

Hello Tomorrow



An Airlines response to MERS Coronavirus and Ebola

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Disclaimer




- ✈ I work for Emirates Airline
- ✈ The views and opinions are my own and don't necessarily reflect the position of the company



- ✈ I do not have financial benefit in producing this presentation
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Sars hit airlines 'more than war'

The Sars virus has had more effect on the global airline industry than the war with Iraq, according to a report from the flight schedule provider OAG.

According to the group's latest report, the number of scheduled flights worldwide fell by 3% - equivalent to 2.5m seats - in mid-June compared to a year ago.



Asia got used to empty airports

The OAG blamed the combined effect of the Sars virus and a slowing world economy.

Worst hit were China and the Asia Pacific region, with flights to China down by 45%.

Background



- Pandemic infections have the potential to cause major impacts on the commercial operations
- Recent examples are SARS and H1N1 infections
- Both had significant **multibillion** dollar effects on the airline/ travel industry

Flu-conomics: The next pandemic could trigger global recession

BY SHARON BEGLEY

Mon Jan 21, 2013 7:47pm GMT

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- Novel new Coronavirus similar to SARS
- First case in April 2012
- Index case from Saudi Arabia
- All cases had direct or indirect contact with the Middle East
- Named MERS-CoV in May 2013
(Middle East Respiratory Syndrome- Coronavirus)

MERS- CoV



- 22 Countries have reported human infection with MERS-CoV
- Saudi Arabia, UAE, Qatar, Jordan, Kuwait, Oman
- All still direct or indirect connection with the Middle East
- **The mode of transmission still remains unknown**

World wide



- 920 cases with 313 deaths
- 30% death rate
- Death usually occurring in those at the extremes of age or with underlying co-morbidities especially chronic renal failure
- Primary infection thought to be from animal vectors (camels /bats)
- Some secondary infections usually in the healthcare settings although some spread to family members of infected patients

UAE background



- 69 known cases
- 10 deaths
- Death rate 14.4%
- Most had contact with Saudi Arabia
- Most had underlying chronic illness
- Secondary cases in health care workers and close family only
- No evidence of sustained community transmission

WHO travel advice



- **Does not advise**
 - special screening at points of entry
 - nor does it currently recommend the application of any travel or trade restrictions
- **But recommends**
 - Avoiding close contact with people suffering from acute respiratory infections
 - Frequent hand-washing
 - Adhering to food safety and hygiene rules
 - Avoiding close contact with live farm or wild animals

Secondary infection



- Tends to be in health care works and family
- Milder form
- Some remain completely asymptomatic
- No sustained community transmission has been observed
- Spikes tend to occur in March/ April months

Haj pilgrimages to Saudi Arabia



Significantly and reassuringly huge numbers (3.5 million) of Hajj pilgrims have visited Saudi Arabia on three occasions since the initial cases without evidence of a spike in numbers



Airline travel



- Many have travelled on commercial airlines including symptomatic cases
- Countries affected UK, France, Germany, Italy, Tunisia, Jordan, Malaysia, Indonesia, USA
- NO evidence of spread via commercial airline travel
- Over 300 pax tested

Our management = Multi-layered



- Aircrew training
 - Consistent response to all possible infectious conditions – old or new
 - Infection control measures
 - UPK (universal precaution kit)



Our management = Multi-layered



- Dedicated in-house AvMed doctor lead
- Monitoring WHO/CDC/IATA/News
- Updates to senior management
- Management reviews company blogs

Dear Colleague

NOVEL CORONAVIRUS IN A QATARI NATIONAL RECEIVING TREATMENT FOR A SEVERE RESPIRATORY ILLNESS IN LONDON

This is to advise you of a case of a novel coronavirus in a patient receiving treatment in a London hospital. On 22 September 2012 a novel coronavirus was identified in lower respiratory tract specimens of a previously well, adult male Qatari national receiving treatment for a severe respiratory illness in London.

