



# **WHO technical advice for case management of Influenza A(H1N1) in air transport**

**Developed in cooperation with**

**The International Civil Aviation Organization**

**and**

**The International Air Transport Association**

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## Acknowledgements

This document is the product of collaborative efforts across WHO, led by the International Health Regulations Coordination Department and the Task Force for the Influenza A(H1N1) Response at WHO and in collaboration with International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA).

WHO wishes to acknowledge with gratitude the commitment of experts from ICAO, IATA and staff who contributed to the preparation of this document, particularly Dr Anthony Evans, Chief of Aviation Medicine Section, ICAO, Montreal, Canada, and Dr Claude Thibeault, Consultant to IATA, Montreal, Canada.

Declarations of interest were obtained from the above major contributors. For the contributor with a potential conflict of interest, information is provided in the footnote below.<sup>1</sup>

This document has been developed to meet the urgent need for guidance and the recommendations are only valid until new guidance becomes available, at the latest until the end of 2009.

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<sup>1</sup> Declared interest: Dr Claude Thibeault: Medical Adviser, Consultant to IATA.

# I. Introduction

This document is part of a series of guidance documents that is being produced by the World Health Organization (WHO) in response to the “public health emergency of international concern” related to the new influenza A(H1N1), as determined by the WHO Director-General on 25 April 2009. These documents are being updated regularly and can be accessed on the WHO web site<sup>2</sup>.

The target audience for this guidance document includes the National Focal Points for the International Health Regulations (IHR (2005))(1) and competent national public health authorities at points of entry, as well as airport operators, aircraft operators, airport personnel, crew members and other stakeholders involved in air transport.

With the adoption of the IHR (2005) by the World Health Assembly in May 2005, States Parties agreed to develop, strengthen and maintain the capacities related to surveillance, reporting, notification, verification, response and collaboration, including activities concerning points of entry. These include contingency plans for public health emergencies that aim at preventing public health risks from spreading internationally, while avoiding unnecessary interference with international traffic and trade. States Parties also have obligations concerning application of health measures to international travellers, trade and transportation, surveillance and reporting to WHO, public health response and other areas.

A group of internal and external experts was convened to develop emergency guidance on case management of the new Influenza A(H1N1) in air transport. This technical advisory group was composed of professionals with expertise and experience in the areas of aviation medicine, hygiene and sanitation in aviation, occupational health, in infection, prevention and disease control. The recommendations have been developed to provide urgent guidance to countries to reduce human exposure<sup>3</sup> to infectious agents at airports and during air travel, and to improve the response to health-related emergencies by establishing mechanisms for rapid intervention, especially when suspected cases of the new influenza A(H1N1) are detected in flight.

This document was developed after a review of existing relevant WHO guidelines for air travel and health (2-4), relevant guidance documents on influenza preparedness and response (5-9), and available guidance on the current influenza A(H1N1) outbreak<sup>4</sup> and other documents (10-15) that provided international and national guidance related to air travel and health, as well as through consideration and discussion of expert opinions.

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<sup>2</sup> See: WHO Epidemic Alert and Response Web page on Influenza A(H1N1). Available at: <http://www.who.int/csr/disease/swineflu/en/index.html>

<sup>3</sup> Exposure is defined as proximity and/or contact with a source of a disease agent in such a manner that effective transmission of the agent may occur. For influenza the main route of transmission is by droplets propelled over short distances and which contaminate surfaces; transmission may occur at short distances through inhalation of small-particle aerosols (droplet nuclei), particularly in shared air spaces.

<sup>4</sup> See: References section, p. 17.

Opinion, experience, and draft recommendations were considered by the expert group during several meetings at WHO Headquarters, Geneva, from 27 April to 6 May 2009. Experts from WHO, the International Civil Aviation Organization (ICAO) and the International Air Transport Association (IATA) evaluated the comments suggested by the experts providing guidance when opinions differed, and providing oversight regarding the incorporation of amendments and finalization of the document. Recommendations were reviewed and finalized on 7 May 2009.

This document compiles recommendations from existing guidelines for air travel and health as well as specific WHO guidelines related to influenza A(H1N1), where applicable for air transport, and outlines some measures to be taken by aircraft operators, airport operators airport personnel, crew members and national authorities. It can be used in conjunction with the document *Guide to Hygiene and Sanitation in Aviation*, 3<sup>rd</sup> edition<sup>5</sup>. Useful guidance related to this subject is also available from the web sites of the International Civil Aviation Organization (<http://www.icao.int>) and International Air Transport Association ([www.iata.org](http://www.iata.org)).

