Influenza A(H1N1) and the aviation sector

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Plan

- Pandemic planning in aviation
  - Chicago Convention
- Current H1N1 situation
- Central role of WHO
- UN communication
- ICAO provisions
- Airport screening
- Cabin ventilation
- Airport operations
Article 14, Convention on International Civil Aviation (Chicago Convention – 1944)

• ‘Each contracting State agrees to take effective measures to prevent the spread by means of air navigation of cholera, typhus (epidemic), smallpox, yellow fever, plague, and *such other communicable diseases as the contracting States shall from time to time decide to designate*....’
2003: SARS
2005 – Avian influenza
Central role of WHO
Pandemic alert phase 5

(phase - signifies spread of disease, not severity)

• Phase 5
  – The same identified virus has caused sustained community level outbreaks in at least two countries in one WHO region

• Phase 6
  .... Sustained community level outbreaks in at least one other country in another region
World Health Organization

• No travel restrictions advised
  – Disease has already spread

• At present, illness is mild in most cases

• Can be treated by oseltamivir (Tamiflu)
World Health Organization

• Simple, practical measures:
  – Frequent handwashing (sanitizer if handwashing not possible)
  – Social distancing/illness distancing
    • Do not travel/go to work with flu-like symptoms
    • Returning travellers who fall ill – seek medical care
  – Cough etiquette (use a tissue, dispose of tissue, wash hands)
Communication
WHO

DAILY UPDATE OF CASES

UN AGENCIES

HEALTH INFORMATION

UN TWG

Inter-agency Technical Working Group

UN WTON

Tourism Emergency Response Network

DAILY PRESS BRIEF

EMERGENCY COMMITTEE

TRAVEL & TOURISM INDUSTRY
Main role of ICAO

• Implementation of appropriate, harmonized preparedness plans by stakeholders in the aviation sector
• Support WHO in implementation of health measures in aviation
Aviation related actions

- Guide to hygiene and Sanitation in aviation
- Case management of Influenza A(H1N1) in air transport
- WHO global Preparedness
- IHR 2005
- ICAO State Guidelines
- preparedness planning
- Airports Council International airport guidelines
- International Air Transport Association airline guidelines

Case management of Influenza A(H1N1) in air transport

IHR 2005

ICAO State Guidelines

preparedness planning

Airports Council International airport guidelines

International Air Transport Association airline guidelines
Changes to ICAO provisions

2007
- States to have a pandemic preparedness plan for aviation - integrated into national plan
- Cabin crew advice on how to identify a suspected case (changes to aircraft declaration)
- Passenger locator card for contact tracing agreed by WHO (collaboration with IATA)

2009
- ‘Universal precaution kit’ for managing on board communicable disease
- Pilot in command to notify air traffic control of a suspected case
Identification of case of communicable disease by cabin crew

Fever (38°C/100°F or greater) plus one or more of the following signs or symptoms:

- Appearing obviously unwell
- Persistent coughing
- Impaired breathing
- Persistent diarrhoea
- Persistent vomiting
- Skin rash
- Bruising or bleeding without previous injury
- Confusion of recent onset
On board medical supplies

– Inclusion of a ‘universal precaution kit’
  • Managing on board communicable disease event
  • Personal protective equipment
  • Absorbent powder
  • Germicidal disinfectant
  • Biohazard disposal bag etc.

– Inclusion of thermometer in first aid kit
Procedures for Air Navigation Services – Air Traffic Management

• procedure for utilising Air Traffic Control for notifying destination of communicable disease
CURRENT SITUATION: AIRLINE NOTIFICATION OF EVENT
ATC NOTIFICATION OF EVENT

En route ATC

Aerodrome tower
For contact tracing of travellers who have been in contact with a suspected or known cases of H1N1 – on WHO/ICAO/IATA website

Use in conjunction with health declaration card (IATA website)
Health declaration card

PUBLIC HEALTH - PASSENGER HEALTH DECLARATION CARD

Public Health Passenger Health Declaration Card to be completed when requested by destination public health authorities. This part of the form contains the information that is not captured by the Passenger Locator Card on the reverse of this form. The information is intended to be held by the public health authorities in accordance with applicable law and to be used only for public health purposes.

