Introduction to ICAO / WHO

UN Specialized Agencies

ICAO

World Health Org.
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
A Paradigm Shift

From diseases list to all public health threats

From control of borders to containment at source

From preset measures to adapted responses
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.’
Changes to SARPs  2007 & 2009

- Annex 9 – Facilitation
- Annex 6 – Operation of Aircraft
- Annex 11 – Air Traffic Services
- PANS – ATM
- Annex 14 - Aerodromes
- Annex 18 – Dangerous Goods
How do you convert all these requirements (IHR and ICAO SARPs and Guidance material) into:

1. Local State legislation
2. Into a comprehensive plan
3. Engagement of stakeholders

Need for a template to guide States to achieve these goals: CAPSCA took on the task
Why the need for an Aviation Preparedness Plan for a Public Health Emergency

Public Health Emergency is a public health issue: How is the Aviation Sector involved?

Air Travel: Primary mode of spread internationally
Aviation: A Pivotal Sector

About 5 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 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
State Plan for PHE

National Plan for all POEs

National Aviation Plan for PHE
Draft Template of an Aviation Public Health Emergency Plan

**Introduced at the 4th SCM CAPSCA Asia Pacific**

- 4th SCM approved formation of a Working Group to work on the Template and provide version for approval at 1st Global RAMT in October 2010 – Singapore Aviation Academy

- Template was presented at the Nairobi CAPSCA Africa meeting

- Template also be presented at the 2nd SCM CAPSCA Americas

- Global RAMT, Singapore Oct. 15 to 16 2010

- 3rd RAMPHT /SCM/Training Seminar CAPSCA Americas

- CAPSCA Europe
Draft Template of an Aviation Public Health Emergency Plan

- Compliance to ICAO SARPs – Annexes 6, 9, 11, 14 & PANS -ATM
- Compliance to relevant articles of IHR (2005)
- References to documents developed cooperatively by WHO / ICAO / IATA / ACI etc
- 2 Scenarios: a) In country outbreak
  b) Imported cases
- Progressive build up --- Colour coding / WHO phases
- Deactivation plan
Introduction:

• The template describes how a national aviation public health emergency plan may be laid out.

• The document is not intended to address all aspects and of necessity therefore some specific items are not included.

• However, the main aspects that require consideration are addressed.

• Utilising this information together with other guidance material that is referenced in the text, the aviation authority should be able to adjust this template to develop specific preparedness plans for a public health emergency of international concern.
When will a public health emergency (PHE) be declared?

A public health emergency (PHE) may be declared:

• when a State’s health authority is satisfied that there is an outbreak or imminent outbreak of a public health emergency that poses a substantial risk to the population of the State OR

• requiring regional / international intervention OR

• upon activation by WHO (according to Annex 2 of the IHR (2005) “Decision instrument for the assessment and notification of events that may constitute a public health emergency of international concern”).
Roles of Aviation Authority:

The roles of the aviation authority during a PHE are:

• Ensure the availability, continuity and sustainability of critical air transport services; and

• Coordinate and facilitate the implementation of health and non-health measures to protect the health and welfare of travelers, staff and the general public as well as to minimize / mitigate the spread of communicable disease through air travel.
**Principle Considerations**

- Coordinated and Timely Response
- Effective and Sustainable Measures
- Minimize Inconvenience to travellers
- Rapid return to routine operations as the emergency subsides
Planning Assumptions:

The State health authority may issue planning assumptions based on its own assessment or information provided by neighbouring States or the WHO.

There are two primary scenarios:

• The first local human case is imported from another affected State/Administration (rather than developing from within the State);

• There has been a local outbreak of a PHE within the State and measures have to be taken to contain the outbreak and minimize the spread to other States
State Health and Aviation Authorities are encouraged to refer to the WHO Western Pacific Regional Office publication

“Guidance for Public Health Emergency Contingency Planning at Designated Points of Entry; Requirement under the International Health Regulations (2005)”

This guide provides a recommended approach, structure and a logical but simple set of considerations and steps for National Public Health Authorities (NPHA) to guide public health and emergency planners responsible for Points of Entry to develop Public Health Contingency Plans.
Execution

• The aviation measures adopted should be an integral part of the State’s overall plan for a PHE.

• The aviation authority will usually have a Crisis Management Team (CMT) to develop and execute the public health emergency plan.

• These planned measures may be contingent on the State health authority’s alert levels or according to the WHO phases of an evolving Pandemic.

• A risk management concept should be adopted to ensure a phased and gradual step up of control measures, in accordance with the changing circumstances.
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>Low</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>

- **Low Transmissibility**
  - **Low Severity**: Seasonal Flu
  - **High Severity**: SARS

- **High Transmissibility**
  - **Low Severity**: H5N1
  - **High Severity**: 1918 Pandemic

*Note: The table shows a comparison of different outbreaks based on their transmissibility and severity.*
## Possible strategies based on risk category

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

- **Low** transmissibility and **Low** severity:
  - Routine public health measures without additional aggressive interventions

- **Low** transmissibility and **High** severity:
  - Aiming at preventing disease importation and containing the virus

- **High** transmissibility and **Low** severity:
  - Aiming at reducing transmission and mitigating impact with focus on vulnerable population

