AN AIRLINE EXPERIENCE OF PUBLIC HEALTH EMERGENCIES

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- Royal Air Force 1979 – 1996
  - General Practice
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- British Airways 1996 - 2010
  - Consultant in Occupational & Aviation Medicine
  - Director Health Services 2004-2010 – member of IATA MAG
Public Health Emergencies/Concerns at British Airways

- SARS
- Polonium 210 contamination
- Pandemic Influenza
  - H5N1
  - H1N1
- ? TB
- ? Measles
- ? Chicken pox
In-flight transmission of disease

WHO:

- There is a potential risk of transmission of airborne diseases on board commercial aircraft
- Infections following exposure during a flight have been documented (TB, influenza, SARS, measles)
- 7 cases in which transmission of TB is thought to have occurred on board
- No case of active TB disease has been identified as resulting from air travel-related exposure during flight
- A small number of incidents involving transmission of food-borne diseases on aircraft have been documented
Severe Acute Respiratory Syndrome (SARS)
SARS summary

- 29 countries
- 8422 cases
- 908 fatalities

(but only 8 fatalities outside China, Taiwan, Vietnam, Singapore, Canada)
SARS chronicle

- November 2002 – First detected and diagnosed cases in the Province of Guandong, People’s Republic of China
- 12 Mar 2003 - WHO global alert - working since mid-Feb on new form of atypical pneumonia in Vietnam, Hong Kong, Guangdong Province
- 2 Apr 2003 - WHO advisory - avoid non-essential travel to Hong Kong, Guandong province of China
- 23 Apr 2003 - WHO travel advisory on non-essential travel extended to Toronto, Beijing, Shanxi province
- 5th Jul 2003 - WHO announce last known chain of human to human transmission has been broken
Lessons from SARS

- Inadequate contingency planning led to irrational responses by some national and international authorities
- Inconsistency in airline approaches (in some cases cultural)
- Effective internal and external communication essential to prevent rumour and sensationalism taking hold
- Key role of IATA working with WHO
- Dissemination of information and agreed recommendations by IATA to all member airlines
- In-flight transmission:
  - may have occurred on 4 flights
  - total cases 27 (22 on one Air China flight Hong Kong to Beijing)
  - 31 flights where symptomatic probable cases known to have flown, but no transmission
IATA / WHO GUIDELINES

- guidelines for cabin crew when facing a suspected case of communicable disease on board
- guidelines for passenger agents (check in & gate staff) when facing a suspected case of communicable disease at the departure airport
- guidelines for cleaning crew who have to clean an arriving aircraft with a suspected case of communicable disease
- guidelines for maintenance crews:
  - cleaning HEPA filters
  - bird strikes
2006 – Polonium-210 contamination
Alexander Litvinenko
Became unwell on 1\textsuperscript{st} November 2006, died of Polonium poisoning on 23\textsuperscript{rd} November 2006
28 Nov 2006 – BA notified of possible aircraft contamination with Polonium-210
Challenges of radioactive contamination

- Emotive impact of possible radiation exposure
- Numbers of people involved:
  - 30,000 passengers
  - 3,000 crew members
- What is the airline’s responsibility?
- What is the public health responsibility?
- Role and expectations of the media – how do you manage uncertainty?

- The Guardian 30 November 2006: The airline said that only "very low traces" of the substance had been discovered on the Boeing 767s and the risk to public health was low. Passengers concerned about their health should call NHS Direct
Planning for Pandemic Flu
WHO Planning Guidance

- Following SARS, concerns developed about the potential impact of pandemic influenza with the emergence of the H5N1 strain
- WHO Influenza Preparedness Plan (Apr 05)
- WHO Checklist for Influenza Preparedness (Mar 05)

Annex 1 of the Preparedness Plan lists a number of interventions of relevance to airlines and air travel.
Airline briefing - disruption likely in flu pandemic

- large numbers of people likely to be affected over a period of time
  - staff - either unwell themselves or caring for dependants
  - passengers - unwilling to travel because they are worried or unable to travel because of illness etc
- potential Government action
  - travel restrictions/advisories
  - restrictions on large public meetings or events
  - screening at airports
- i.e. major operational and commercial impact on a global scale
Airline briefing - Role of Vaccines