The guidance in this document should be adapted to the local situation, the national and international regulations, and guidelines provided in national pandemic preparedness plans. Mainly it addresses aspects in relation to first aid in flight and at airports, and it supports contingency planning to control public health risk and avoid unnecessary interference with international traffic and trade. It is not intended to address all public health issues and related rules and regulations that may arise in relation to aircraft or airport operations.

The use of this document should result in greater predictability of the measures adopted by the various stakeholders (including both public and private sector entities), and facilitate implementation of appropriate actions in suspected cases of the new influenza A(H1N1).

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<sup>5</sup> See: *Guide to Hygiene and Sanitation in Aviation*, 2009. Geneva: World Health Organization. Available at: [http://www.who.int/water\\_sanitation\\_health/hygiene/ships/en/](http://www.who.int/water_sanitation_health/hygiene/ships/en/)

## **II. Management of events during the flight**

This part of the document provides a basic framework of response for cabin crew members to help them manage a person with influenza-like symptoms in order to reduce potential transmission on board and to prepare follow-up actions with airport operators and local public health authorities at destination.

The likelihood that a person is suffering a communicable disease is increased if he/she has a fever with a temperature of 38 °C/100 °F or greater, associated with one or more of the following signs or symptoms, e.g. appearing obviously unwell; persistent coughing; impaired breathing; persistent diarrhoea; persistent vomiting; skin rash; bruising or bleeding without previous injury; or confusion of recent onset. In the current situation, the cabin crew should also consider as suspicious any traveller with a fever and one of the influenza-like signs and symptoms (fever, cough, headache, body aches, sore throat, runny nose and sometimes vomiting or diarrhoea).

### **Cabin crew member actions**

Persons on board who may be suffering from a communicable disease, especially if they have influenza-like signs and symptoms, should receive immediate attention. Further advice for cabin crew members is described in Box 1.

### Box 1: Recommended procedures for cabin crew members

1. If medical support from the ground is available, contact ground support immediately and/or page for medical assistance on board (as per company policy).
2. If medical ground support and/or an on-board health professional is available, crew should follow their medical advice accordingly.
3. If no medical support is available:
  - a) Relocate the ill traveller to a more isolated area, if appropriate, and space is available. If the ill traveller is relocated, make sure that the cleaning crew at destination will be advised to clean both locations. (All surfaces potentially contaminated by the ill traveller should be cleaned and disinfected according to the WHO Guide to Hygiene and Sanitation in Aviation) \*.
  - b) Designate one cabin crew member to look after the ill traveller, preferably the cabin crew member who has already been dealing with this traveller. More than one cabin crew member may be necessary if more care is required.
  - c) When possible, designate a specific lavatory for the exclusive use of the ill traveller. If not possible, the commonly touched surfaces of the lavatories (faucet, door handles, waste-bin cover, counter top, etc.) must be cleaned and disinfected after each use by the ill traveller.
  - d) If the ill traveller is coughing, request him/her to follow respiratory etiquette:
    - i. Provide tissues and the advice to use the tissues to cover the mouth and nose when speaking, sneezing or coughing.
    - ii. Advise the ill traveller to practice proper hand hygiene\*. If the hands become visibly soiled, they must be washed with soap and water.
    - iii. Provide an air-sick bag to be used for the safe disposal of tissues.
  - e) If available on aircraft and tolerated by the ill traveller, a medical (surgical or procedure) mask should be, and the ill traveller asked to wear it. If a mask is used, replace with a new mask as soon as it becomes damp/humid. After touching a used mask, (e.g., for disposal), proper hand hygiene\* must be practised immediately. Single masks should not be reused and must be disposed safely after use.
  - f) If there is a risk of direct contact with body fluids, the crew member should wear disposable gloves. Gloves are not intended to replace proper hand hygiene\*. Gloves should be carefully removed and safely disposed. After the removal of gloves, hands should preferably be washed with soap and water or, if the hands are not visibly soiled, cleansed with an alcohol-based hand rub.
  - g) If the ill traveller cannot tolerate a mask, the designated cabin crew member(s) or any other person in close contact (less than 1 metre) with the ill person should wear a medical (surgical or procedure) mask. The airline should ensure that the cabin crew member has adequate training in its use to ensure that risk is not increased (for example by more frequent hand-face contact or adjusting and removing the mask).
  - h) Store soiled items (used tissues, 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 and label it "biohazard".
  - i) Ask accompanying traveller(s) (spouse, children, friends, etc.) if they have any similar symptoms. The same procedure should be followed for all ill travellers.
  - j) Ensure that hand-carried cabin baggage is removed along with the ill traveller, and comply with any public health authority requests.
4. As soon as possible, advise the captain of the situation.
5. Unless stated otherwise by ground medical support or public health officials, ask all travellers seated in the same row, and two rows in front and two rows behind the ill traveller (i.e. a total of five rows) to complete a passenger locator card (according to the model provided in Annex 1 (available at <http://www.who.int/ihr/PLC.pdf> ) if such cards are available on the aircraft. If not available on board, this action should be taken immediately upon the arrival of the aircraft at next airport.