- **High** transmissibility and **High** severity:
  - Aiming at rapid containment at the early stage, and mitigating the impacts, if containment not possible
Matching cost and consequences of interventions with risk level (example)

<table>
<thead>
<tr>
<th>Level of Risk</th>
<th>Cost &amp; Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARS</td>
<td>More acceptable interventions</td>
</tr>
<tr>
<td>Seasonal Influenza</td>
<td>More acceptable interventions</td>
</tr>
<tr>
<td>New H1N1 ???</td>
<td>More acceptable interventions</td>
</tr>
<tr>
<td>1918 pandemic virus or worse</td>
<td>More acceptable interventions</td>
</tr>
</tbody>
</table>

Examples of interventions:
- E.g. Temperature
- E.g. Border closure
- E.g. Health alert or advice
## 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>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Resource intensive</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• May give a false sense of security</td>
<td></td>
</tr>
</tbody>
</table>

**Comments & guidance:**
Response to Pandemic (H1N1) 2009

• WHO recommended that all countries intensify surveillance for unusual outbreaks of influenza-like illness and severe pneumonia

• WHO also recommended

  ➢ *not to close borders AND restrict international travel*

  ➢ It was considered prudent for people who are ill to delay international travel and for people developing symptoms following international travel to seek medical attention
Activation / Deactivation Process

The activation of the health measures will usually be initiated by the State health authority.

The aviation crisis management team will coordinate all measures within the aviation sector.

The deactivation or scaling down of measures will be initiated by the State health authority.
Measures to be adopted

• The measures adopted at Points of Entry (POE) especially at airports are crucial to the containment and mitigation efforts of the State.

• The import / export of the communicable disease may be mitigated through the implementation of a specific set of measures corresponding to the defined alert levels.

• The measures are subject to changes, attendant on the State’s continuing assessment of the situation

Gives example of a Colour Coded Alert System:
1. Alert Green = WHO Phase 1 to 3
2. Alert Yellow = WHO Phase 4
3. Alert Orange = WHO Phase 5
4. Alert Red = WHO Phase 6 (Pandemic)
<table>
<thead>
<tr>
<th>Alert Level (WHO Phase)</th>
<th>Travellers</th>
<th>Airport workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green (WHO Phase 1 to 3)</td>
<td>No additional measures. Ensure plan is updated and exercised. Ensure that all relevant personnel are familiar with the plan and its activation.</td>
<td>No additional measures. Ensure plan is updated and exercised. Ensure that all relevant personnel are familiar with the plan and its activation. Emphasize hygiene measures</td>
</tr>
<tr>
<td>Yellow (WHO Phase 4)</td>
<td>The following measure may be adopted at POE: Distribution of Health Alert Notice (HAN) to arriving / departing travellers.</td>
<td>Any airport worker with symptoms (indicate list of symptoms) and/or fever will not report for work but will proceed to his/her doctor. If diagnosed with the prevailing PHEIC, he/she will be treated and will not report for work until full recovery and/or the requisite time recommended by the State health authority.</td>
</tr>
<tr>
<td>Alert Level (WHO Phase)</td>
<td>Travellers</td>
<td>Airport workers</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Orange (WHO Phase 5)</td>
<td>In addition to the measure adopted in Alert Yellow, the following measures may be adopted: Distribution of Health Declaration Forms (HDFs); and Carry out other screening measure/s such as Visual Screening / Temperature Screening on arriving and departing travellers</td>
<td>All airport workers must take their temperature before leaving home for work. Those with fever (temperature of 37.5 degrees centigrade and above, (or as specified by the State health Authority) and specified symptoms will not report for work but will proceed to see their doctor. If diagnosed with the prevailing PHEIC, he/she will be treated and will not report for work until full recovery and/or the requisite time recommended by the State health authority has elapsed</td>
</tr>
<tr>
<td>Alert Level (WHO Phase)</td>
<td>Travellers</td>
<td>Airport workers</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Red (WHO Phase 6)</td>
<td>It is likely that the measures at the airport will progressively be deactivated except for the possible continuing distribution of HANs to travellers. The deactivation will be from the State health authority</td>
<td>As in Alert Orange</td>
</tr>
</tbody>
</table>
Specific Issues

6.4 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. 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 a 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. The airport plan should, ideally, have a pre-designated parking bay for the aircraft with a suspected case of communicable disease on board.**

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.**
Annexes to Template:

Annex A  Example of a colour coded Disease Outbreak Response System and WHO Pandemic Phases
Annex B  Public Health Emergency Plan Activation flow chart for Points of Entry
Annex C  Roles Performed by aviation authority CMT during a Public Health Emergency Response
Annex D  Sample of Health Alert Notice (HAN)
Annex E  Mode of distribution of HAN and quantity required
Annex F  Health Declaration Form
Annex G  Public Health Passenger Locator Card
Annex H  Suggested framework for assessment and decision making – Responding to Pandemic H1N1 2009: Options for interventions at International Points of Entry : WHO Regional Office for the Western Pacific interim option paper, 20 May 2009
Annex I  Traveller Screening Deployment Locations
Annex J  SOP for Screening Procedure for Travellers
Annex K  Entry-exit locations of Ambulance at Airport and Route to Designated Hospital
Template is available on www.capsca.org

In 5 languages.
Thank you for your kind attention!

Jarnail Singh