Airport preparedness guidelines for outbreaks of communicable disease

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Introduction

In the event of an outbreak of communicable diseases on an international level, air travel will be the focus of much attention due to the potential that aviation has to increase the rate at which a disease spreads, thereby decreasing the time available for preparing interventions. Although it is probably not feasible to halt the spread of some diseases, advance preparation should make it possible to reduce the consequences.

For airport operators, the main aims are to protect the health and welfare of travellers, staff and the public, and to reduce the opportunities for dissemination of communicable diseases by air. The following guidelines outline measures to be taken by airport operators and national authorities against communicable diseases[1] that might pose a serious risk to public health.

The recommendations are designed to reduce exposure to an infectious agent at airports and to improve the response to health related emergencies by establishing mechanisms for rapid decision-making and action. They are intended as guidance, not to be adopted as written, but to be modified to the local situation as necessary. Use of these guidelines should result in greater predictability of the measures to be taken by the various stakeholders (including both public and private sector entities) involved.

Responsibility

The responsibility for management of the risk of communicable diseases at airports rests primarily with the local/regional/national public health authority and the relevant airport operator (guidance on the role of the "competent authorities" at airports is given in the International Health Regulations (2005)[2] article 22). If more than one airport is operated by the same organisation, preparedness plans should be prepared for each airport, in line with the recommendations contained in this document.

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[1] *In these guidelines, "communicable disease" is taken to include those diseases resulting from infections by transmissible agents such as viruses and bacteria, and that have the potential to cause a serious public health risk or emergency of international concern*

[2] *The International Health Regulations (2005) will enter into force on 15 June 2007 for all WHO Member States that have not rejected them or made "reservations" on a timely basis.*

Each airport operator, together with its national authorities, should play its part towards achieving greater predictability and international coordination of preparedness measures, as this is the key to success in reducing the risk of spread of any communicable disease. To achieve this, the individual Airport Preparedness Plan should address aspects such as:

- communication (especially with the public),
- screening,
- logistics (transport of travellers to health facilities),
- equipment,
- entry/exit controls, and
- coordination with the local/regional/national 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. Staff, including those not directly employed by the airport operator, should be adequately trained in aspects of preparedness planning relevant to their specific role.

Communication

Good communication is key to effective preparedness planning, both for routine operations and during an emergency response. The communications required for both situations may differ. Attention should be given to airport employees, to others working at the airport who may not be employed directly by the airport operator e.g. contractors and sub-contractors, and to the non-travelling public.

The International Health Regulations (2005) (Article 22) refers to the role of competent authorities at airports with respect to ensuring that facilities for travellers are maintained in a sanitary condition and that goods being transported through airports are kept free of sources of infection or contamination.

Airport operators 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.

Communication links should be established, directly or indirectly, with the following entities:
    1) Internal
- airlines
- handling agents
- air traffic management
- local hospital(s)
- police
- customs
- immigration
- security
- travel agents
- airport retailers
- information/customer relations services
- other stakeholders as necessary

2) External
- local/regional/national public health authority
- travellers:
  - before reaching the airport
  - in the terminal building
- other airports in same State/region
- other airports outside State/region
- media

Communication with departing travellers in the event of a communicable disease outbreak

- Before arrival at the airport terminal building, information can be provided to travellers 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.

- The media can play a useful role in informing travellers of the situation at an airport and links with the media should be established so that journalists can obtain information at short notice. Notices on radio stations and public information delivered through the media can be very effective.

- Travellers and health professionals should have access to consistent information about postponing travel and about screening measures that may be in place at an airport, should a potential traveller have an illness prior to considering air travel. Such information will usually be taken from a public health information site or developed in close collaboration with the public health authority.

- Travellers who have medical conditions that will not prevent travel should have their attending physician complete the International Air Transport Association Medical Information Form ("MEDIF", 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:

  o "This airport has XXXX (name of disease) screening in place. Travellers 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 or national public health authority will provide the information on symptoms.

  o 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).

- To ensure public confidence, airport operators should tell passengers everything they know about the situation, admit what they don't know, explain what they are doing, and be open and honest to build trust.

Screening

Screening for communicable diseases can potentially reduce opportunities for transmission and forestall or delay international spread. Depending on the epidemiology and extent of transmission, severity of the disease (attack and mortality rates), and cost factors, screening of entering and departing travellers at international airports may be considered. Information on these factors will be needed at the onset and throughout the evolution of a public health emergency of international concern, to balance the probable effectiveness of screening in alleviating concerns, against economic considerations. For example, if a substantial proportion of transmission of a communicable agent occurs during the incubation period or during asymptomatic infection, the impact of health screening on reducing international spread will be diminished.

