

Ground-based Medical Support (GBMS) for Airlines.

An additional link in the system.

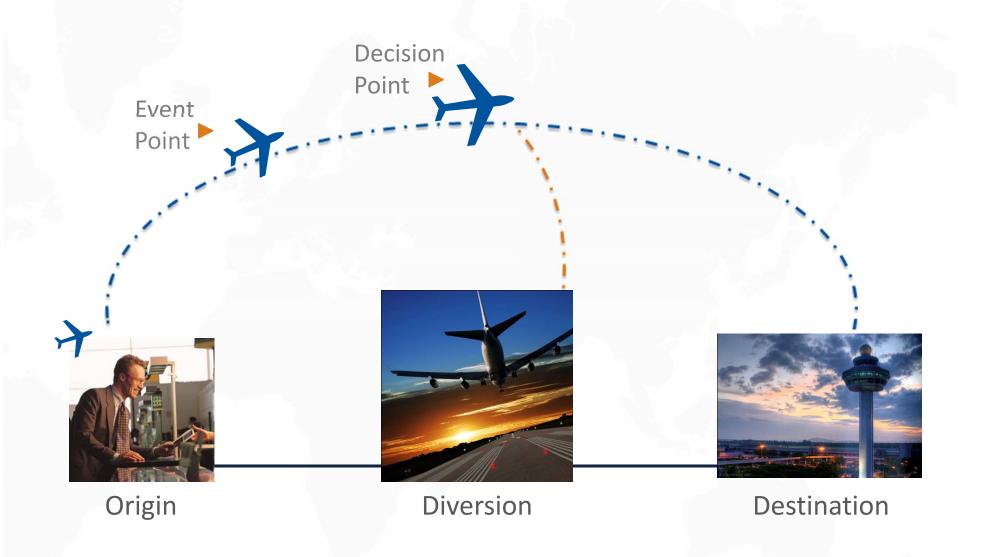
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www.medaire.com

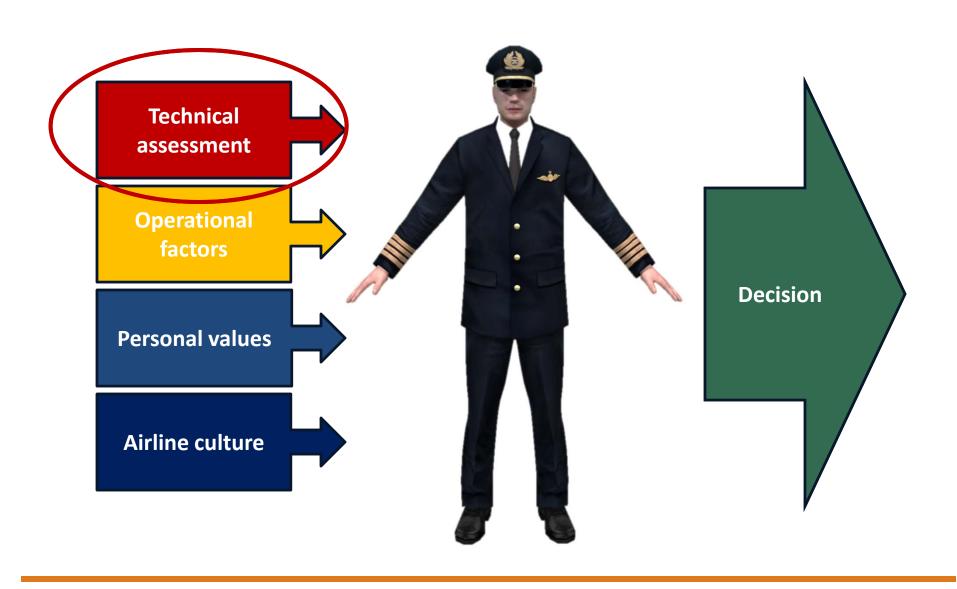
Disclosure

- Michael Braida is a full-time MedAire/International SOS employee
- MedAire is a medical solution provider for commercial airlines and business aviation
 - Ground-based medical advice, training and medical equipment
- International SOS is a global health and security assistance company
- Opinions expressed are personal, not necessarily reflecting MedAire / International SOS positions

Touching points in commercial aviation



A CRM Perspective



Current scenario

- Ground-based medical support (GBMS): 30+ years
- 58%-68% of top 50 airlines in the world^(*) utilize GBMS
- GBMS is a recommended practice by ICAO IATA
- Four types of GBMS:

Fully dedicated solutions	Public services
Partially dedicated solutions	In-house medical departments

^(*) Excluding Chinese carriers and depending whether pax carried or RPKs is considered

Historical Background

- Mayo Clinic
- Royal Flying Doctors
- Airline medical departments
- SAMU France
- MedAire 1986
 - Need for a structured approach to in-flight medical events

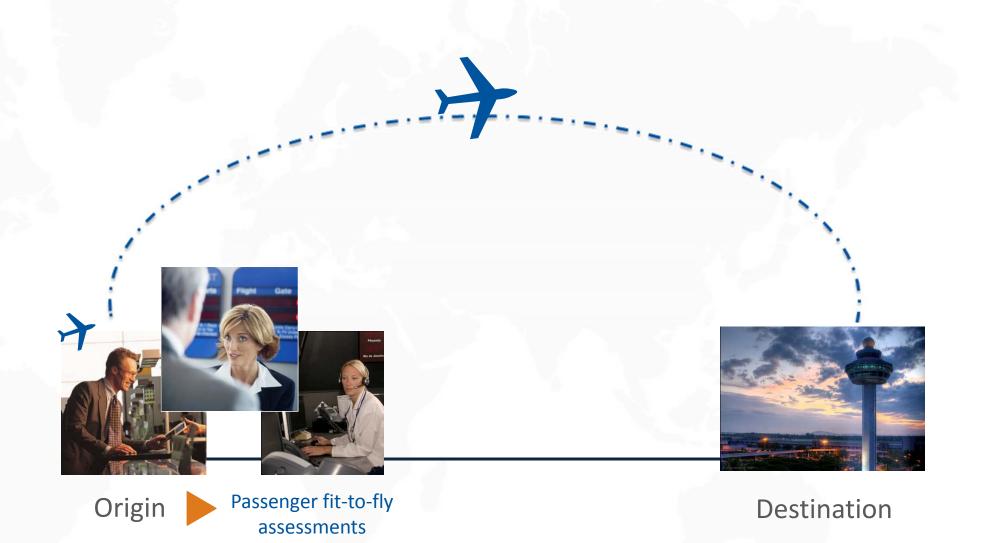
How could GBMS help?

- Assisting airlines (crewmembers/gate agents) in identifying cases to be reported to health authorities
- *Orienting* crewmembers in handling suspect cases to minimize exposure/transmission risks
- Providing statistics to be matched with actual notification figures received by system (ATC / local health authorities)
- Educating crewmembers and traveling public

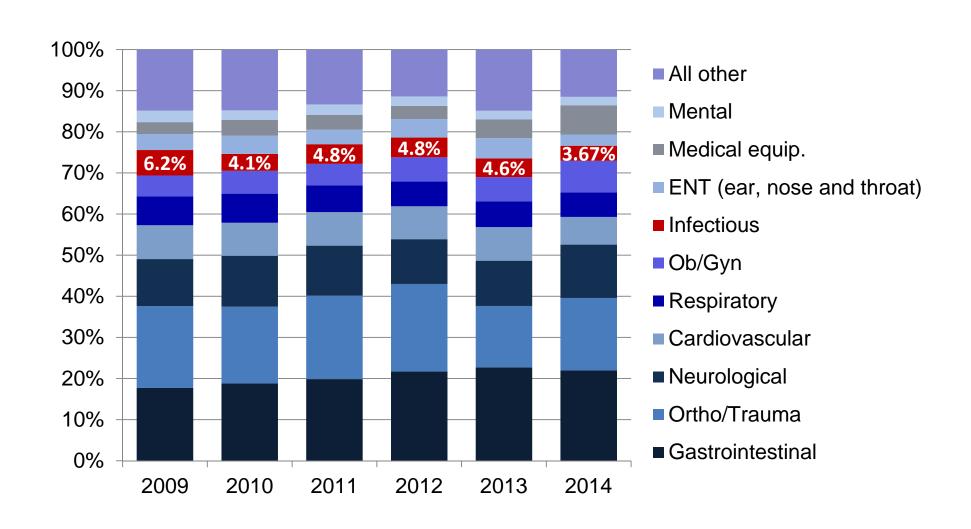
Experience with international public health concerns

