CAPSCA Africa
Nouakchott, Mauritania

14th July to 18th July 2014

CAPSCA Team
PUBLIC HEALTH AVIATION
Public health and Aviation

- Diseases are spread by passengers travelling by air and affect populations in other States
- Passengers and crew can become ill on aircraft from infectious passengers
- Absence of safety critical personnel (during a public health emergency) increases flight safety risk
- Public health events severely:
  - Affect aviation and economies relying on it
  - Affect aviation efficiency

Courtesy Anthony Evans
Introduction to ICAO / WHO

UN Specialized Agencies
HQ – Montreal, Canada
International Health Regulations (2005)

A global legal framework for public health security

IHR (2005) came into force on 15 June 2007*

Legally binding for the world’s countries that have agreed to follow the same rules to secure international health.
Purpose of the IHR (2005)

“To prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade” – Article 2
IHR Definition of “PHEIC”

- PHEIC - “Public health emergency of international concern” means an extraordinary event which is determined, as provided in these Regulations:
  
  (i) to constitute a public health risk to other States through the international spread of disease

  AND

  (ii) to potentially require a coordinated international response
IHR -- Adapted Response

- Response depends on the nature of public health risks and events occurring…
- IHR emphasize the need of risk assessment to inform appropriate public health actions
- International public health security is based on strong national public health response capacity connected to a global alert and response system (e.g. GOARN)
- Need flexibility for POE public health measures
19 Annexes to the Convention - ‘Standards and Recommended Practices’ SARPs

- Governments
  - Regulatory Aviation Authorities
  - e.g.
  - Civil Aviation Authority of Singapore (CAAS)
  - Transport Canada
  - DCA India
  - FAA, USA
CONVENTION
ON INTERNATIONAL CIVIL AVIATION
Signed at Chicago, on 7 December 1944

CONVENTION
RELATIVE À L’AVIATION CIVILE INTERNATIONALE
Signée à Chicago, le 7 décembre 1944

CONVENIO
DE AVIACIÓN CIVIL INTERNACIONAL
Firmado en Chicago, el 7 de diciembre de 1944

ICAQ

OACI
Basis for Action - health

Article 14, International Convention on Civil Aviation:

‘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….
Basis for Action - health

Article 14, International Convention on Civil Aviation:

....and to that end contracting States will keep in close consultation with the agencies concerned with international regulations relating to sanitary measures applicable to aircraft.’
19 ICAO Annexes contain ‘SARPs’

• Annex 1 Personnel Licensing
• Annex 2 Rules of the Air
• Annex 3 Meteorological Service for International Air Navigation
• Annex 4 Aeronautical Charts
• Annex 5 Units of Measurement to be Used in Air and Ground Operations
• **Annex 6 Operation of Aircraft** *
• Annex 7 Aircraft Nationality and Registration Marks
• Annex 8 Airworthiness of Aircraft
• **Annex 9 Facilitation** *
• Annex 10 Aeronautical Telecommunications
• **Annex 11 Air Traffic Services**
  – **Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM)** *
• Annex 12 Search and Rescue
• Annex 13 Aircraft Accident and Incident Investigation
• **Annex 14 Aerodromes** *
• Annex 15 Aeronautical Information Services
• Annex 16 Environmental Protection
• Annex 17 Security: Safeguarding International Civil Aviation Against Acts of Unlawful Interference
• **Annex 18 The Safe Transport of Dangerous Goods by Air**
• **Annex 19 Safety Management Systems**
New SARPs in force
From Nov 2007... Audits!!
Changes to SARPs  2007

• Annex 9 - Facilitation
  – States to have a pandemic preparedness plan for aviation
  – Pilot in command to notify air traffic control of a suspected case
  – Cabin crew advice on how to identify a suspected case (changes to aircraft General Declaration)
  – Passenger locator form for contact tracing agreed by WHO (collaboration with IATA)
Changes to SARPs 2009

- Annex 6 – Operation of Aircraft
  - On board medical supplies
  - Inclusion of a universal precaution kit
    - Managing on board communicable disease event
Changes to SARPs 2009