Please see attached in the below annex the full alert from the Department of Health

Yours sincerely

A handwritten signature in black ink, appearing to read "Sally C Davies".

**PROFESSOR DAME SALLY C DAVIES
CHIEF MEDICAL OFFICER
CHIEF SCIENTIFIC ADVISER**

In-flight suspected pax



- EK management based on WHO/ICAO/ IATA guidelines
- Cabin crew contact ground based medical support
- Ill pax
 - Relocate
 - Dedicated crew
 - Dedicated toilet
 - Cough etiquette (masks in UPK)
 - Gloves if risk of contact with body fluids
 - Pax in same row and adjacent 2 rows fill in locator card
- Captain contacts ATC before arrival and station for cleaning etc.



Also undertake regular corporate updates



groupworld


My Work Employee Centre Travel Tools & Applications Commu

News

GROUPWORLD » NEWS » WHAT'S ON

What's On

Medical advisory: MERS CoV



There have been media reports of deaths and infection caused by MERS CoV. Emirates Group Medical Services is constantly in touch with local health authorities, and is monitoring advisories from the International Air Transport Association (IATA) and the World Health Organisation (WHO), which confirms there's no cause for alarm. No advisory has been issued on travel and trade, and special screenings at airports are not yet required. However, it is recommended that the ill and the elderly delay their travels to Saudi Arabia for religious pilgrimage.

Emirates social media channels



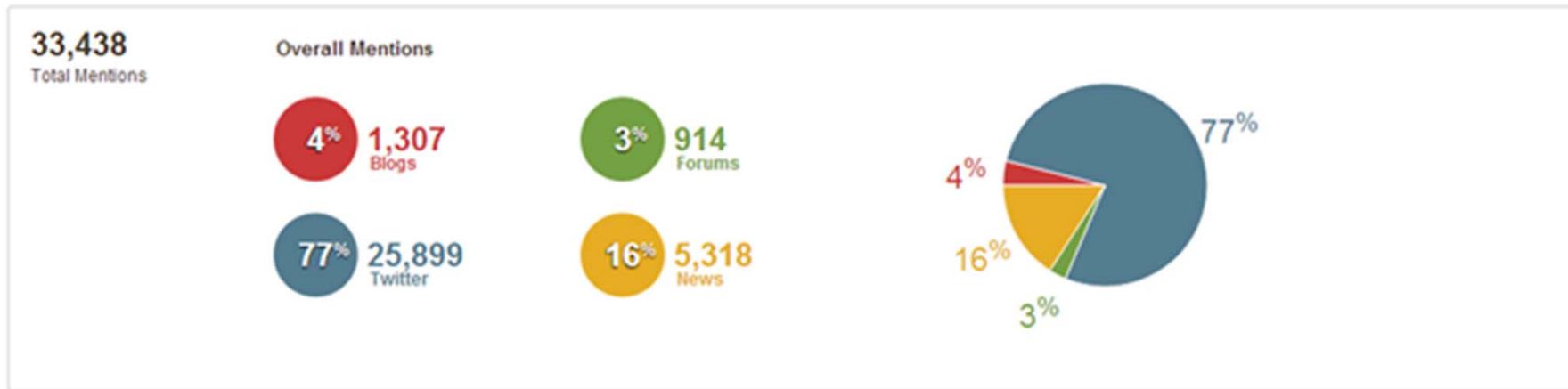
- Some of the most popular in the airline/ travel/ lifestyle industry
- The most 'engaged' amongst all airlines
- 3 million Facebook fans
- 2 million on Google+
- 200,000 on LinkedIn
- 60,000 on Twitter