- **SARS** 2003
- H1N1 2009
 - Deep involvement coordinating with airlines aspects of crew and passenger health
 - Worked closely with the CDC
- MERS-CoV 2013/2014
- **EVD** 2014
- GBMS have at least three touching points during pandemics
 - In-flight cases
 - Pre-flight pax fit-to-fly assessment
 - Crew support cases

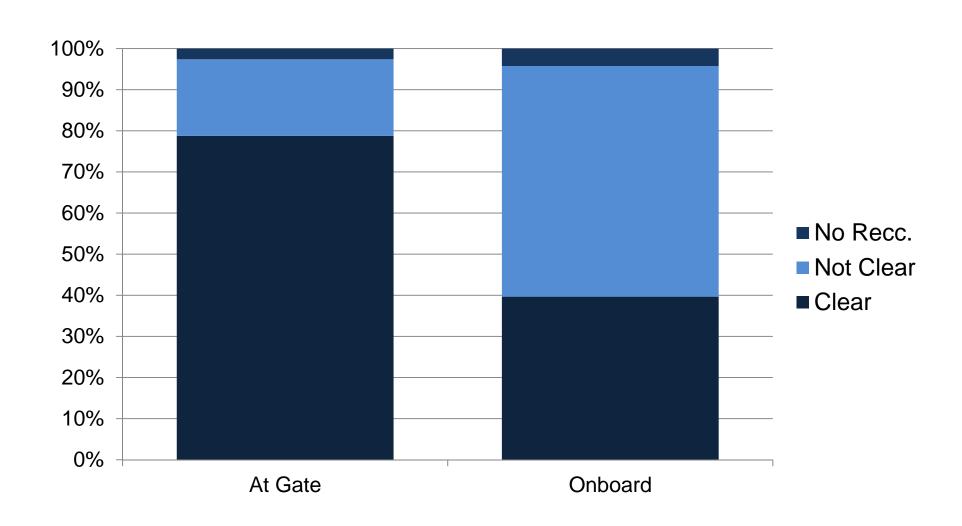
Opportunities for Intervention



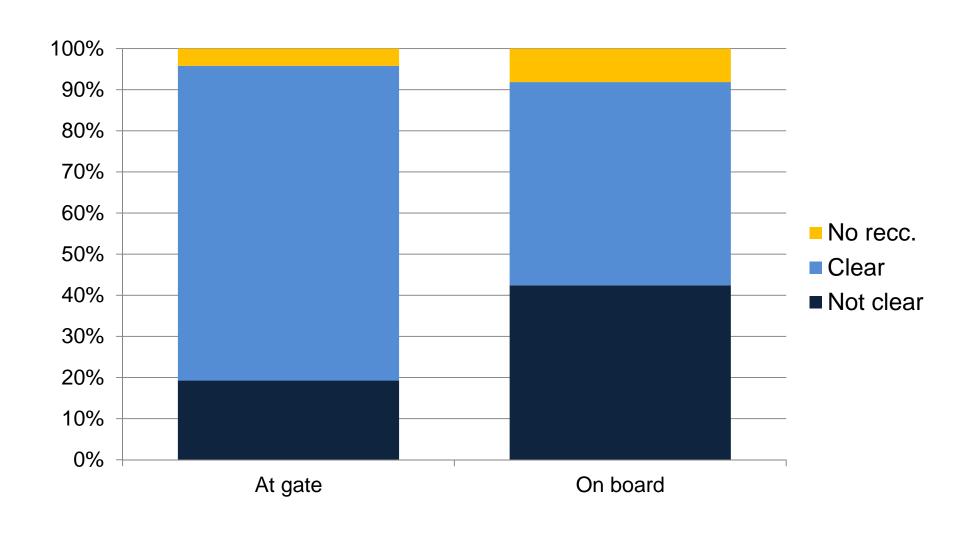
Percentage of CIDs in pre-flight assessments