For further information of operational procedures recommended by IATA, please see IATA Guidelines for Cabin Crew:

[http://www.iata.org/NR/rdonlyres/DD29D97F-0E8C-4CBD-B575-1F5067174941/0/Guidelines\\_cabin\\_crew\\_finalDec2008.pdf](http://www.iata.org/NR/rdonlyres/DD29D97F-0E8C-4CBD-B575-1F5067174941/0/Guidelines_cabin_crew_finalDec2008.pdf)

\* Guide to Hygiene and Sanitation in Aviation, revised draft 2009. Geneva: World Health Organization. Available at: [http://www.who.int/water\\_sanitation\\_health/hygiene/ships/en/](http://www.who.int/water_sanitation_health/hygiene/ships/en/)

\*\* Proper hand hygiene:

A general term referring to any action of hand cleansing, performed by washing one's hands (either with soap and water or an antiseptic hand rub) for at least 15 seconds. Touching the face with hands should be avoided (see Appendix 3).

## Pilot in command actions

The pilot in command of an aircraft may take such emergency measures in flight as may be necessary for the health and safety of travellers on board. The event needs also to be recorded on the Health Part of the Aircraft General Declaration, IHR Annex 9.<sup>6</sup>

He/she shall inform air traffic control, as early as possible before arrival, of any cases of illness indicative of a disease of an infectious nature or evidence of a public health risk on board. This information must be relayed immediately/as soon as possible by air traffic control to the competent authority for the destination airport, according to procedures established in IHR (2005), Article 28.4 and ICAO Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM, Document ICAO PANS-ATM 16.6), as described in Figure 1 and in Box 2.

Figure 1 Air traffic control (ATC) notification of an event



In summary:

- (1) Pilot reports to air traffic services (ATS)
- (2) ATS reports to destination (and departure) ATS unit
- (3) Destination ATS unit reports to public health authority/competent authority for the airport
- (4) Public health authority (PHA)/competent authority contacts airline operating agency to obtain further details of illness

The specific mechanisms for implementing communications between the competent authority, airline operating agency and airport/aerodrome authority (items 3 and 4 above) are determined nationally.

<sup>6</sup> *International Health Regulations (2005)*, 2<sup>nd</sup> edition. Geneva: World Health Organization; 2008. Available at: [http://whqlibdoc.who.int/publications/2008/9789241580410\\_eng.pdf](http://whqlibdoc.who.int/publications/2008/9789241580410_eng.pdf)

**Box 2: PANS-ATM 16.6\*:**

The flight crew of an en-route aircraft shall, upon identifying a suspected case(s) of communicable disease, or other public health risk, on board the aircraft, promptly notify the Air Traffic Service (ATS) unit with which the pilot is communicating, the information listed below:

- (a) aircraft identification;
  - (b) departure aerodrome;
  - (c) destination aerodrome;
  - (d) estimated time of arrival;
  - (e) number of persons on board;
  - (f) number of suspected case(s) on board; and
  - (g) nature of the public health risk, if known.
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16.6.2 The ATS unit, upon receipt of information from a pilot regarding suspected case(s) of communicable disease, or other public health risk on board the aircraft, shall forward a message as soon as possible to the ATS unit serving the destination/departure, unless procedures exist to notify the appropriate authority designated by the State, and the aircraft operator or its designated representative.