- Current flu vaccines would not offer protection against a future pandemic strain.
- Likelihood that the next pandemic strain will originate from H5N1, and may not differ from it significantly.
- Disadvantage of stockpiling is that the vaccine deteriorates after a couple of years and if it is not needed would have to be thrown away.
- H5N1 influenza vaccine now developed and licensed in some countries
Airline briefing - Role of masks

- **WHO:**
  - Mask wearing by the general population is not expected to have an appreciable impact on transmission
  - need for “respiratory hygiene” (covering mouth when coughing or sneezing, careful disposal of soiled tissues or other materials)
- Jim McMenamin, consultant epidemiologist at Health Protection Scotland:
  - "Even if there was a global pandemic of avian flu tomorrow we would not recommend or endorse the use of face masks.”
BA contingency planning

- Contingency planning group established Mar 05:
  - Broad representation
  - Focus moved from pandemic flu as a medical problem to one of business continuity
  - Links established with IATA / WHO, UK Govt agencies, BAA, NATS and other airlines
  - Sharing of information – key customers, suppliers
  - Corporate contingency planning exercise Nov 07

- Primary objectives:
  - Survival of the business
  - Recovery of the business
Airline preparedness

- Most airlines have generic contingency plans
- Variable degree of liaison with national government
- Most intend to use IATA guidelines for cabin crew, check-in/gate, maintenance and cleaning staff (agreed with WHO)
- No clear view of role of antivirals, vaccines and masks
- High level liaison established between IATA Medical Adviser and WHO Communicable Diseases Group (and ICAO, CDC)
- IATA template for airline public health emergency response plan
- Airports Council International (ACI) has produced similar template for airports - www.airports.org
H1N1 Influenza A

- 25 April 09 – WHO declared an outbreak of international public health concern
- At 17:00 GMT, 30 April, 11 countries had officially reported 257 confirmed cases of influenza A (H1N1) infection.
- At 06:00 GMT, 26 May, 46 countries had officially reported 12,954 confirmed cases of influenza A (H1N1) infection.
- In the USA, the number of cases doubled from 2,500 to over 5,000 in a week
- Media interest declined quickly – illness less severe, not dramatic numbers of cases
22 MAY 0600 GMT: Swine flu reaches the Philippines

Canada
- 1
- 719

US
- 9
- 5,764

Mexico
- 75
- 3,892

Guatemala
- 4

Costa Rica
- 1
- 20

Panama
- 73

Chile
- 24

Argentina
- 1

Cuba
- 4

El Salvador
- 6

Colombia
- 12

Ecuador
- 8

Peru
- 5

Brazil
- 8

Argentina
- 1

UK
- 112

Netherlands
- 3

Norway
- 3

Finland
- 2

Sweden
- 3

Ireland
- 1

Belgium
- 16

Germany
- 14

Denmark
- 1

Poland
- 2

Switzerland
- 1

Portugal
- 1

Spain
- 113

Italy
- 10

Greece
- 1

Turkey
- 2

Austria
- 1

Japan
- 294

South Korea
- 3

Thailand
- 2

Philippines
- 1

Malaysia
- 2

Australia
- 7

New Zealand
- 9

World total
- Confirmed deaths: 86
- Confirmed cases: 11,168

Source: WHO, government figures
How bad was it?

- Many factors ticked ‘worst case’ for airline business:
  - Rapid escalation – alert phase 3 to 5 in 3 days
  - Existing global economic crisis and impact on airlines
  - US was early focal point
  - Wide geographical spread of confirmed cases – North & South America, Europe, Far East, Australasia
  - Inconsistent and inappropriate Government and airline responses

- Positive factors:
  - Generally mild illness with few deaths outside Mexico
  - Many Governments / organisations well-prepared

- Potential: H5N1 ‘avian’ flu hasn’t gone away
Key learning & outcomes

- Use of single source of information (WHO) where possible
- What proactive planning is in place, possible and legally permitted to coordinate activity with other airlines?
- Ensure IATA / ICAO guidelines incorporated into all relevant manuals, accessible and staff aware
- Aircraft communicable disease packs. Confirm logistical arrangements and crew awareness of when and how to use them
- Masks & antivirals. Cross-departmental review of possible scenarios leading to corporate decisions and procurement if necessary
And it hasn’t stopped there ..........
Volcanic eruptions
Nuclear accidents
ANY QUESTIONS?