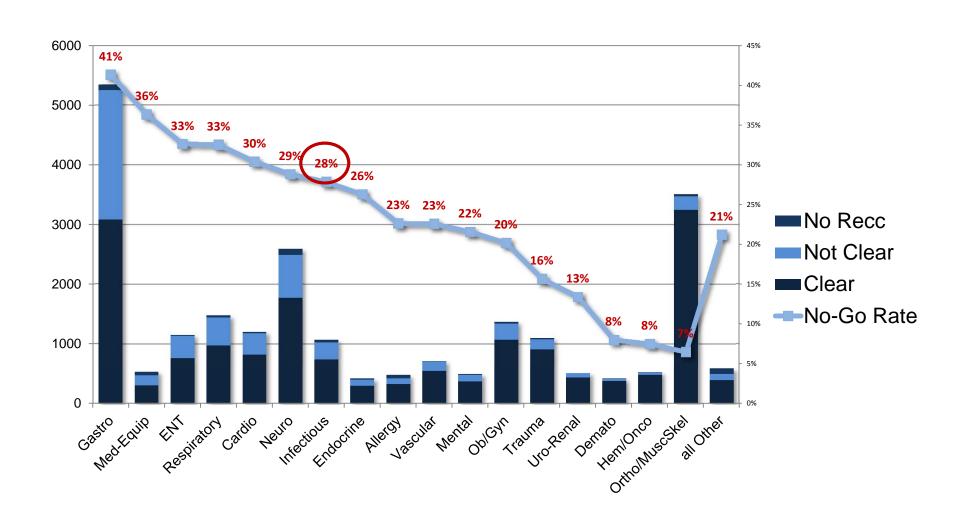
Overall disposition – Pre-flight assessments



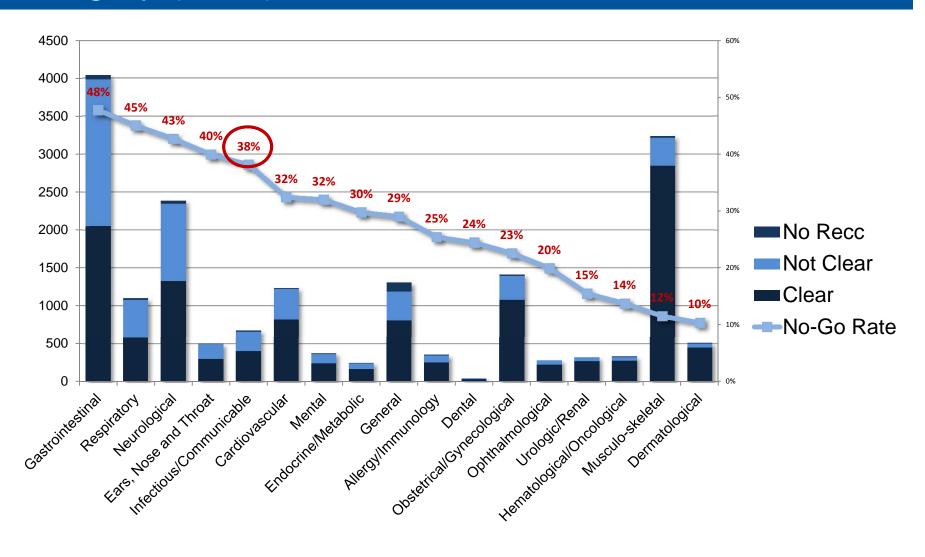
Disposition of Pre-flight Screenings for Infectious / Communicable Diseases (Update 2014)



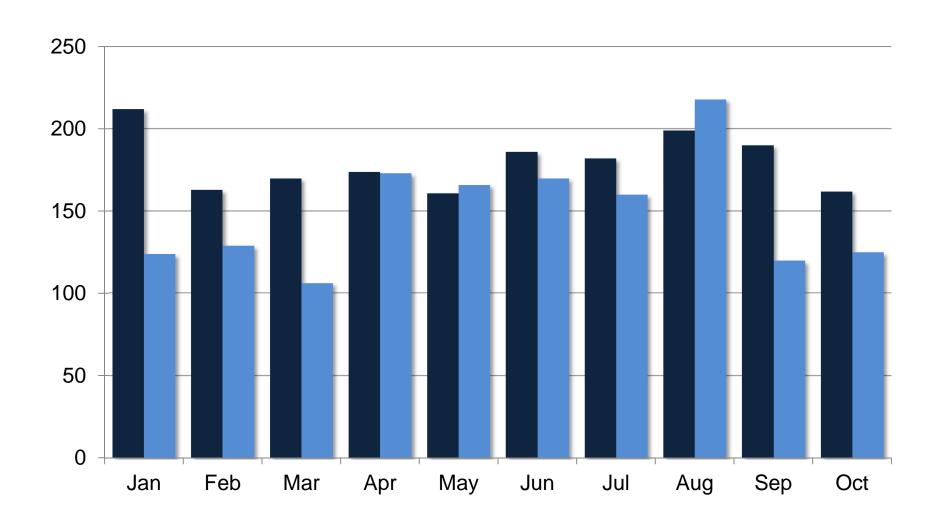
Dispositions and No-go rate per diagnostic category (2013)