### Passenger Information

<table>
<thead>
<tr>
<th>Sex</th>
<th>Birth Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>DD MM YYYY</td>
</tr>
<tr>
<td>Female</td>
<td>DD MM YYYY</td>
</tr>
</tbody>
</table>

### Public Health Questions

1. Have you had a fever or chills in the last 24 hours?  
   - Yes ☐  
   - No ☐
2. Do you have a cough or difficulty breathing of recent onset?  
   - Yes ☐  
   - No ☐
3. Do you have a sore throat, runny nose, headache or body aches?  
   - Yes ☐  
   - No ☐
4. Have you vomited or had diarrhea in the last 24 hours?  
   - Yes ☐  
   - No ☐
5. In the last 10 days, have you been near or spent time with someone who had a fever and cough, or was a known case of influenza?  
   - Yes ☐  
   - No ☐
6. Do you have a chronic disease or condition?  
   - Yes ☐  
   - No ☐

List all the countries where you have been (including where you live) in the last 10 days:

1. 
2. 
3. 
4. 
5. 
6.

The first part of this form “Public Health - Passenger Locator Card” has remained unchanged. This part of the form has been developed for the Influenza A (H1N1) outbreak only and will be revised afterwards.

- Developed by IATA – to assist harmonization
- Specifically for use in H1N1
Airport screening

- Health declaration card
- Temperature
  - Infra-red imaging
  - Temperature probe
- Screening not recommended by WHO for H1N1
  - But could be regarded as disease surveillance tool
- Not likely to be too disruptive
  - Significant disruption under IHR = delay of >24 hours
Temperature screening

- Identifies travellers with fever
- Possible to be infectious without fever
- Not all H1N1 cases have a fever
- ? Deterrent effect to travellers
Screening - summary

- May identify some travellers at risk
- Not likely to have any significant effect on preventing spread of H1 N1
- May have a reassuring effect – the government is ‘doing something’
- May deter unwell potential travellers from travelling
- For consideration by governments - but not currently recommended by WHO
Cabin Ventilation
Air recirculation – through high efficiency particulate air (HEPA) filters
> 99% efficient

‘Progressive dilution’
90% air changed every few minutes

Courtesy: Pall Corporation
“Close contact”
Same row, 2 rows ahead and behind

Airflow – across cabin, not longitudinal

Cabin airflow patterns

Cargo compartment
Airport operational issues

• Maintaining flight operations when numbers of staff are reduced: up to 40% for 8 weeks
  – Air traffic controllers, pilots, cabin crew
  – IT support, ground transportation
  – Power supply
CAPSCA project

• “Cooperative Arrangement for the Prevention of Spread of Communicable disease through Air travel”
• Commenced 2006 in Asia Pacific
• Now also in Africa and Americas
• Goals
  – Training
  – Development of guidance material
  – Airport evaluations
“Cooperative”

• Main partners
  – World Health Organization, International Air Transport Association, Airports Council International

• Other contributors
  – UN Office for the Coordination of Humanitarian Affairs, World Food Programme, International Organization for Migration, UN World Tourism Organization, European Civil Aviation Conference, US Centers for Disease Control and Prevention ....and others
Successful preparedness planning requires effective inter-organization collaboration
Some findings from airport evaluations

• Designated aircraft parking area – not necessarily located distant from terminal
• Passenger baggage from affected area – does not need to be disinfected
• Arriving passengers should be handled as close to routine as possible
• Need clear lines of responsibility and communication
• All stakeholders need to be involved
Key messages

• Simple preventative measures are effective – handwashing, cough etiquette, illness distancing
• Risk of developing a serious illness is low: – and can be treated with oseltamivir (Tamiflu)
• International communication between main players is good-lessons have been learned from SARS
• Communication between public health and aviation sector at national level is vital
• ICAO in collaboration with its partners have developed guidance material for aviation preparedness-widely available
• Evolution of H1N1 cannot be predicted
“Plan for the worst, hope for the best”
Useful websites

• ICAO
• WHO
  http://www.who.int/ihr/travel/A(H1N1)_air_transport_guidance.pdf
• United Nations
  http://www.un-influenza.org/
• UN World Tourism Organization
  http://www.sos.travel/
• US Centers for Disease Control and Prevention
  http://www.cdc.gov/
• International Air Transport Association
  http://www.iata.org/index.htm
• Airports Council International
  http://www.airports.org/cda/aci_common/display/main/aci_content07.jsp?zn=aci&cp=1_665_2__
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