• Annex 11 – Air Traffic Services and PANS-ATM (Procedure for Air Navigation Services – Air Transport Management)
  – Detailed procedure for utilising ATC for notifying destination of on board public health event
  – Public health emergencies included in contingency planning
Procedures for Air Navigation Services – Air Traffic Management

• Chapter 16

16.6 Notification of suspected communicable diseases, or other public health risk, on board an aircraft:

16.6.1 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 ATS unit with which the pilot is communicating, the information listed below…

[* see aircraft gen dec for identification]
NOTIFICATION OF SUSPECTED COMMUNICABLE DISEASE, OR OTHER PUBLIC HEALTH RISK, ON BOARD AN AIRCRAFT

ICAO Aircraft General Declaration
- Declaration of Health
  (ICAO Annex 9, Appendix 1 & IHR (2005) Annex 9)

- Aircraft Callsign (ID)
- Dep. Aerodrome
- Dest. Aerodrome
- Est. Time Arrival
- Number of persons on board
- Number of susp. cases
- Nature of public health risk

Voice or data

IHR Focal Point

Local procedure (AEP)
- Airport Operator
- Public Health Auth.
- Other Agency(ies)

If more information is required – go thru’ airline agent

Air Traffic Controller

Destination Aerodrome TWR ATC

Airport Operator
Public Health Authority
Other agency(ies)

IHR Focal Point

local procedure (Aerodrome Emergency Plan)

? Diversion

Departure Aerodrome TWR ATC

Air Traffic Controller
Changes to SARPs 2009

- Annex 14 – Aerodromes
  - Public health emergencies included in aerodrome emergency plan
ICAO Universal Safety Oversight Audit Program (USOAP)

Continuous Monitoring Approach (CMA)
## Audit - Organization

<table>
<thead>
<tr>
<th>ICAO ref.</th>
<th>Protocol question</th>
<th>Reply</th>
<th>Guidance for review of protocol question</th>
<th>Status of implementation</th>
<th>Evidence/Notes/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ORG: prevention of communicable disease</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CC Art 14 A9 8.12 &amp; 8.16 A37-13</td>
<td>Has the State identified a clear contact point at national aviation level, with identified individual(s), for policy formulation, operational organization of preparedness and coordination of a national plan in order to respond to a communicable disease with the potential to pose a serious public health risk?</td>
<td>☐ Yes ☐ No</td>
<td>If yes, provide name and contact details</td>
<td>New question</td>
<td></td>
</tr>
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<tr>
<td>A9 8.15 Note 1 A9 2.10 &amp; App1 A6 6.2 and AttB</td>
<td>Does the aircraft operations organization ensure that the air operator has established a procedure for the crew to evaluate a traveller with a suspected communicable disease, based on the presence of a fever and certain other signs or symptoms?</td>
<td>□ Yes □ No</td>
<td>Review operations inspectors procedures to ensure they check air operators related procedures Sample an air operator procedure in operations manual or cabin crew manual Check the procedure includes the transmission, as required, of a General Declaration form to the State authorities.</td>
<td>□ Satisfactory □ Not satisfactory</td>
<td></td>
</tr>
<tr>
<td>ICAO ref.</td>
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<tr>
<td>A9 8.15 PANS ATM Doc 4444 16.6.1</td>
<td>Does the aircraft operations organization ensure that the air operator has established procedures for the pilot in command to report promptly to ATC a suspected communicable disease?</td>
<td>□ Yes □ No</td>
<td>Review operations inspectors procedures to ensure they check air operators related procedures Sample an air operator procedure in operations manual Ensure, in the procedure, that the following information is transmitted by the crew: 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.</td>
<td>□ Satisfactory □ Not satisfactory</td>
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## Audit – Air Navigation Services

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<tbody>
<tr>
<td>STD A11 2.30 Att. C</td>
<td>ANS 7.153 Does the State ensure that contingency plans have been developed and promulgated for implementation in the event of disruption or potential disruption of ATS or related supporting services?</td>
<td>[Yes, No]</td>
<td>Review documented evidence for inclusion of contingency plans in respect of public health emergencies</td>
<td>[Satisfactory, Not satisfactory]</td>
<td></td>
</tr>
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</table>
## Audit – Air Navigation Services