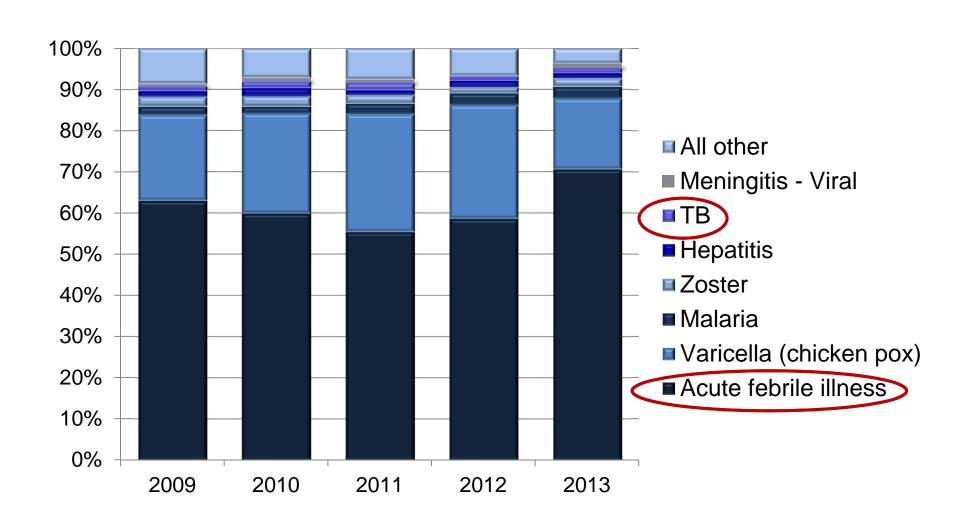
Dispositions and No-go rate per diagnostic category (2014)



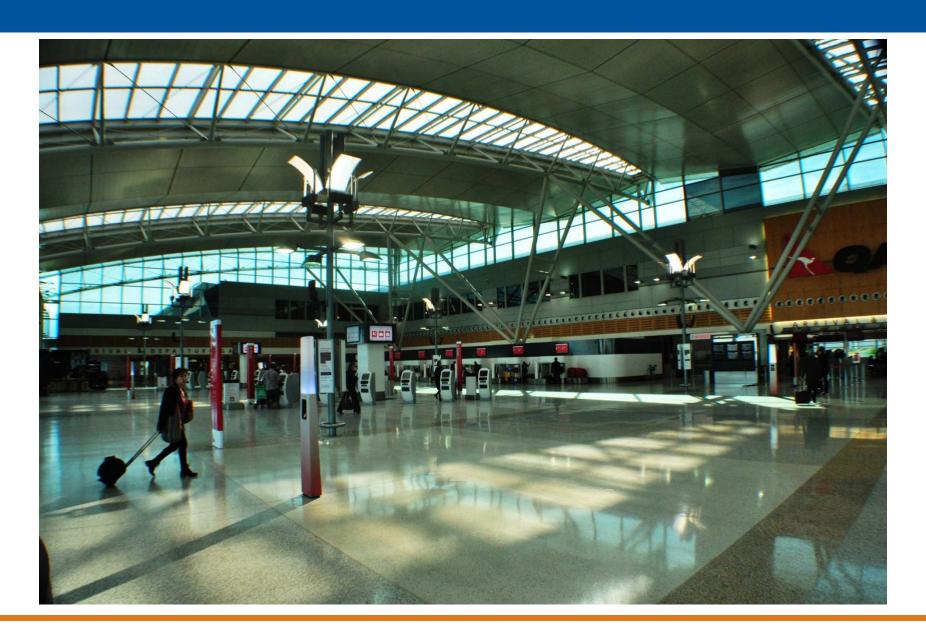
Infectious Diseases 2013/2014 Monthly Apr/Oct



