Public Health Emergency Preparedness for Aviation Sector – Singapore’s Perspective

CAAS
24 Apr 2013 (Wed)
Scope

• Introduction

• National Crisis Response Framework

• Disease Outbreak Response System (DORS)

• Changi Airport Border Health Control Plan

• Air Traffic Services’ BCP for Influenza Pandemic
Introduction

Singapore’s ability to respond to public health threats has improved significantly because of:

• Its experience in managing the SARS epidemic in 2003 and the Influenza A(H1N1) pandemic in 2009 and

• Its whole-of-government (WOG) approach in preparing for a pandemic over the past 8 years.
National Crisis Response Framework
Ministerial Committee

Homefront Crisis Executive Group (HCEG)

Lead Crisis Management Group (CMG)

Other Crisis Management Groups

Strategic

Operational

Crisis Manager

Tactical

Incident Manager
Public Health Crisis (Air Transport Sector)

Ministerial Committee

Homefront Crisis Executive Group (HCEG)

Strategic

CMG (Health)
(Lead CMG) (MOH)

Tpt CMGs

Operational

Crisis Manager
(CAAS)

Tactical

Incident Manager
(Changi Airport)
CMG (Health) Composition

Chairperson
PS(Health)

- MHA
- MOE
- MOT
- MFA
- MEWR
- MND
- MTI
- MCI

Other Ministries or Agencies
Mission of CMG (Health)

• Manage all medical issues during a crisis
  ➢ E.g. civil emergency, mass casualties or disease outbreaks

• Provide emergency medical services

• Formulate response plans to deal with medical crises
  ➢ E.g. DORSCON framework

• Provide policy guidance and advice to responding agencies
Disease Outbreak Response System (DORS)
Disease Outbreak Response System (DORS)

Colour-coded Graduated Response Framework

• Based on risk of infection to individuals/community
• Used in managing infectious disease threats
  ➢ In a Whole-of-Government Approach
  ➢ Establishes common understanding across Government agencies
• Allows graduated and defined responses
• Provides recommendations and guidelines for medical and non-medical measures
• Facilitates decision-making & concurrent actions
DORS Conditions (DORSCON)

- 5-colour DORSCON alert phases indicating increasing spread of a highly virulent disease
  - Each phase with control measures hardwired
# DORS Conditions (DORSCON)

<table>
<thead>
<tr>
<th>DORSCON</th>
<th>WHO PHASE</th>
<th>DEFINITION</th>
<th>AIM OF MEASURES</th>
</tr>
</thead>
</table>
| GREEN 0 | 1 to 3    | • No outbreak globally  
• Outbreak (in single cases) in other countries  
• Low risk of import | Maintain situational awareness  
Build capacity  
Step up surveillance  
Prevent import  
Raise public vigilance |
| GREEN 1 | 4         | • Elevated risk of import  
• No local secondary transmission | Prevent further import  
Detect cases early  
Contain spread  
Protect essential services |
| YELLOW  | 5         | • Local transmission confined  
• Low risk of community transmission | Contain spread (break local transmission chain)  
Suppress and slow down spread  
Prevent export of cases  
Enhance public vigilance |
# DORS Conditions

**DORSCON**

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| RED     | 6         | • High risk of acquiring disease from community | Gain control of community spread  
          |           |            | Mitigate consequences of pandemic  
          |           |            | Continue to prevent export of cases  
          |           |            | Step up crisis communications |
| BLACK   | 6         | • Local infection out of control  
          |           | • Widespread community transmission  
          |           | • Escalating morbidity & mortality rates | Medical & public health measures take precedence over social & economic considerations  
          |           |            | Limit impact on community  
          |           |            | Facilitate recovery of healthcare systems |
Lessons from 2009 H1N1 Pandemic

Some limitations of DORS were noted:

• Considered only the spread but not severity

• No public communication component

• DORSCON alert phases corresponded to WHO Pandemic Alert Phases for Influenza and not reflective of local situation
Reviewing DORS Framework

• Take into account the severity (virulence) of the infectious disease, in addition to its spread

• DORSCON alert phases to be based on MOH’s risk assessment of the likely public health impact

• Provide clear guidance for agencies

• Balance clarity with flexibility in response

• Be adaptable and provide for gradation in the suite of measures to be taken

• Contain a public communications component
Border Health Response Measures

- A phased and gradual approach will be adopted to step up control measures in accordance with developing circumstances as guided by principle of risk management

- Implementation & subsequent stepping up of various border control measures will be aligned with defined triggers at various DORSCON alert levels with the aim to have early detection & prevention of possible importation of influenza case(s)
Border Health Response Measures

Include:

• Health Advisory posters at airports
• Health Alert Notices (HAN) and Health Declaration Cards (HDC) distribution to pax
• Contact tracing of close contacts of index cases
• Temperature screening arriving/departing passengers
• Quarantine of suspect cases/pax from affected countries
Health Advisory Posters

- Health advisory posters at various points at Changi Airport since 15 Apr 13

- In view of Avian Influenza A(H7N9) situation in China and Novel Coronavirus in Middle East
Health Alert Notices (HANs)

To further enhance public awareness & encourage travellers to seek timely treatment if ill

Distribution of Health Alert Notices (HANs) from 20 Apr 13

In 4 official languages in Singapore
Health Alert Notices (HANs)

