baggage, customs and security clearance of a sick passenger, and the other passengers and crew.
- A procedure for transporting a sick passenger to hospital needs to be in place.

DRILLS/EXERCISES

9. Airports should establish a method of testing preparedness by means of drills/exercises involving all relevant stakeholders, especially public health authorities, airports and airlines.

SUMMARY OF COMMUNICATION LINKS

10. A schematic summary of some of the possible communication links and resulting actions is shown below.