Diagnostic impression



The determined traveler

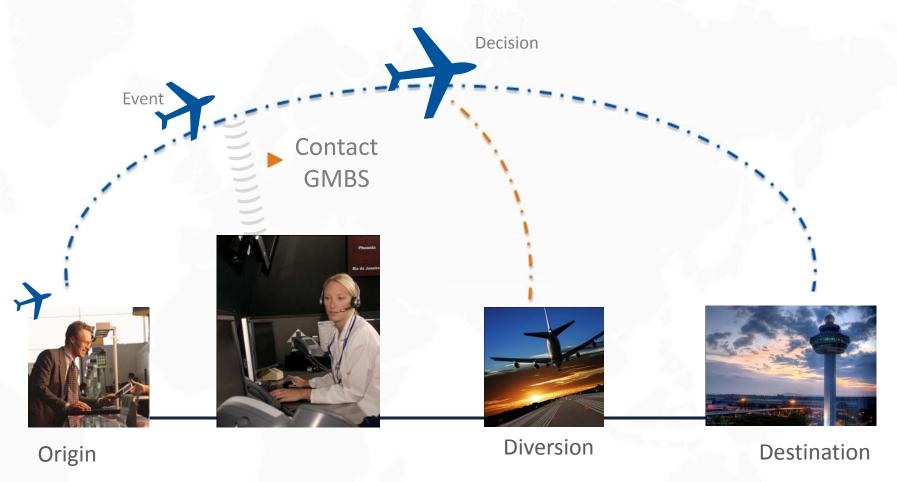


The "index" case: how it all started

http://who.int/mediacentre/news/ebola/20-october-2014/en/index1.html

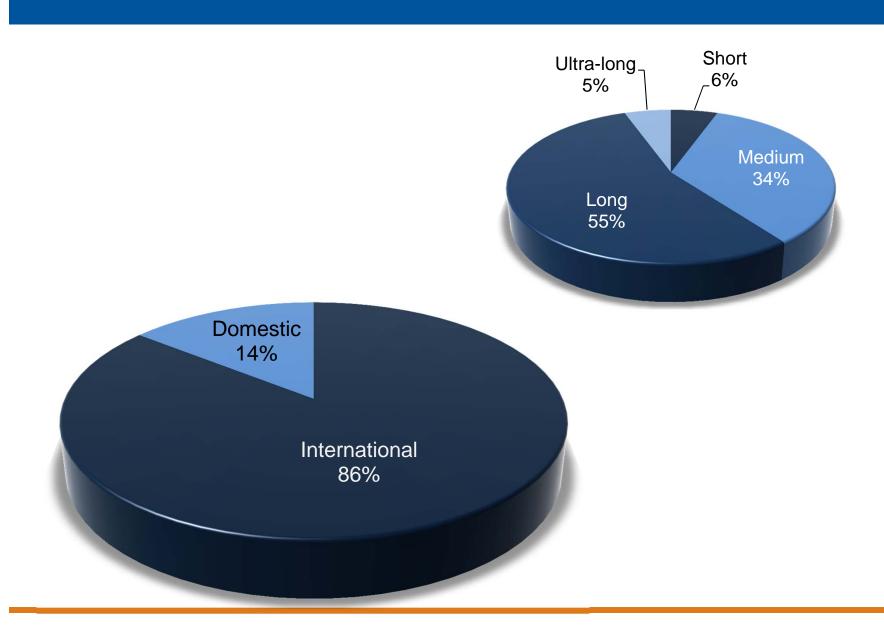
- The Ebola virus entered Lagos on 20 July via an infected Liberian air traveler, who died 5 days later.
- At the departure airport, he was <u>visibly very ill, lying on</u> the floor of the waiting room while awaiting the flight.
- At the hospital, he told staff that he had malaria and denied any contact with an Ebola patient.
- As was learned later, his sister was a confirmed case who had died from the disease in Liberia.