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<tr>
<td><strong>ANS: prevention of communicable disease</strong></td>
<td>□ Yes □ No</td>
<td>Review procedure and mechanism established to ensure the message is forwarded to the appropriate entities, especially that relating to transfer of information from the destination ATS unit to the public health authority. Review the mechanism to ensure the contact details of each entity are up to date and available. During industry visit ensure the procedure is known by the staff and contact details of the entities are available.</td>
<td>□ Satisfactory □ Not satisfactory</td>
<td>CAPSCA Abuja October 2011</td>
<td></td>
</tr>
<tr>
<td>PANS Doc 4444 16.6.2 &amp; 16.6.3</td>
<td>Does the State ensure that the ATS has established a procedure, upon receipt of information from a pilot regarding a suspected case of communicable disease, to forward a message as soon as possible to: the ATS unit serving the destination/departure if applicable the public health authority (PHA) or the appropriate authority designated by the State the aircraft operator or its designated representative the aerodrome authority?</td>
<td></td>
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## Audit – Aerodromes

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<tbody>
<tr>
<td>STD A14, Vol. I 9.1.1 to 9.1.3</td>
<td>AGA 8.291 Has the State promulgated regulations for aerodrome operators to develop emergency plans, including appropriate cooperation and coordination with other entities involved in the provision of emergency services and the development of the plans?</td>
<td>☐ Yes ☐ No</td>
<td>Include emergencies which may occur in the vicinity of an aerodrome Sample aerodrome manual Review regulation and manuals to ensure inclusion of public health emergencies and coordination with public health services</td>
<td>☐ Satisfactory ☐ Not satisfactory</td>
<td>CAPSCA-Abuja October 2011</td>
</tr>
<tr>
<td>RP A14, Vol. I 9.1.4 &amp; 9.1.5</td>
<td>GM Doc 9734 Part A 2.4.7</td>
<td>GM Doc 9774 App. 1 4.3</td>
<td></td>
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Aircraft Operations Protocols (1)

• Does the aircraft operations organization ensure that the air operator has established a procedure for the crew to evaluate a traveller with a suspected communicable disease, based on the presence of a fever and certain other signs or symptoms?

• Annex 9, 8.15, Note 1; Annex 6, 6.2 and Attachment B
Guidance for review of question

• Review operations inspectors procedures to ensure they check air operators related procedures
• Sample an air operator procedure to confirm implementation, check if the universal precaution kit is used (not mandatory, recommendation)
• Check the procedure contains communication between the cabin crew and the flight crew and the transmission, for States where it is required, of a General Declaration form.
Aircraft Operations Protocols (2)

• Does the aircraft operations organization ensure that the air operator has established procedures for the pilot in command to report promptly to ATC a suspected communicable disease, in order to facilitate the presence of any special medical personnel and equipment necessary for the management of public health on arrival?

• Annex 9, 8.15; PANS ATM Doc 4444, 16.6.1
Air Navigation Service Protocols (1)

- Does the State ensure that procedures have been established for providing service to aircraft in the event of emergency?
- Annex 11, 2.23, 2.30, Attachment C; PANS ATM Doc 4444, 15.1; A11
Guidance for review of question

• Review mechanism established to ensure effective implementation
• Review documented evidence of the procedures followed to render assistance to an aircraft in the event of the following emergencies:
  1. Unlawful interference
  2. Aircraft bomb threat
  3. Emergency descent
• Review mechanism established to ensure effective implementation
• Review documented evidence of the existence of contingency plans and how they are applied
• **Review documented evidence for inclusion of contingency plans in respect of public health emergencies**
Air Navigation Service Protocols (2)

• Does the State ensure that the ATS has established a procedure, upon receipt of information from a pilot regarding a suspected case of communicable disease, to forward a message as soon as possible to:
  – the ATS unit serving the destination/departure if applicable
  – the public health authority (PHA) or the appropriate authority designated by the State
  – the aircraft operator or its designated representative
    the aerodrome authority?