- Currently no mentions regarding MERS-CoV

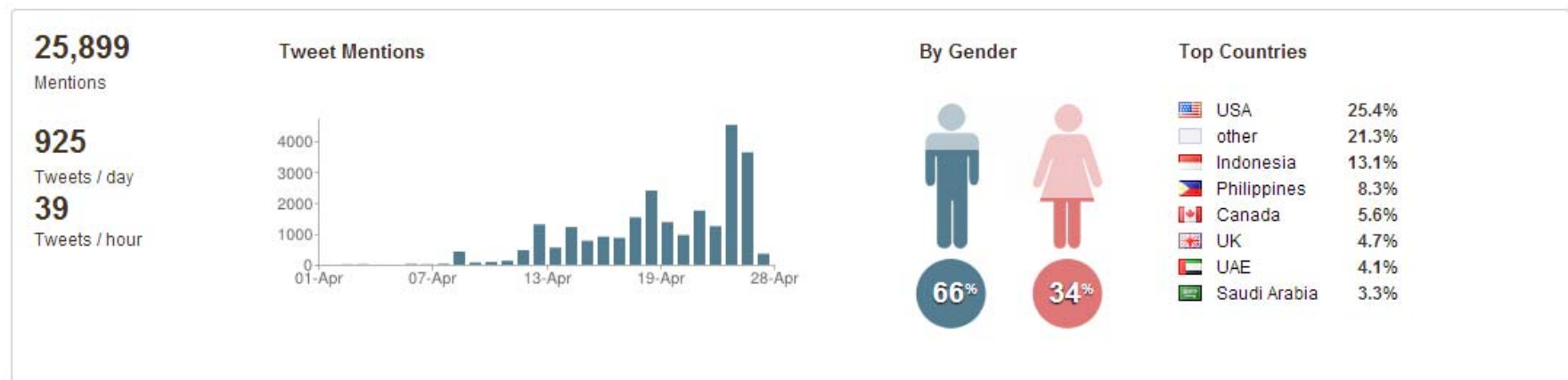
Review of all social media sites for MERS CoV



Social Media Activity



Tweets



Running in the background 'Pandemic Health Plan' (46 pages)



CONTINGENCY RESPONSE PLANNING

PANDEMIC HEALTH EMERGENCY

Suspected infection in a pax post flight



	Action	Check
1.	During phase 1 and 2, monitor any information with regards to the emergency and advise Medical Services of any reported developments. If necessary support communications to Flight and Cabin Crew	<input type="checkbox"/>
2.	When notified (by a Local Health Authority) of a suspected passenger virus post flight: <ul style="list-style-type: none">○ contact Medical Services (VP AOM or deputy),○ provide PNR details to Group Security to enable them to manage external requests for information - Group Security - Law Enforcement Pax Info Requests GSLEPI@emirates.com○ contact Cabin Crew Duty Manager & Flight Duty Manager to provide a list of cabin and flight crew on board and request immediate notification of any reported sickness○ Contact Public Relations for a reactive press statement - Public.relations@emirates.com	<input type="checkbox"/>

Only passenger case



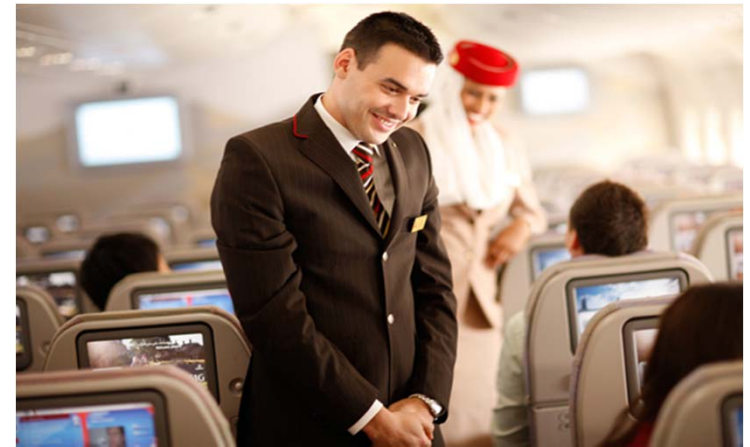
- Pax flying from S. Arabia to Dubai
- Local resident to the UAE
- Flew on 16th April 2014
- Underlying chronic illness
- No signs of symptoms of illness at the time of the flight
- Became unwell a few days later
- Contacted by the local authority on 22nd April