In-flight cases

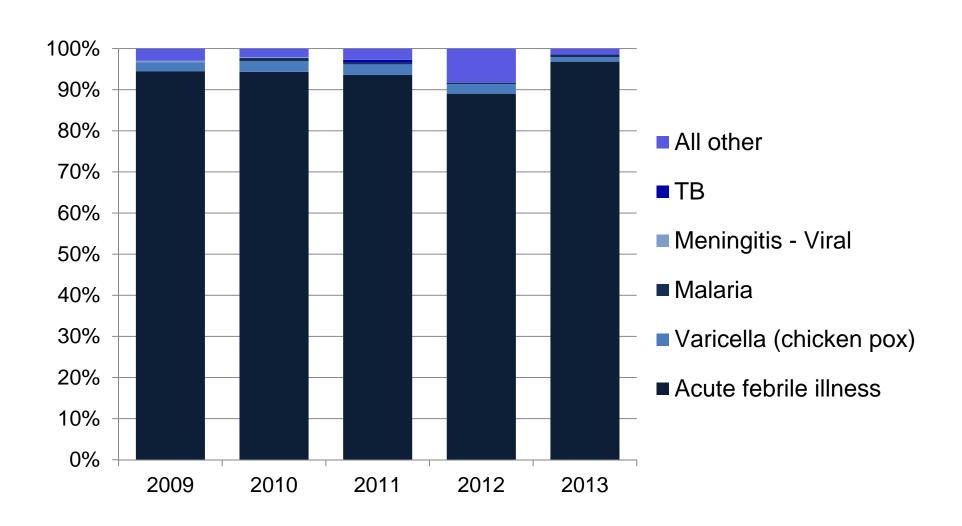


Onboard plan of care • Optimize medical volunteers
• Continuation or diversion recommendations • Consistent data capture