16.6.3 When a report of a suspected case(s) of communicable disease, or other public health risk, on board an aircraft is received by an ATS unit serving the destination/departure, from another ATS unit or from an aircraft or an aircraft operator, the unit concerned shall forward a message as soon as possible to the public health authority (PHA) or the appropriate authority designated by the State as well as the aircraft operator or its designated representative, and the aerodrome authority.

Note 1. For relevant additional information related to the subject of communicable disease and public health risk on board an aircraft, see The International Civil Aviation Convention, Annex 9, Chapter 1 (Definitions), Chapter 8, 8.12 and 8.15, and Appendix 1,

Note 2. The PHA is expected to contact the airline representative or operating agency and aerodrome authority, if applicable, for subsequent coordination with the aircraft concerning clinical details and aerodrome preparation. Depending on the communications facilities available to the airline representative or operating agency, it may not be possible to communicate with the aircraft until it is closer to its destination. Apart from the initial notification to the ATS unit whilst en-route, air traffic control communications channels are to be avoided.

Note 3. The information to be provided to the departure aerodrome will prevent the potential spread of communicable disease, or other public health risk, through other aircraft departing from the same aerodrome.

Note 4. AFTN\*\* (urgency message), telephone, facsimile or other means of communication may be used.

\* Although not formally applicable until November 2009, its immediate implementation is advised.

\*\* AFTN: Aeronautical Fixed Telecommunications Network i.e. ground-based telecommunications network

### **III. Action by public health authority/competent authority at arrival airport**

To effectively manage a public health event on board an aircraft, and to minimize the adverse effect of such events on travellers and airport operations, the relevant competent authority<sup>7</sup> shall take action according to the national public health surveillance and response procedures, the airport emergency plan regarding public health events and international requirements, addressing the following issues among others<sup>8</sup>:

- (1) Coordinate with the airport operator/airport authority to provide a parking area for the aircraft.
- (2) Coordinate with airport authorities to grant credentials and security escorts to public health personnel and emergency responders who require access to restricted areas of the airport.
- (3) Make appropriate notifications about the incident.
- (4) Facilitate and supervise the implementation of arrangements, including agreements or memoranda of understanding with appropriate agencies, health care units, airport authorities, airlines and service providers, for the management of arriving traveller(s) displaying symptoms of a disease of concern, including coordination for customs and immigration clearance.
- (5) Ensure availability of appropriate transport for travellers suspected of having an illness of public health concern to a designated facility for further evaluation, quarantine, isolation and treatment as necessary.
- (6) Work with other local health authorities, medical services and other agencies to assist in the care of passengers and crew if they are housed at a temporary health care facility or quarantine facility, preferably away from the airport.
- (7) Conduct further public health risk assessment relating to the arrival and departure of ill or suspect travellers. Consideration should be given to disease-specific local protocols where appropriate, and assessment should be undertaken at the earliest possible opportunity following disembarkation from the conveyance.
- (8) Establish with airport operators an appropriate area(s) for undertaking health assessment of traveller(s) with symptoms of a disease of concern. This area(s) should accommodate appropriate numbers of traveller(s) and allow privacy, provide good ambient light, appropriate ventilation, access to designated toilet facilities and telecommunications.
- (9) Coordinate with customs, immigration and other federal partners, for adequate clearance of travellers, baggage, personal items, etc.

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<sup>7</sup> “Competent authority” means an authority responsible for the implementation and application of health measures under the International Health Regulations (2005).

<sup>8</sup> See Box 3 for specific checklist for arriving or departing ill travellers (including crew members),

- (10) Establish a communication strategy that educates and informs in a timely manner relevant agencies, the airport operator, aircraft operators and service providers of their obligations as specified in the contingency plan. Aircraft operators and other service providers, agencies and authorities should be advised of public health measures to be applied at arrival and departure, in response to occurrences of a disease of concern.
- (11) Ensure that aircraft operators inform travellers of the health measures recommended by WHO and adopted by the State Party for application on board and assist with providing information to family and friends of passengers and crew, as appropriate.
- (12) Establish a system whereby all relevant health authorities and border agency representatives are appropriately trained in traveller health assessment and management, according to their duties and competences, including use of and access to personnel protective equipment (PPE).
- (13) Establish a system that enables the identification of at-risk traveller(s) who have travelled on aircraft where cases of a disease of concern are suspected or have been confirmed for future contact tracing, if applicable, in accordance with data protection requirements.
- (14) Assist with logistics, as applicable.
- (15) Ensure that travellers are treated in accordance with national law and international requirements (including the International Health Regulations (2005)).