Aircraft

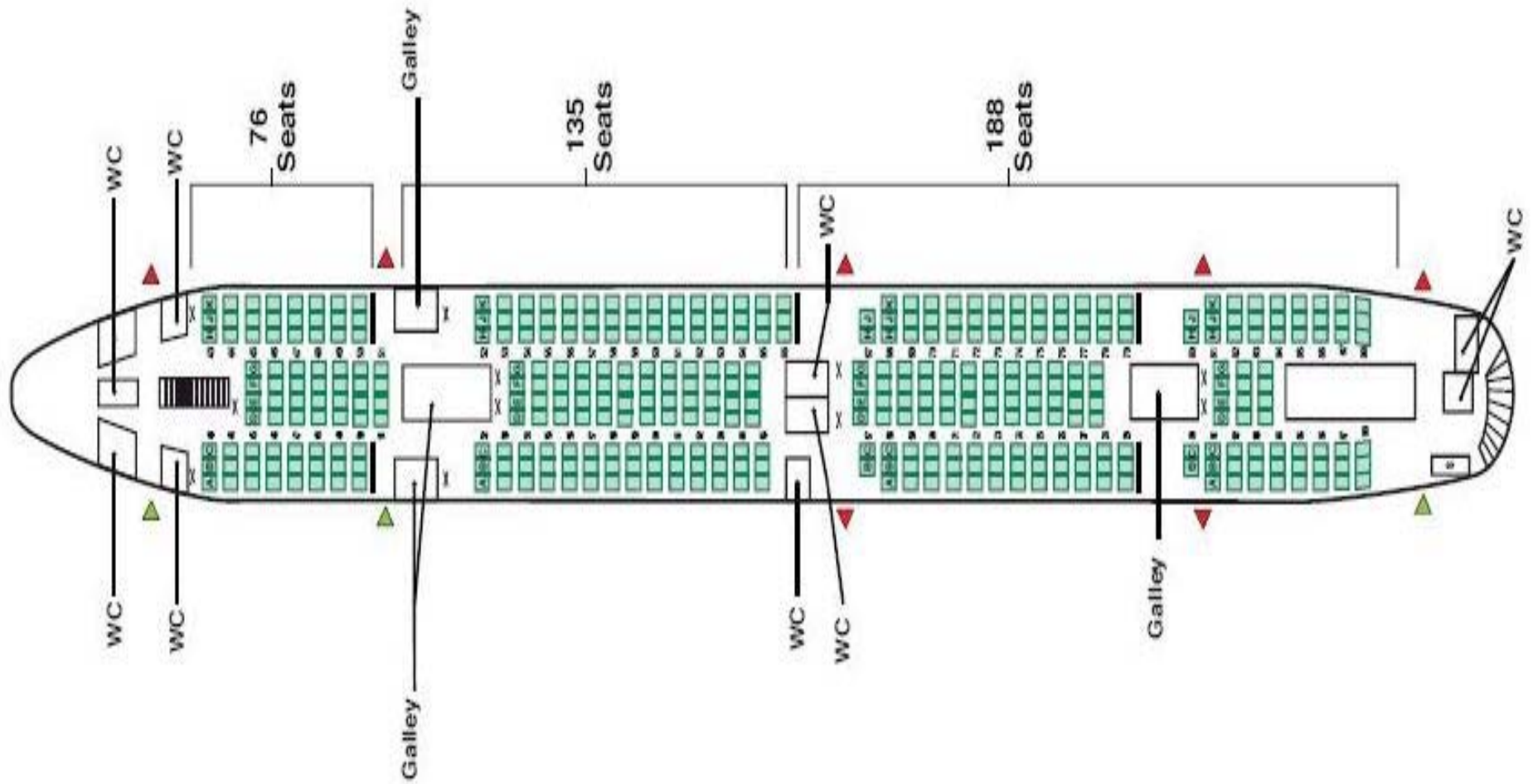


- Flew on a A380-800
- Flight time is less than 3 hours
- 470 pax in total
- Full 427 in main deck (economy)
- Had an aisle seat in a configuration of 3
- Within 2 rows of the exit
- No issues on board the flight