- Given out to travellers returning from affected countries/areas
- Reminds travellers to look out for signs and symptoms of flu and seek medical attention if ill with such symptoms
Quarantine

- Government quarantine facility (GQF) to be set-up and on standby upon activation.
- For tourists served with Quarantine Orders (during an infectious disease outbreak scenario).
## Response Measures at Various DORSCON Alert Levels

<table>
<thead>
<tr>
<th>Possible Scenarios</th>
<th>Green 0-1</th>
<th>Yellow</th>
<th>Orange</th>
<th>Red</th>
<th>Black</th>
</tr>
</thead>
</table>
|                    | • Isolated animal - human infections  
                        • No human - human transmission | • Inefficient human-to-human transmission  
                        • Small clusters of cases may occur | • More efficient human-to-human transmission  
                        • Larger cluster(s) but human-to-human spread is still localised | • Virus is fully transmissible from human-to-human  
                        • Community-level spread.  
                        • Mild - moderate morbidity & mortality | • Pandemic in Singapore with high morbidity and mortality |

| Response measures | • Update & exercise response plans  
                        • Health advisory posters  
                        • Distribution of HAN (targeted) | • Temperature screening for inbound pax (targeted)  
                        • Issue of HAN  
                        • Filling-in of HDC  
                        • Tracing of close contacts | • Temperature screening for inbound & outbound pax (full border)  
                        • Contact tracing  
                        • Quarantine orders | • Temperature screening for inbound & outbound pax (full border)  
                        • Discontinuation of issue of HAN/HDC | • Temperature screening for inbound & outbound pax (full border) |
Passenger Screening Scenarios

Regional (Targeted) Screening

- Arrival Screening @ aerobridges
- Confined to selected piers @ terminals with set up of IFSS, nursing and isolation stations

Full Border Screening

- Screening @ Arrival and Departure Halls with set up of IFSS, nursing and isolation stations

IFSS: Infra-red Fever Screening System
Deployment for Regional Health Screening (Arrival)

Note: HAN/HDC to be distributed when required, as directed
Aerobridge Deployment

Pax are scanned as they walk past the capture zone of the IFSS camera.

IFSS Operator

IR Camera

Thermal Ref Source

Pax with high temperature will be channelled for further medical assessments.
Protocol for Suspect Case

• Upon detection of pax with high temperature, pax will be diverted to nursing station.

• If doctor assesses that it is a highly possible case, pax will be led to isolation room.

• Healthcare service provider will activate ambulance while airport will facilitate entry of ambulance and access of medical staff.

• Airport will also facilitate immigration and customs clearance for affected pax.
Deployment for Full Border Health Screening (Arrival)

Note: HAN/HDC to be distributed when required, as directed
Deployment for Full Border Health Screening (Departure)

Note: HAN/HDC to be distributed when required, as directed
Deployment at Arrival Hall
(Example)
Infrared Fever Screening System
Isolation Room + Nursing Station
Air Traffic Services’ Business Continuity Plan (BCP) in Influenza Pandemic
SCOPE

- Introduction
- Staff well being
- Segregation
- Medical cases
- Overseas travel
- Vaccinations
- Monitoring of levels
INTRODUCTION

• Recognize when it is coming

• Emphasize cleanliness to stop the spread

• Provide hand cleanser at the doors of the workplace

• Conduct check on the health
STAFF WELL BEING

• Self check with thermometers
• Proper records kept
• Daily reporting to a central body (HR)
• Suspected cases
• Contact tracing
• Rules/laws to stop unwell staff from reporting for work
• Daily cleaning of the consoles with disinfectant

Note: Source of images from Internet
SEGREGATION

• Prevent or minimise contact

➢ Ops room
  ✓ Staff uses different routes to get out of the room
  ✓ Work areas and consoles segregated by clusters
  ✓ No rotation of staff from different units

➢ Staff lounge/cafeteria
  ✓ Staff are allocated different tables and chairs for their meals

➢ Complex
  ✓ All to follow specified segregated routes in and out

➢ Visits
  ✓ Stopped until the situation is back to normal
SEGREGATION

• Prevent or minimise contact

- Segregate office hours staff into two groups
  - One group will report to work on Monday, Wednesday and Friday
  - Another group will report to work on Tuesday and Thursday
  - Weekends all work from home

*Note: Source of images from Internet*
MEDICAL CASES

- Keep records, follow up and close the case
  - Involving staff family members
  - Involving maintenance staff
  - Involving contractors

- At the workplace
  - Quarantine sick staff in isolated room
  - Ambulance to transfer sick staff to nominated hospital

Note: Source of images from Internet
OVERSEAS TRAVEL

• Precautions to be taken

➢ Upon return from affected overseas location
  ✓ One week rest at home (work from home)

➢ Avoid travelling to
  ✓ Countries/ areas affected unless urgently required

➢ Consult doctor if not feeling well

Note: Source of images from Internet
VACCINATIONS

• Provide vaccinations to all the essential staff (voluntary)

• Vaccinations
  ➢ Staff are rostered - not all can go at the same time
  ➢ Cost borned by the organisation

Note: Source of images from Internet
MONITORING OF LEVELS

• As advised by MOH

  ➢ MOH is closely monitoring the influenza A (H7N9) situation and will work with Agencies to institute appropriate control measures as situation evolves

  ➢ Will then adopt appropriate measures at workplace commensurate to prevailing health advisories
THANK YOU