Local airline agents should be informed of the Public Health Response Plan, including information about designated facilities, and have local procedures integrated into their own protocols.

Public health officers need to have quick and efficient access to the aircraft, using appropriate PPE and hand-hygiene supplies. For many communicable diseases, disposable gloves and good hand hygiene (at times in combination with medical masks) are sufficient unless otherwise specified by the national public health authority.

A traveller having a communicable respiratory disease should wear a mask unless the traveller is unable to tolerate it. If a mask is worn consistently by the ill traveller this precludes the need for others to wear a mask. All disposable materials in potential contact with an ill traveller need to be removed using biohazard precautions.

All surfaces potentially contaminated by the ill traveller should be cleaned and disinfected according to the *WHO Guide to Hygiene and Sanitation in Aviation*.<sup>9</sup>

An ill traveller should be taken by a medical escort from the aircraft to an area suitable for further assessment/treatment. Appropriate infection control measures should be applied. Before disembarkation, travellers and crew on the same aircraft as the ill traveller should remain 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 preventive measures.

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<sup>9</sup> See footnote 5.

Procedures need to be in place for obtaining baggage, customs and security clearance of an ill traveller, and others accompanying him/her.

A procedure for transporting an ill traveller to hospital needs to be in place.

**Box 4: Checklist for arriving or departing ill travellers (including crew members)**

- a. Are systems in place, on departure, en-route, or on arrival, for management of travellers reported as displaying symptoms suggestive of influenza?
- b. Are systems in place to ensure that any reports of arriving travellers displaying symptoms suggestive of influenza are accurately and immediately relayed to the public health authority at the intended place of arrival?
- c. Are systems in place to alert the National IHR Focal Point, should ill travellers arrive with symptoms suggestive of a condition that could be related to this public health event (or other applicable events)?
- d. Are systems in place for the identification and contact tracing of various categories of fellow travellers depending on the suspected illness, as applicable, in accordance with the national and international requirements?
- e. Are agreements in place with relevant agencies for: the management of travellers displaying symptoms suggestive of influenza, including initial medical assessment of the ill traveller; assessment of associated public health risks; expediting of clearance procedures etc.?
- f. Are agreements in place with the relevant agencies for the transportation of travellers displaying symptoms suggestive of influenza from the airport of entry to the designated health care facility/facilities, and for the delivery of the relevant medical examination and treatment, as well as access to diagnostic capability in the designated health care facility/facilities.
- g. Are arrangements in place for public health responders to have access through secure areas of the airports to respond to reports of arriving or departing travellers displaying symptoms suggestive of a communicable disease, should that be required?
- h. Are arrangements in place with other border agencies for the clearance of ill travellers, those accompanying ill travellers, and their baggage, being transported to health care facilities?
- i. Is there a designated area that will allow privacy, with good ambient light, ventilation, easy cleaning, and access to designated toilet facilities and telecommunications for the assessment where necessary of small groups of suspect travellers?
- j. Are areas designated at the airport for the assessment and management of various categories of fellow travellers (e.g. family members, others in travel group, those sitting near to the ill person, entire aircraft occupants) should the need arise due to the suspected illness of the ill traveller?
- k. Do contingency plans at the airport include the potential need to separate suspect travellers from others in the airport until given public health clearance?
- l. Do contingency plans at the port of entry include the possibility of moving suspect travellers to designated health care facilities away from the airport for assessment, treatment, isolation, or quarantine, as appropriate? Does the existing procedure ensure minimal contact with others, until such time as the risk of their carrying such disease has been dismissed or managed?
- m. Do contingency plans include the provision of language interpretation services if required?
- n. Do contingency plans include media communication strategies, as applicable, for the event of an ill person arriving with a suspected communicable disease, the nature of which could raise public concern?
- o. Are systems in place for the collection, management and use of contact-tracing information, to allow for rapid contact with fellow travellers post-clearance, should that be required due to the eventual diagnosis of the ill traveller?
- p. Are public health response stockpiles available for rapid response at the airport, e.g. personal protective equipment (e.g. masks and gloves), documentation, passenger locator cards, etc.?
- q. Are systems in place to ensure the cleaning and disinfection of conveyances, and any contaminated airport spaces if required?