Screening measures that match the behaviour of the communicable disease in question have the greatest chance of reducing the number of cases and limiting or, if possible, preventing international spread.

A 'toolbox' of screening methods is available, including visual inspection, questionnaire and temperature measurement (using thermal scanners or other suitable methods). The selection of the most appropriate screening method will be determined by the transmission characteristics, associated illness patterns and the risk groups affected. Details of requirements cannot always be determined in advance of an outbreak.

Many characteristics of emerging infectious diseases that will guide the selection of screening measures will become apparent only after the new infectious agent, for example a new influenza strain, has emerged and begun to cause large numbers of human cases.

The World Health Organization (WHO) will monitor the unfolding epidemiological and clinical behaviour of new infectious agents in real time and interpret their significance for the determination of effective screening measures. If, during an evolving infectious disease event, clinical, epidemiological and virological findings, as well as the geographical distribution of infected persons, suggest that screening measures could be effective to limit international disease spread, WHO may recommend airport screening, including temperature measurement and questionnaires about symptoms and travel history.

- It is plausible that screening for persons on departure from affected countries is a better use of global health resources than arrival screening: fewer travellers would be screened, the likelihood of a positive result being a 'true positive' i.e. representing identification of an individual having the disease in question, rather than another, less important, disease having some similar characteristics, would be higher, and transmission on aircraft would be reduced. Exit (departure) screening is therefore less burdensome to individual travellers and societies, and should be undertaken as soon as possible after travellers have arrived at the airport, and before they pass through to airside.

For many communicable diseases, entry (arrival) screening of travellers at international borders will incur considerable expense with a disproportionately small impact on the protection against international spread.

Although entry screening is more costly and disruptive it may be considered:

- o for geographically isolated infection free areas (islands)
- o when epidemiological data indicates the need to do so
- o when the country believes that exit screening at traveller's point of embarkation is suboptimal
- o where internal surveillance capacity in an outbreak area is limited

- If the public health authority determines that screening is to be employed, it should discuss the issues with the airport operator 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.

- Travellers determined at screening to be at increased risk of having a communicable disease posing a potentially serious public health risk should undergo secondary screening by a medical practitioner. If the assessment is positive i.e. the traveller is thought to be suffering from a communicable disease which poses a serious public health risk, consideration should be given to preventing his/her departure. Such a decision should not be taken lightly and has legal implications that need to be adequately considered in preparedness planning. (IHR (2005) Articles 23.3, 23.5, 31 and 32 cover health measures for arriving and departing travellers, including requirements for minimising discomfort and distress for passengers that are at risk of a communicable disease).

- In the event of positive secondary screening, measures should be taken to refer the individual for appropriate diagnosis, treatment and appropriate case management, in accordance with the IHR (2005) with a view to protecting the public from potential infection i.e. by isolation or quarantine. Appropriate isolation or quarantine facilities should be identified by the public health authority and are normally only available away from the airport site.

- In the event of negative secondary screening, the passenger should be allowed to continue on his/her way.

- A private assessment area needs to be pre-identified, where travellers at risk of having a communicable disease can be temporarily accommodated without exposing others to risk.

- Travellers arriving or departing from an 'at risk' area should be provided with the available information about risks, risk avoidance, symptoms associated with the disease and when and where to report should these symptoms develop.

Inbound aircraft carrying a suspected case of a communicable disease which may pose a serious public health risk

A number of considerations should 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:

- 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 usually be taken by the public health authority in consultation with airlines and airport operators. This may be on a remote stand, or, depending on the situation, on the apron with or without a passenger boarding bridge

attached. Action should be taken to disembark the travellers 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 travellers 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 traveller having a communicable respiratory disease should wear a surgical mask unless the traveller is unable to tolerate it. If a mask is worn consistently by the ill traveller this obviates the need for others to wear a mask. All disposable materials in potential contact with a sick traveller need to be disposed of with biohazard precautions

- All surfaces potentially contaminated by the sick traveller should be cleaned and disinfected

- A sick traveller should be taken, by a medical escort, from the aircraft to an area for further assessment/treatment. Appropriate infection control measures should be applied e.g. isolation

- Before the disembarkation, travellers and crew on the same aircraft as the sick traveller should be segregated from other travellers until traveller seating details, contact details and destination have been obtained and they have been advised by public health authority staff of any necessary precautionary measures

    Note.: To assist contact tracing, a suitable traveller locator card is currently under consideration by the Informal Transportation Working Group of the World Health Organization. Information regarding access to this document will be published in ICAO Annex 9, Appendix 13, and posted on this web site when available. The International Air Transport Association, assisted by relevant experts, is evaluating different electronic methods that could facilitate traveller tracing.