Airbus A380 Main Deck (Economy Class)

■ Economy Class: Rows 43-88



Crew on board



- 23 cabin crew and 1 CSA
- Split between two levels
- Main deck (economy) had
 - 8 Grade 2 cabin crew
 - 2 Senior Flight Stewards
 - 1 cabin service attendant (CSA)
 - 1 Purser



Follow up



- Requirement by local authority to test all crew who had been on the flight
- No requirement to test the pilots
- Contact initiated immediately
- Option to test via local authority or in-house
- Senior management decision for in-house testing to allay concerns and for logistics

Crew testing



- Nasopharyngeal swabs
- By doctors
- PCR
- 1 day turn around time at local lab
- Approx. \$120 each
- Negative test doesn't all eliminate risk of infection



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MERS-CORONAVIRUS RNA PCR-SWAB

Result DateTime	Description	Value	Unit	Range
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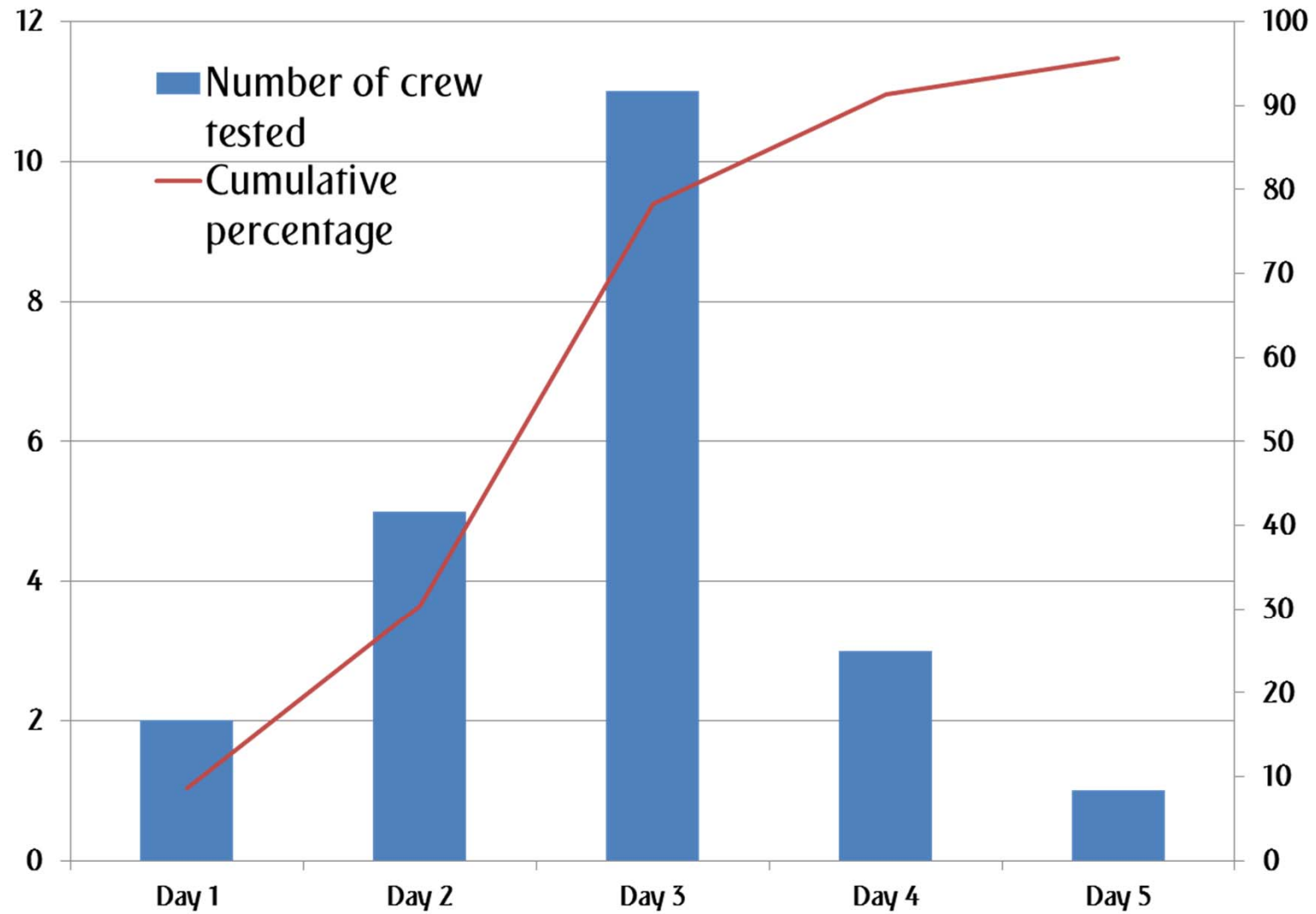
	MERS-CoV PCRS NEGATIVE			
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Crew results