• PANS ATM Doc 4444, 16.6.2 & 16.6.3
Guidance for review of question

• Review procedure and mechanism established to ensure the message is forwarded to the appropriate entities, especially that relating to transfer of information from the destination ATS unit to the public health authority
• Review the mechanism to ensure the contact details of each entity is up to date and available
• During industry visit ensure the procedure is known by the staff and contact details of the entities are available
Organization protocols

• Has the State identified a clear contact point, with identified individual(s), at national aviation level for policy formulation, operational organization of preparedness and coordination of a national plan in order to respond to a communicable disease with the potential to pose a serious public health risk?

• CC Art 14; Annex 9, 8.12 & 8.16; A37-13

CAPSCA-Abuja October 2011
Aerodrome Protocols

• Has the State promulgated regulations for aerodrome operators to develop emergency plans, including appropriate cooperation and coordination with other entities involved in the provision of emergency services and the development of the plans?

Guidance for review of question

- Verify regulations
- Cross-check with ICAO Annex 14 compliance checklist
- Review evidence to confirm effective implementation, cooperation and coordination

- Include emergencies which may occur in the vicinity of an aerodrome
- Sample aerodrome manual

- **Review regulation and manuals to ensure inclusion of public health emergencies and coordination with public health services**
USOAP: From May 2013 – “CMA” Continuous Monitoring Approach

- Questionnaire, completed every year (continuous monitoring) by the State and analyzed by ICAO.
- On basis of questionnaire, a full audit may be required
- States with reduced implementation receive a full audit more often than those doing better
CMA for Public Health Events: Single question – every year

• Has the State identified a clear contact point at national aviation level, with identified individual(s), for policy formulation, operational organization of preparedness and coordination of a national plan in order to respond to a communicable disease or other health event with the potential to pose a serious public health risk?

• CC Art 14; Annex 9, 8.12 & 8.16; A37-13
Aviation: A Pivotal Sector

More than 6 million passengers daily

With Long Range Flights

Able to be at the opposite end of the world in less than 24 hours

Passenger/s with communicable or other disease can carry it to the opposite end of the world in less than 24 hours

Aviation Sector’s response to the threat of a possible pandemic has to be **timely, robust, coordinated and harmonized**
What can you expect when a State is declared as an affected area

With a public health emergency of international concern (PHEIC)

Not necessarily an infectious disease
People rushing out of an affected area

Can anything be done at this juncture at the departure airport for departing passengers?
What would be expected of:
1. The State Public Health Authority
2. The Civil Aviation Authority
3. The Airport
4. The Airlines operating at the Airport
5. The other Stakeholders at the Airport

What if a passenger falls ill at the Airport (with a suspicion of having contracted the infectious disease)?

Responsibilities of various Stakeholders?

Why the state of panic?
Full flights

What measures can be implemented if a passenger falls ill
Role of the Airline?

- Pilot –in-Command of the flight
- Cabin attendants
- Cleaning of the aircraft
- Dealing with Biohazards
- Dealing with suspect case in flight
- Dealing with other passengers

Keeping the Airline alive.

What does this remind you of?
Purpose of the IHR (2005)

“To prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade” – Article 2

Courtesy WHO
Reflected in the arrival scene ... coming away from an affected area

Possibility of implementing measures at arrival airport?
What would be expected of:
1. The State Public Health Authority
2. The Civil Aviation Authority
3. The Airport
4. The Airlines operating at the Airport
5. The other Stakeholders at the Airport

What if a passenger falls ill at the Airport (with a suspicion of having contracted the infectious disease)?

Responsibilities of various Stakeholders?

Why the state of panic?

WHO IHR Core and Emergency requirements at international POEs
….and then

Deserted Airports
Empty aircraft
2003: SARS

ISSUES:
- Panic reactions
- No preparedness plans
- No Harmonization
Singapore hosts an ICAO meeting ---- “Anti-SARS” measures developed for the aviation sector.

