Ground-based Medical Support (GBMS) for Airlines

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Historical Background

- Royal Flying Doctors (Australia)
- Mayo Clinic
- Airline medical departments
- Commercial initiatives
  - MedAire – 1986
ICAO Assembly
2004

“that the protection of the health of passengers and crew on international flights is an integral element of safe air travel and that conditions should be in place to ensure its preservation in a timely and cost-effective manner”

Action by the Assembly:

a) Recommend that Contracting States ensure that appropriate measure are taken to protect passengers’ health during air travel
It is recommended that all airlines have a facility by which medical advice from the ground is available to crew at all times during flight.
Ground-based medical providers

- Public
- In-house
- Outsourced
- 44% of Top 100 RPK Airlines
- 75% of North American Airlines
  - All major US / Canadian Airlines
  - Oceania, Middle-East, UK
How does it work?

- Origin
- Advice
- Diversion
- Destination
Experience with pandemics

- At least three touch points during pandemics
  - In-flight cases
  - Pre-flight pax fit-to-fly assessment
  - Crew support cases
- SARS – 2003
- Worked closely with CDC
- H1N1 – 2009
  - Deep involvement coordinating with airlines aspects of crew and pax health
Pre-flight Fit-to-Fly Assessments

• 2009-2011
• 36,778 cases
• 1,829 (4.97%) for Communicable/Infectious Diseases (CIDs)
• 75 Airlines
Percentage of CID.s

- 2009: 6.2%
- 2010: 4.1%
- 2011: 4.8%
- Total: 5.0%

Legend:
- All other
- Mental
- Medical equip.
- ENT (ear, nose and throat)
- Communicable
- Ob/Gyn
- Respiratory
- Cardiovascular
- Neurological
- Gastrointestinal
- Ortho/Trauma
CIDVs versus Non-CIDVs Distribution
Median age / month for CIDS
Diagnostic impression
CIDs In-Flight Events

- 2009-2011
- 2,260 events categorized as infectious (3-5% of all events, 3.36% in 2011)
- 48 different airlines
Airlines Region Distribution

- Europe: 20%
- Asia: 21%
- Oceania: 5%
- Middle East: 29%
- America: 25%
Origin of the flight
Distribution by ICAO region

- US: 19%
- S Asia: 14%
- SE Asia: 16%
- N Europe: 13%
- S Europe: 5%
- SE Asia Maritime: 6%
- S Pacific: 1%
- E Asia: 1%
- SP Africa: 1%
- W Africa: 1%
- NE Africa: 1%
- S Africa: 2%
- EN Pacific: 3%
- C America: 3%
- Canada: 4%
- WN Pacific: 4%
- NW Africa: 1%
- Caribbean: 1%
- All other: 1%
Nature of flight

- **Domestic** 14%
- **International** 86%
- **Ultra-long** 5%
- **Short** 6%
- **Medium** 34%
- **Long** 55%
CID/Non-CID Ratio
In-flight cases
Median age / month for CIDs
In-flight cases
Time into flight by the time of first contact

![Graph showing the number of cases by hours of flight for short-haul, medium-haul, and long-haul flights.](image-url)

- **Short-haul**
- **Medium-haul**
- **Long-haul**
How could GBMS support help?

- Helping airlines (crewmembers/gate agents) in identifying cases to be reported to health authorities
- Orienting crewmembers in handling suspect cases to minimize exposure/transmission risks
Interactions during pandemics
MANAGING AN ON-BOARD CASE

A/C ID
Dep.
Dest.
ETA
POB
No. cases
Nature of risk

Aircraft gen. declaration – Health Part

GROUND SUPPORT

Air traffic controller

Destination aerodrome tower

PHI

AIRLINE OPERATING AGENCY

AIRPORT OPERATOR

OTHER AGENCY

CAPSCA-Ulaanbaatar April 2012
In-flight case

Case evaluation
- Confirm suspected communicable disease
- Epidemiological assessment:
  - Epidemics?
  - Case definition
  - Public health concern?

Yes

- Contact airline operation agency
- Recommend ATC notification
- Recommend treatment as required
- Document case

No

- Recommend treatment as required
- Document case

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
Conclusions

- GBMS play a significant role during pandemics and in the handling of public health matters
  - Airlines
  - Health authorities
    - Clear case definition
- GBMS data provides good monitoring of disease activity during epidemics
Muchas gracias!
Thank you!