- Attempts to contact all crew
- One crew had already left on non-medical emergency leave
- 23/24 reviewed
- Non had fever or concerning symptoms
- All were fit to fly
- 23/24 tested
- All negative
- Incubation period lapsed

But it took time



Passenger results



- Attempts by local authority to contact pax in adjacent 2 rows
- Process outsourced by local authority
- No confirmed cases
- Incubation period lapsed

Current facts



- Multiple cases of air travel with known MERS-CoV
- Some passengers were symptomatic during the travel
- Probably a significant number of unknown others have flown to who were asymptomatic
- Pax travelled on multiple sectors during their incubation/infectious periods
- Some of the flight they travelled were long haul

Current facts



- Emirates serves over 140 countries in 6 continents and has flown well over 100 million passengers since the virus was first found
- It has 37 **daily** flights to other Middle East countries
 - 7 daily flights to Saudi Arabia
 - 3 of which are A380-800
- Emirates has only had one known case of a passenger flying who was later diagnosed with MERS-CoV
- No current evidence of transmission of the virus onboard
- **Also so far no known case transmitted globally via air travel**

Conclusions



- There seems to be significant benefit of having a consistent airline / industry approach to any infection
- For new infections this benefit is strengthened by the airline management being referenced to advice from respected international organisations (WHO/ IATA/ CDC)
- MERS-CoV has not been transmitted to pax travelling by air
- MERS-CoV seems to have had little impact on commercial operations to date – including from pax and aircrews





The Ebola story

- First new case notification March 2014
- Similar process and planning as for MERS- CoV
- BUT Significant change in the flavour of the information forwarded though from CDC/WHO
- Suggestion of minimal / no risk to Aircrews
- "Negligible as the person gets exposed and then gets rapidly sick and will be too sick to fly"



Management

- Briefings to senior management
- Contingency Response Team activated
- Initially daily reviews and then twice weekly
- Up to 15 Senior Managers invited
- Internal corporate communications
- Reassured by lack of PHEIC designation



Concerns

- Increasing concerns from crew and airport staff in Conakry
- Heightened by increasing numbers
- Movement of the cases from rural areas to the city
- Escalated by media reports



Email escalation and loss of credibility



- The Daily Mail - Mr Sawyer, a consultant for Liberia's Finance Ministry, died on Friday after arriving at Lagos airport on June 20, having vomited and suffered diarrhoea on two flights....
- The Telegraph.co.UK - "Patrick Sawyer could have brought Ebola to US but died in Nigeria while en route to family in Minnesota."