- Restore confidence in the travelling public

- ? Pre-empting the IHR ?
WHO holds global meeting: Timing & severity of next pandemic cannot be predicted
Take threat seriously
Take appropriate actions & mobilize resources
2005: Expectations

Spread to rest of world

Start of Pandemic

H5N1
ICAO: For The Aviation Sector:
Proactive approach to develop **Aviation** Pandemic Preparedness Plan

Singapore hosts meetings at Changi Airport 2006:
Output – “Preparedness Planning Guidelines (Aviation Aspects) for a Communicable Disease of Public Health Concern” – Applicable to any communicable disease (not just avian influenza)
To carry project forwards --- Harmonizing global aviation sector’s preparedness

Cooperative Arrangement for the Prevention of Spread of Communicable disease through Air travel

Collaborative Arrangement for the Prevention and Management of public health events in Civil Aviation

1. Implementation of ICAO Guidelines (State, Airport & Airline Guidelines)
2. Evaluation of international airports
3. Training of personnel

Launched Sept. 2006: Singapore Aviation Academy Seminar / Workshop / Table top exercise

From Jan 2013
2005: Expectations

Spread to rest of world

Start of Pandemic

H5N1
There is no evidence of increased illness in the pig population.
CAPSCA Guidelines Development

**WHO Pandemic Preparedness Guidelines**

**ICAO Annex 9 Annexes 6, 11, 14**

**ACI, IATA, CDC & Other expert agencies**

**States**

**IHRs**

**WHO Rapid Containment Strategy**

**National Pandemic**

**Aviation Pandemic Preparedness Plan**

**Preparedness Plan**

**Joint WHO-ICAO-IATA-ACI Guidelines**
Guidance Material

Distilled into…..

State Guidelines : ICAO

Airline Guidelines : IATA

Airport Guidelines : ACI
New SARPs in force

From Nov 2007 & 2009...

Annex 6
Annex 9
Annex 11
Annex 14
PANS -ATM

IHR implementation
1. CAPSCA – Asia Pacific

2. CAPSCA – Africa

3. CAPSCA - Americas

4. CAPSCA – Middle East

5. Europe
CAPSCA
Asia Pacific
In conjunction with the 4th CAPSCA meeting:

Seminar / Workshop on Business Continuity Planning for Pandemic Preparedness
Kuala Lumpur, Malaysia, 25 – 26 May 2010

Discussed & developed thru working groups:
- Airports
- Airlines
- ANS providers
The 7th Meeting of the CAPSCA-Asia Pacific (CAPSCA-AP) project was hosted by the Civil Aviation Authority of Sri Lanka at the Hilton Colombo, Sri Lanka, from 20 May to 23 May 2014.

A total of almost 70 participants attended the meeting, representing both Civil Aviation and Public Health Authorities and their stakeholders, from 13 States/Administrations of the Asia Pacific Region i.e. Bangladesh, Brunei, China, Hong Kong SAR, Indonesia, Macao SAR, Malaysia, Maldives, Nepal, New Zealand, Singapore, Sri Lanka, and Thailand.

In addition to ICAO, partner organisations at the meeting included representatives from the World Health Organization (WHO), Airports Council International (ACI), Association of Asia Pacific Airlines (AAPA), and University of Toronto.
Launched Nov. 2007
Seminar/Workshop in Gabon
Mar 2008: Training W/shops & Table top Exercises: South Africa & Senegal
Confirmed, probable, and suspect cases and deaths from Ebola virus disease in Guinea, Liberia, and Sierra Leone, as of 6 July 2014

(1) New cases were reported between 3 and 6 July 2014.
At the kind invitation of the Civil Aviation Authority of the Islamic Republic of Mauritania, the 5th Meeting of the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA) - Africa will be held in Nouakchott from 14 to 18 July 2014.