- Procedures need to be in place for obtaining baggage, customs and security clearance of a sick traveller, and other travellers

- Thought should be given to the comfort of all passengers, particularly if placed in isolation, or detained on board the aircraft. Food, water and other essentials need to be considered.

- Communication with these passengers is vital to ensuring that discord is not created. Passengers should be fully aware of the processes occurring at all times, and medical staff (possibly nursing staff) should be available to reply to questions or calm concerns that they may have.

- A procedure for transporting a sick traveller to hospital needs to be in place
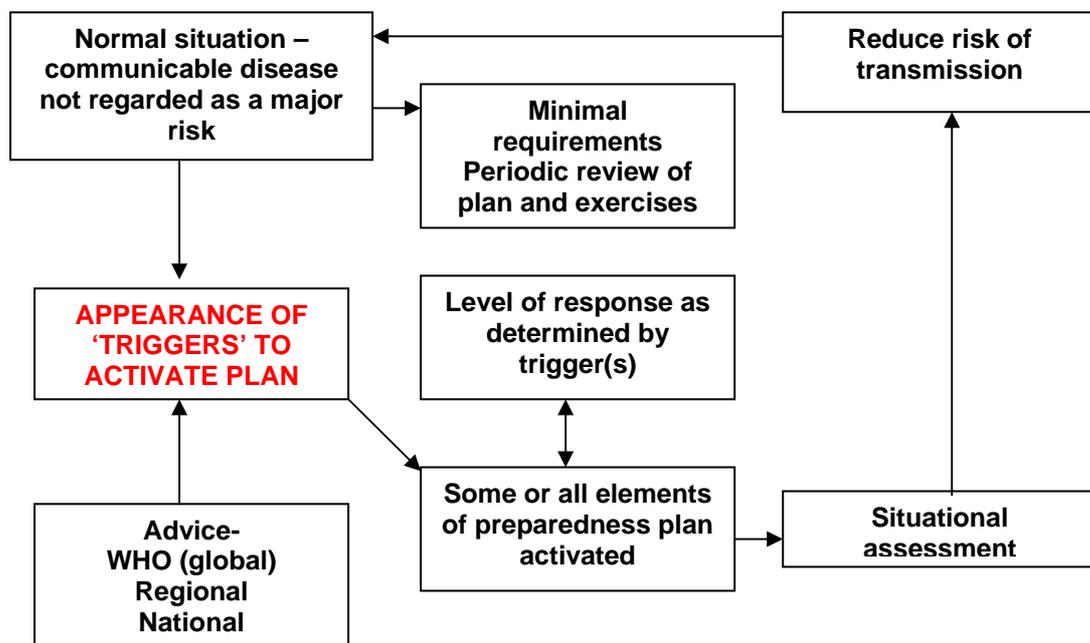
Exercises

- Airport operators should establish a method of testing preparedness by means of drills/exercises involving all relevant stakeholders, especially public health authorities, airport operators and airlines.

Summary

- A schematic summary of some of the possible communication links is shown below.

   Airport preparedness plan – schematic example of summary of actions

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┌─────────────────────┐                          ┌─────────────────┐
│ Normal situation –  │◄─────────────────────────│  Reduce risk of │
│ communicable disease│                          │  transmission   │
│ not regarded as a   │──┐                       └─────────────────┘
│    major risk       │  │   ┌─────────────────┐          ▲
└─────────────────────┘  └──►│     Minimal      │          │
          │                  │  requirements    │          │
          │                  │ Periodic review  │          │
          │                  │ of plan and      │          │
          ▼                  │   exercises      │          │
┌─────────────────────┐      └─────────────────┘          │
│  APPEARANCE OF      │      ┌─────────────────┐           │
│  'TRIGGERS' TO      │      │ Level of        │           │
│  ACTIVATE PLAN      │      │ response as     │           │
└─────────────────────┘      │ determined by   │           │
          ▲         \        │ trigger(s)      │           │
          │          \       └─────────────────┘           │
          │           \              ▲                     │
┌─────────────────┐     \            │                     │
│    Advice-      │      ┌─────────────────┐   ┌─────────────────┐
│  WHO (global)   │      │ Some or all     │──►│  Situational    │
│   Regional      │      │ elements of     │   │  assessment     │
│   National      │      │ preparedness    │   └─────────────────┘
└─────────────────┘      │ plan activated  │
                         └─────────────────┘
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For further details, refer to the following sites:
- WHO for health authorities guidelines:
  www.who.int/gb/ebwha/pdf_files/WHA58/A58_55-en.pdf

- ICAO for State authorities guidelines:
  www.icao.int/cgi/goto_m_med.pl?icao/en/med/avmedavianinfluenza.htm

- IATA for airline guidelines:
  www.iata.org/whatwedo/safety_security/safety/health_safety/aviation_communicable_diseases.htm