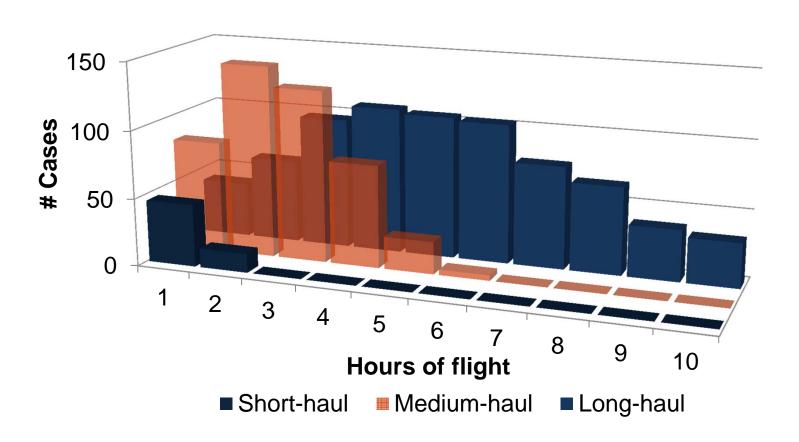
Nature of flight

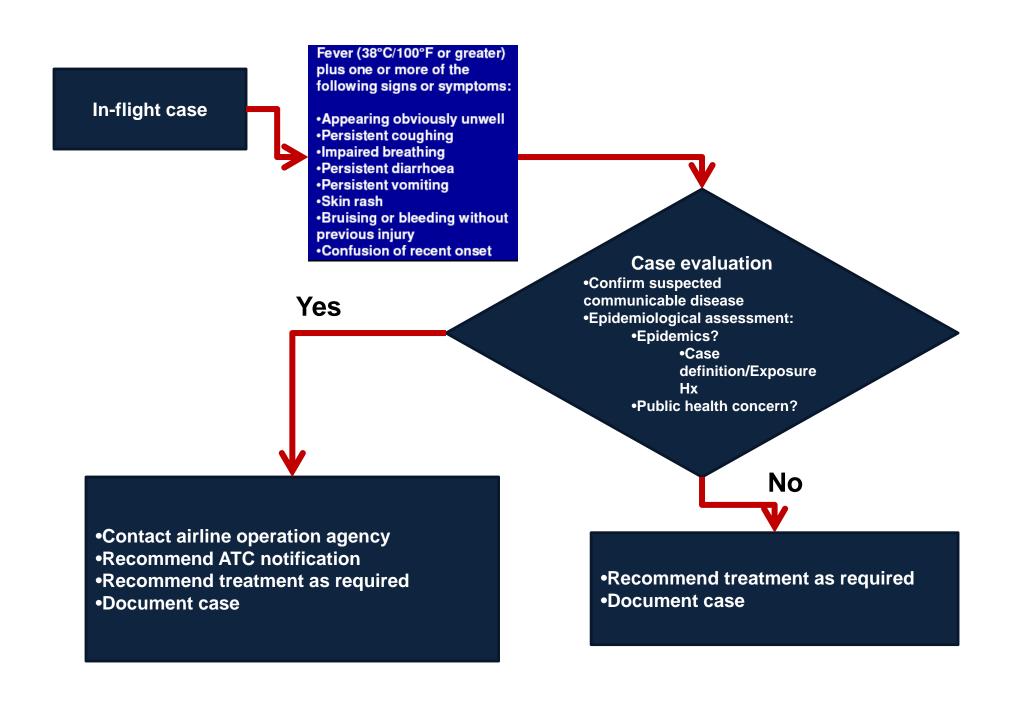


Diagnostic impression - In-flight



Time into flight





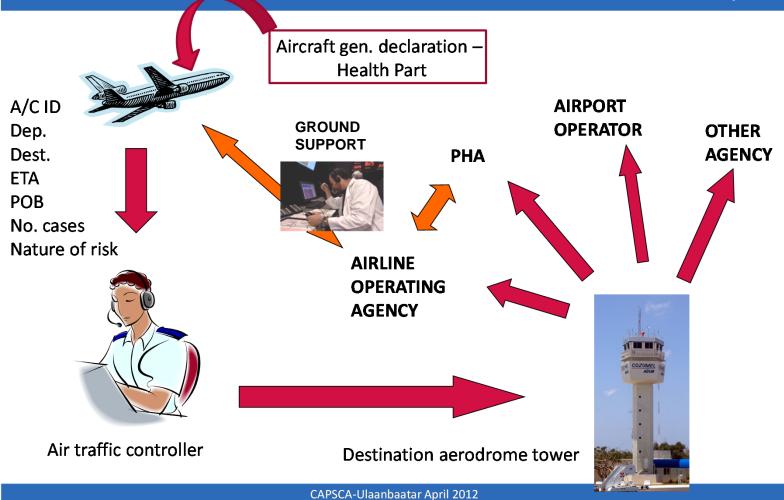
MANAGING AN ON-BOARD CASE



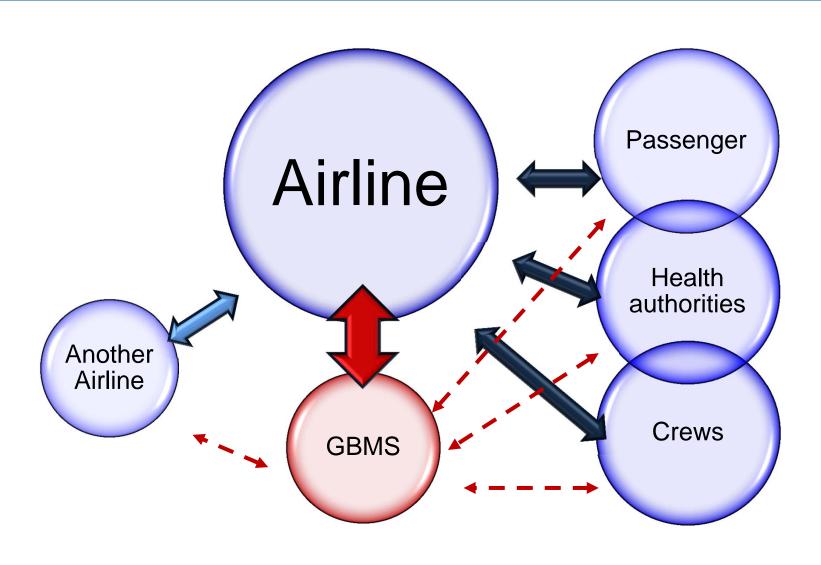


MANAGING AN ON-BOARD CASE





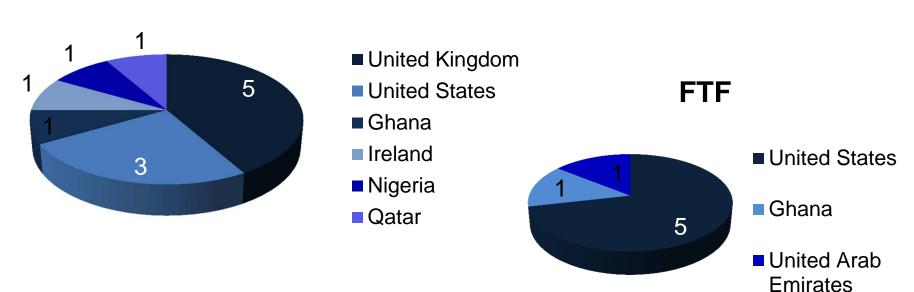
Interactions during public health concern

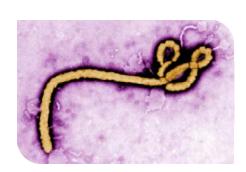


Ebola

- 19 cases mentioning Ebola in 2014
 - 15 in October
 - 12 In-flight / 7 Pre-flight

In-flight





Conclusions

- GBMS play a significant role in the management of Communicable Diseases
- GBMS data provides good monitoring of disease activity during epidemics
- Enhancing the system
 - Standardization
 - Collaboration
 - Technological advances