The event is organized by the International Civil Aviation Organization (ICAO) in collaboration with the World Health Organization (WHO).
CAPSCA Americas:
Launched in Mar/April 2009: Lima, Peru
1st SCM – June 2009, Mexico
Almost all States in the Americas are members of CAPSCA
Assistance visits are being carried out rapidly
Fifth CAPSCA Americas Meeting
Barbados, 2 – 6 September 2013
1st Meeting in Cairo: Dec 2011

Next meeting: Nov 2014 - Cairo
CAPSCA Europe

Sept. 2011 at the ICAO Regional Office Office Paris
2012 --- Frankfurt, Germany
2013, --- Bern, Switzerland
1st Global CAPSCA Meeting
15 – 16 October 2010
Singapore Aviation Academy
Next Global Meeting ---- Cairo Nov 2014
CAPSCA Achievements

• CAPSCA regional projects joined by **100 Member States & Territories**

• **Airport Assistance Visits** to individual States/international airports completed in **55 States/Territories**

• **Training** for 20 Technical Advisors, provided for CAPSCA Assistance Visits by States

• The **CAPSCA** web site ([www.capsca.org](http://www.capsca.org))

• **Expanding CAPSCA’s scope** beyond communicable disease (subject to future funding)…
International Civil Aviation Organization: CAPSCA

Template for a National Aviation Public Health Emergency Preparedness Plan
Guidance for Public Health Emergency Contingency Planning at Designated Points of Entry

Requirement under the International Health Regulations (2005)
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 13 May 2009

Guide to Hygiene and Sanitation in Aviation

International Health Regulations (2005)
Assessment tool for core capacity requirements at designated airports, ports and ground crossings
CAPSCA Checklist
Passenger Locator Form: latest version

For Contact tracing
Public Health Measures Available (Theoretically)
- at the international border -

1. Travel and screening (prevention, detection)
   - Health advice and alerts to travellers
   - Health declaration form
   - Temperature screening
   - On-board identification of suspected travellers
   - International travel advisory, restriction, border closure?

2. Management of symptomatic & exposed travellers
   - Symptomatic travellers (isolation & treatment…)
   - Exposed travellers (quarantine?…)
• Public health measures in response to pandemic influenza
• Options for public health intervention at international points of entry (POE)
Decision for option: Key considerations

- International border health measures should be implemented under the framework of the new *International Health Regulations*
- Decision on public health measures based on *assessed risks*
- Public health measures should be *evidence-based* whenever possible
- Countries should *balance the benefits against the costs and potential consequences*
- Desirability of *harmonization of interventions* at international POE
- Planning, coordination and communication is essential
### Comparative risk of outbreaks

<table>
<thead>
<tr>
<th>Severity of Disease (Morbidity &amp; Mortality)</th>
<th>Transmissibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>H5N1</td>
</tr>
<tr>
<td>High</td>
<td>SARS</td>
</tr>
<tr>
<td>Low</td>
<td>1918 Pandemic</td>
</tr>
<tr>
<td>Low</td>
<td>Pandemic (H1N1) 2009</td>
</tr>
<tr>
<td>Low</td>
<td>Seasonal Flu</td>
</tr>
</tbody>
</table>
**Possible strategies based on risk category**

<table>
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<tr>
<th>Severity of Disease (Morbidity &amp; Mortality)</th>
<th>Transmissibility</th>
</tr>
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<tbody>
<tr>
<td><strong>Low</strong></td>
<td>Aiming at rapid containment at the early stage, and mitigating the impacts, if containment not possible</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>Aiming at preventing disease importation and containing the virus</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>Routine public health measures without additional aggressive interventions</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>Aiming at reducing transmission and mitigating impact with focus on vulnerable population</td>
</tr>
</tbody>
</table>
Matching cost and consequences of interventions with risk level (example)

Costs and Consequences vs Level of Risk

- More acceptable interventions
- Less acceptable interventions

- SARS
- 1918 pandemic virus or worse
- New H1N1
  - E.g. Temperature
  - E.g. Border closure
  - E.g. Health alert or advice

Levels of Risk:
- F
- A
- B
- C
- D
- E

Costs and Consequences

Seasonal Influenza
# Options for Interventions: Decision Matrix

<table>
<thead>
<tr>
<th>Options</th>
<th>Benefits</th>
<th>Limitations &amp; consequence</th>
<th>Decision (Yes/No/wait)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature screening</strong></td>
<td>• Increase public awareness</td>
<td>• Lack of evidence to show effectiveness</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>• May be reassuring to the public</td>
<td>• Modelling suggests limited impacts on reducing risks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Serve as “sentinel” points to detect some travelled cases</td>
<td>• Thermal scanning alone will not prevent virus entry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Deterrence to travel</td>
<td>• Unlikely to be cost-effective</td>
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<td></td>
<td></td>
<td>• Resource intensive</td>
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<tr>
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<td></td>
<td>• May give a false sense of security</td>
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**Comments & guidance:**
Other Public Health Emergencies?