## **IV. Arrival airport – additional information**

### **Parking position of aircraft**

The pilot in command (PIC) needs to be advised 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 airline and airport authorities. This may be on a remote stand or, depending on the situation, on the apron with or without an air bridge attached. It should be noted that parking an aircraft some distance away from the terminal building is likely to delay the public health assessment of the situation, and may make passenger handling more complicated. There is no evidence to suggest that the public health risk is greater if the aircraft is parked adjacent to the terminal, with an air bridge or steps used for disembarkation. In principle, the aircraft arrival should be managed by a system that is as close to routine as possible: using a remote stand is not mandatory.

Aircrew and ground crew need to be advised concerning the opening of aircraft doors, disembarkation and the information to be given to travellers prior to the arrival of the medical team.

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.

### **Disembarkation of travellers**

At the arrival airport all travellers on the aircraft should follow national public health procedures regarding the need for health information (including completion of passenger locator cards or other documents) and further checks.

It is recommended that completed passenger locator cards be collected from travellers seated in the same row, two rows in front and two rows behind the ill traveller (i.e. a total of five rows). If such cards are not available on the aircraft they should be provided (according to model provided in Appendix 1<sup>10</sup>) and completed at the arrival airport in order that travellers may be located at a later date by public health authorities.

In addition, other fellow travellers who may have been seated beyond the two rows in front and two rows behind, but nevertheless had close contact with ill passenger during this travel — such as family members, other members of a travel group, or having cared for, lived with, or had direct contact with respiratory secretions or body fluids of a probable or confirmed case of influenza A(H1N1), as well the ill person — may be required to provide information concerning their destination in case they may need to be contacted, according to the national pandemic preparedness plan.

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<sup>10</sup> Passenger Locator Card. Available at: <http://www.who.int/ihr/PLC.pdf>

## **Close contacts identification and follow-up**

The travellers must be informed that if any symptoms and signs of influenza-like illness (fever, cough, headache, body aches, sore throat, runny nose and sometimes include vomiting or diarrhoea) develop within the next 7 days, they should seek medical help and inform the health care provider about his/her travel history.

## **Occupational health of airline crew members**

Airline crew members may be exposed to travellers infected with the influenza A(H1N1) virus. They should follow the (same) practices and instructions described above.

Routine infection prevention and control, such as hand hygiene and control of the source of infection through social distancing and cough etiquette (including wearing of masks by symptomatic individuals) are important control measures and should be followed by the crew if they are symptomatic.

Recommendations are based on standard infection control and industrial hygiene practices. Rapid implementation of these measures can help to ensure protection of airline crew members and travellers and help limit the potential spread of the virus through airline travel.

## **Management of crew-member exposure following completion of flight**

Crew members who may have been exposed to a traveller suspected of having influenza A(H1N1) should monitor their health for 7 days following the exposure. They can continue to work as per their original schedule unless they become ill with influenza-like symptoms.

If they do become ill with influenza-like symptoms, including fever, cough, headache, body aches, sore throat, runny nose and sometimes include vomiting or diarrhoea, they should immediately take the following steps:

- Stay at home except to seek medical care; do not report to work.
- Notify their employer.
- Contact their occupational health service or personal physician.
- Inform the occupational health service, clinic, or emergency room before visiting it about the possible exposure to influenza.
- Do not travel, unless it is critical to travel locally for health care.
- Limit contact with others as much as possible.
- When not alone or in a public place, wear a facemask to reduce the number of droplets coughed or sneezed into the air.

## Cleaning and disinfection

Cleaning refers to the removal of visible dirt or particles, while disinfection refers to the measures taken to control, deactivate or kill infectious agents such as viruses and bacteria.

Cleaning and disinfection on aircraft require special attention since it is necessary to use agents that are not corrosive or otherwise detrimental to aircraft components. It is therefore necessary to exercise caution in selecting suitable products and before applying them in the cabin. In addition, manufacturers' instructions must be followed carefully to protect the health of the cleaning personnel and to ensure effective action.

Cleaning crews need to be adequately trained for routine cleaning and disinfection procedures and also for those to be implemented following a communicable disease event, since the requirements are likely to differ. Exposure to body fluids (such as respiratory secretions or blood), vomit or faeces may involve a risk of infection if not properly contained. Cleaning crews therefore need to follow the procedures that will ensure effective cleaning and disinfection and protect their health, using appropriate personal protective equipment.