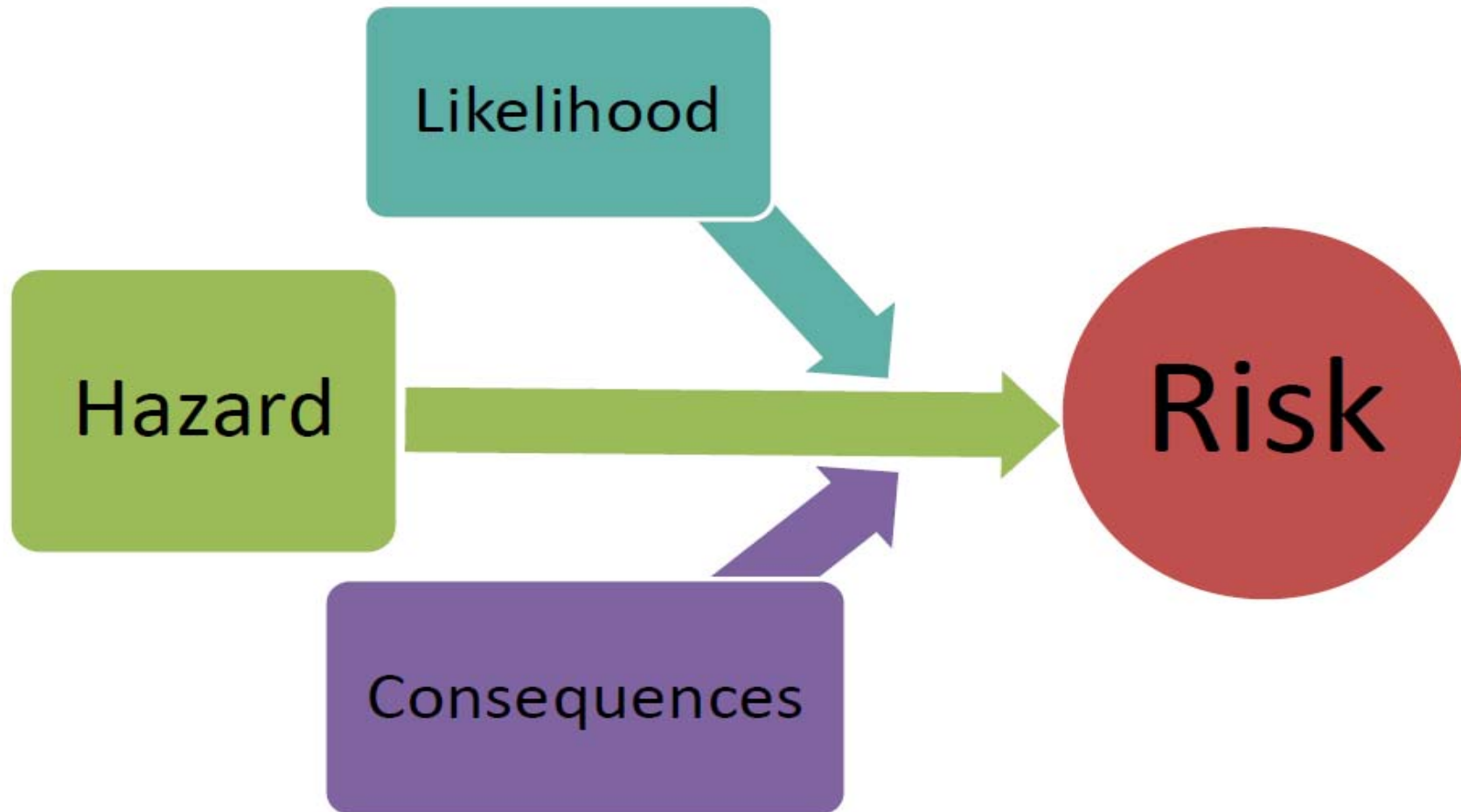
Ebola patient escapes Liberia quarantine, chased in market



" Even experts are dying"

- Gulf News - "Doctor's death highlights danger of Ebola virus"
- "Dr Shaikh Humarr Khan, a Sierra Leonean expert in viral haemorrhagic fevers, relentlessly fought to save people infected with the lethal Ebola virus and in the process, succumbed to the disease himself on Tuesday".
- <http://gulfnews.com/opinions/editorials/doctor-s-death-highlights-danger-of-ebola-virus-1.1365561>