Fukushima Dai-ichi Nuclear Plant 12 March 2011
Fukushima Dai-ichi Nuclear Plant
12 March 2011

What if:
• An aircraft flies through the plume?
• An aircraft is parked overnight downwind?
• An exposed individual wants to fly for treatment?
• Should Japan be screening departures?
  Cargo?
  People?
• Should other countries be screening for arrivals?
  Cargo?
  People?
• What levels are acceptable?
• What equipment/training/PPE is needed?

Courtesy Anthony Evans
ICAO Transport Task Force

Weekly teleconference

ICAO  
IAEA  
IMO  
WHO  
WMO  
UNWTO  
ILO

UN Organisations

IATA
ACI

Trade Organisations

Courtesy Anthony Evans
Concern about levels in food and water
What is going to hit us next?

Pandemic H?N?, Nuclear?
Expert: UN Brought Cholera to Haiti
Dec 8, 2010 1:40 AM CST
Europe’s food poisoning outbreak has sickened more than 2,400 people and killed 24. Weeks after the outbreak began on May 2, German officials are still searching for the source of the contamination.

Germany on E. Coli Source: It Was the Bean Sprouts

Jun 10, 2011 6:25 AM CDT
Globally, 827 laboratory-confirmed cases of infection with MERS-CoV, including at least 287 related deaths have officially been reported to WHO.

WHO does not advise special screening at points of entry with regard to this event nor does it currently recommend the application of any travel or trade restrictions.

……..the Committee unanimously concluded that the conditions for a Public Health Emergency of International Concern (PHEIC) have not yet been met.

…… the Committee indicated that there was no solid information to support the use of thermal screening as a means to stop or slow the entry of MERS-CoV infections, and that resources for supporting such screening could be better used to strengthen surveillance, infection control and prevention or other effective public health measures.
Avian influenza A(H7N9) virus
On 17 March 2014, WHO elevated the risk assessment of international spread of polio from central Africa, particularly Cameroon, to very high.

A new exportation event from Equatorial Guinea demonstrates that the risk of international spread from central Africa remains very high (http://www.who.int/csr/don/2014_03_17_polio/en/)

On 18 June 2014, Brazil reported that wild poliovirus type 1 (WPV1) had been detected in a sewage sample collected in March at Viracopos International Airport in Sao Paolo state. Genetic sequencing indicates that this virus is most closely related to the virus that is circulating in Equatorial Guinea.
ANTHRAX

Biohazard

BioTerrorism
Awareness
Preparedness

Cutaneous anthrax skin infection

#ADAM
Economic-Related issues

Passengers of Hong Kong International Airport, January to August 2003

- Courtesy: Dr Henry Kong, past Chief Port Health Officer, Hong Kong

International Arrivals, Mexico, 2008-2010

- Courtesy: Dr Jose Valente Aguilar Zinser, Ministry of Transport, Mexico

Passengers of Hong Kong International Airport, January to August 2003

- 12 March, WHO Atypical pneumonia alert
- 2 April WHO travel advisory
- 23 May Travel advisory lifted

Courtesy: Dr Henry Kong, past Chief Port Health Officer, Hong Kong
What is the single most important measure to prevent transmission of infectious disease??

Hand Hygiene
What is essentially required?

Simple hygiene measures!!
Causative organism…… H?N?, Variant ?, ? Others

When

How widespread

Where will it start

Aviation sector may again be hit badly

Preparedness planning is our only protection

A harmonized preparedness plan will inspire confidence in the travelling public
Questions?

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