For more detailed technical guidance see the *Guide to Hygiene and Sanitation in Aviation*.<sup>11</sup>

## V. General requirements when applying health measures to international travellers — IHR (2005)

1. Travellers must be treated:
  - a. With courtesy, and respect for their dignity, human rights and fundamental freedoms;
  - b. So as to minimize any discomfort or distress associated with these measures; and
  - c. Taking into account their gender, sociological, ethnic and religious concerns
  
2. Where international travellers are subject to health measures such as quarantine, isolation or medical examinations<sup>12</sup> or other public health procedures, the State must provide or arrange for:
  - a. Adequate food and water.

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<sup>11</sup> Guide to Hygiene and Sanitation in Aviation, revised draft 2009. Geneva: World Health Organization. Available at: [http://www.who.int/water\\_sanitation\\_health/gdwqrevision/aviation/en/index.html](http://www.who.int/water_sanitation_health/gdwqrevision/aviation/en/index.html).

<sup>12</sup> "Medical examination" means a preliminary assessment to determine health status and potential risk to others, and may include scrutiny of health documents, and a physical exam when justified by circumstances of the individual case (see IHR (2005) Article 1, Definitions).

- b. Appropriate accommodation and clothing.
  - c. Protection for baggage and possessions.
  - d. Appropriate medical treatment.
  - e. Means of necessary communication.
  - f. Other appropriate assistance ((IHR (2005), Article 32).
3. Measures must be initiated and completed without delay, and applied in a transparent and non-discriminatory manner ((IHR (2005), Article 42).
  4. All medical examinations, procedures, vaccination, other prophylaxis for travellers which involves risk of disease transmission must be performed or administered in accordance with established national/international safety guidelines/standards to minimize that risk ((IHR (2005), Article 23.5).

### **Charges to travellers for health measures — IHR (2005)**

1. Unless travellers are seeking temporary or permanent residence, no charges shall be made for the following measures primarily for the protection of public health:
  - a. Any medical examination under the Regulations, or any supplementary examination required by the State to ascertain the health status of the traveller.
  - b. Isolation or quarantine requirements.
  - c. Certificates issued to the traveller specifying the measures applied and date.
  - d. Health measures applied to accompanying baggage.
  - e. Any vaccination or prophylaxis provided to travellers on arrival unless the requirement was published at least 10 days before arrival.
2. For charges to travellers for other health measures:
  - a. Each State must have just one tariff (and all charges must conform to this tariff).
  - b. The tariff may not exceed the actual cost of the service.
  - c. There may not be discrimination as to nationality, domicile or residence of travellers.
  - d. The tariff must be published at least 10 days earlier ((IHR (2005), Article 40).

Travellers or conveyance operators may not be stopped from leaving the State pending payment of these charges.

The IHR (2005) do not preclude States from seeking reimbursement for these expenses listed under paragraph 1, above, from insurance sources or from conveyance owners or operators as to their employees.

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**Annex 2 - Health Part of Aircraft General Declaration, IHR Annex 9<sup>14</sup>**

Health Part of Aircraft General Declaration, IHR Annex 9

ANNEX 9

**THIS DOCUMENT IS PART OF THE AIRCRAFT GENERAL DECLARATION,  
PROMULGATED BY THE INTERNATIONAL CIVIL AVIATION ORGANIZATION  
HEALTH PART OF THE AIRCRAFT GENERAL DECLARATION<sup>1</sup>**

*Declaration of Health*

Name and seat number or function of persons on board with illnesses other than airsickness or the effects of accidents, who may be suffering from a communicable disease (a fever - temperature 38°C/100 °F or greater - associated with one or more of the following signs or symptoms, e.g. appearing obviously unwell; persistent coughing; impaired breathing; persistent diarrhoea; persistent vomiting; skin rash; bruising or bleeding without previous injury; or confusion of recent onset, increases the likelihood that the person is suffering a communicable disease) as well as such cases of illness disembarked during a previous stop .....

.....

Details of each disinsecting or sanitary treatment (place, date, time, method) during the flight. If no disinsecting has been carried out during the flight, give details of most recent disinsecting

.....

.....