Risk assessment approach





Management decision

- Flights to Conakry suspended
- Made on overall risk analysis
- Mainly on commercial grounds
- But also on duty of care



Non standardised approach

- Pax was offloaded in DKR on the advice of Medlink - as was displaying 'similar' symptoms to that of the Ebola virus,
- **The local authorities refused to allow him into the Country.**
- After a 4 hour plus standoff Pax was offloaded and repatriated to CKY on a chartered private jet.
- Given the extended time on the ground in DKR the operating crew were unable to reach DXB due to max FDP constraints so the flight stopped in BAH and a new crew sent to BAH from DXB to pick up the flight and the original operating crew.

US implemented entry screening in early October





Suspected case from connection hub

- Been informed by the captain that the customer was complaining from not feeling well before he boarded.
- Customer looked weak but did not complain from anything like vomiting or headaches or fever.
- Customer had his lunch, did not drink any alcohol and used the toilet once only.
- Customer did not vomit or complain from any fever during the flight.
- His 2 colleagues wanted to be involved as they were all travelling together connecting from Monrovia Liberia.



- Customer stated that he will connect via DXB to JNB.
- Had Tempus IC onboard.
- Customer agreed that we use the Tempus IC to get his vitals
- Customer stated he only feels stomach cramps.
- Medlink advised to give one pill of Buscopan and monitor.
- Customer asked for my name and stated they work for News Agency
- Ground Medical assistance was waiting at the L5 door to check.



Ebola Test: Passenger isolated at Dubai Airport

Agencies / 16 October 2014

The purpose of the test was to ensure that the passenger arriving from Liberia through Morocco does not suffer from Ebola symptoms.

Dubai - The UAE Ministry of Health announced the isolation of a passenger arriving from Liberia through Morocco at the Dubai International Airport to conduct necessary tests after suffering from diarrhoea. The purpose of the test was to ensure that the passenger does not suffer from Ebola symptoms.

The Ministry of Health said in a statement that the patient does not suffer from either Ebola symptoms or high temperature. As part of the ministry's adopted precautionary measures in this cases, the passenger was quarantined, monitored and conducted the necessary tests according to the medical requirements and procedures of the World Health Organisation in such cases.

Mixed messages



Management

- Decided to implement Primary Screening procedures on exit for all African destinations
- Undertaking by Check- In staff
 - Non- touch temperature checks
 - Questionnaire
 - Passports checks for recent travel to high risk areas
 - If positive to any the medical certificate required
 - Procedures went live end Oct 2014





Challenges

- No requirement to undertake if the airport was undertaking the procedure
- EK procedure implemented in 12 stations,
- 6 pending stations
 - (HRE, CMN, KRT, TUN, SEZ & ADD).
- CMN seen as the highest risk



Passenger issues

- No cost incurred if flights changed
- Refusal for carriage if process is not completed
- No one has refused... ultimately
- Only 2 cases of a temp over 38 found in over 60000 pax assessed
- Allowed to fly the next day



Delays in information

- Despite Index case being announced in March
- International guidelines for cleaning staff and cabin announcements not forwarded until end October
- UPK suggestions also updated
- Still pending information on other equipment cleaning



Summary

- Airlines are commercial entities
- Principally to move pax, goods and services
- Airlines need to flexible and agile
- Risk assessments for management are different to those of medical professionals
- Consistent messages by people/ organisations with gravitas are key to support decisions
- Need all those involved to be part of the decision making process



Personal view

- All pax with a fever over 38 degrees should not be carried on board
- Exit screening for all pax similar to security checks
- This would negate a number of current issues and help with a consistent message for new outbreaks
- The message is simple
- This would be fair
- This would be consistent
- Whilst initially costly, the industry/ economics would be better protected long term



Thank you

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