Signature, if required, with time and date

\_\_\_\_\_  
Crew member concerned

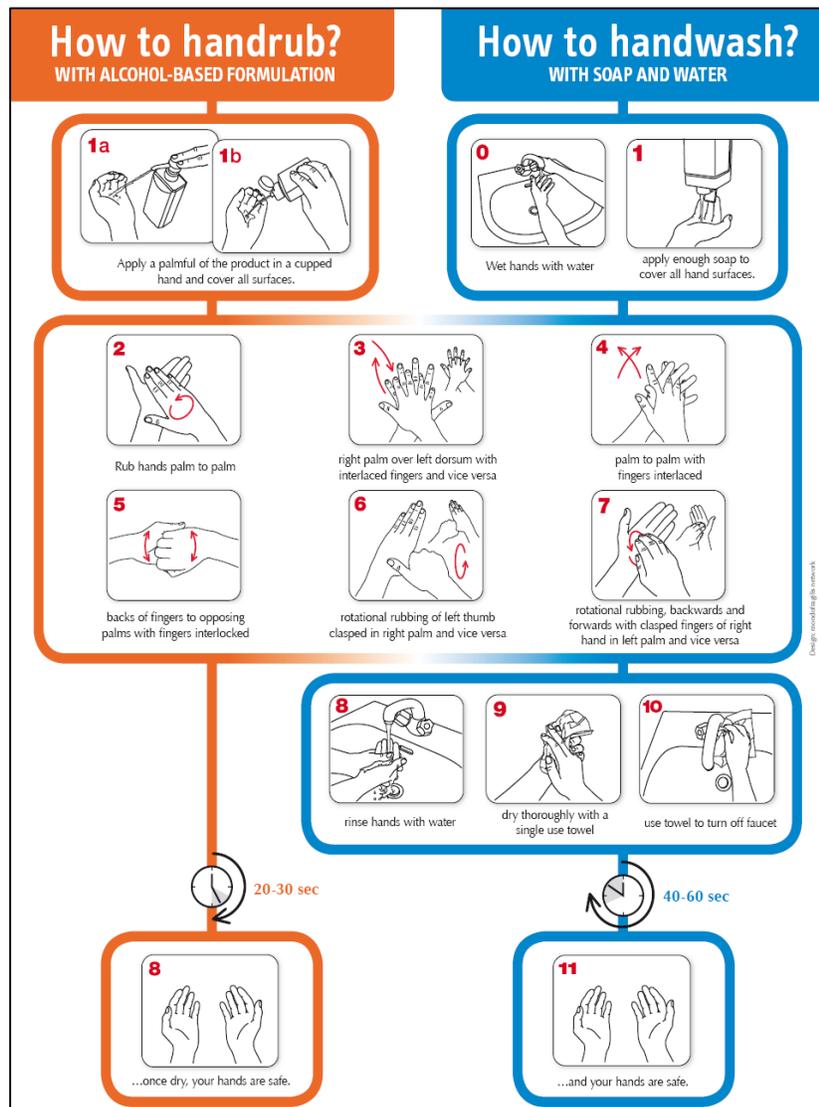
<sup>1</sup> This version of the Aircraft General Declaration entered into force on 15 July 2007. The full document may be obtained from the website of the International Civil Aviation Organization at <http://www.icao.int/icao/en/med/guidelines.htm>

<sup>14</sup> See: Annex 9, *International Health Regulations (2005)*, 2<sup>nd</sup> edition. Geneva: World Health Organization; 2008. Available at: [http://whqlibdoc.who.int/publications/2008/9789241580410\\_eng.pdf](http://whqlibdoc.who.int/publications/2008/9789241580410_eng.pdf)

## Annex 3 - Handwashing Procedures

Washing your hands properly takes about as long as singing "Happy Birthday" twice, using the images below.<sup>15</sup>

- Clean your hands regularly.
- Wash your hands with soap and water, and dry them thoroughly
- Use alcohol-based handrub if you don't have immediate access to soap and water.



SOURCE : WORLD ALLIANCE FOR PATIENTY SAFETY [HTTP://WWW.WHO.INT/PATIENTSAFETY/EN/](http://www.who.int/patientsafety/en/)

<sup>15</sup> See also: WHO Patient Safety web site page on: *Clean care is safer care.*  
[http://www.who.int/gpsc/clean\\_hands\\_protection/en/index.html](http://www.who.int/gpsc/clean_hands_protection/en/index.html)