

# Medical Support at Altitude, Why Bother?

**Corporate Jet Investor Asia 2019**

Remote Diagnostic Technologies

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# Hard facts



2.75 billion



passengers per year

44.000 in-flight



medical emergencies  
per year

1 in 604



flights per year

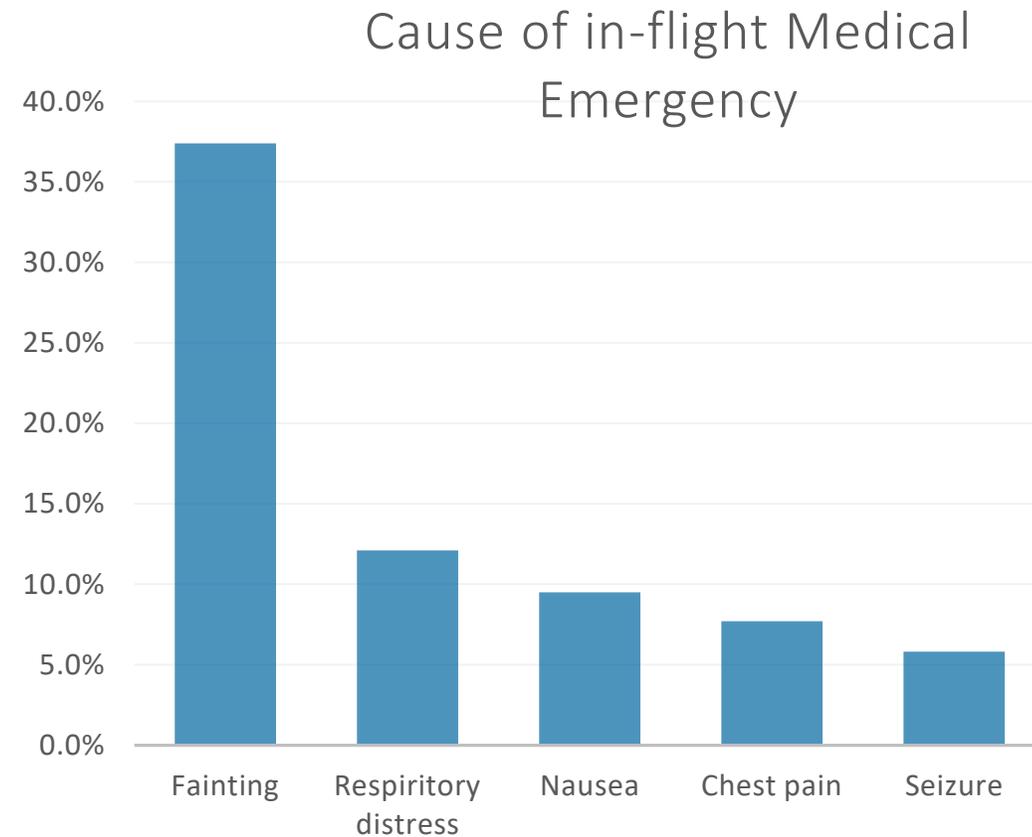


# Common in-flight medical issues

The top six chief complaints of passengers are:\*

- Fainting
- Respiratory distress
- Nausea
- Chest pain
- Seizure

\*May vary around the globe



# Which, Where and What?

- On **Which** flights will these medical incidents occur?
- **Where** will the aircraft be when they happen?
- **What** do the symptoms presented indicate?





# Managing an inflight medical incident

Management of an inflight medical incident will be affected by certain factors:

- The severity of the medical condition
- Prompt diagnosis to determine the above
- Informed medical assistance
- Available medication and medical equipment
- Ground resource guidance



# Time is the one thing you don't have in medical emergency



The Golden Hour and the difference between life and death – a patient's fate can be sealed within the first hour of a medical incident

- Accurate and prompt diagnosis can change outcomes
- Administration of the right medication at early stages can be important
- Providing the right level of care can be critical

These three things can impact recovery time and survival



Reasons not to bother

# Popular Arguments Against



## Age and Health



No need, no incidents to date



## Cost



# More Popular Arguments Against

I will just land the aircraft



We have a doctor on board



We don't fly very often



It just not a priority right now, maybe at some point in the future

# Annoying Facts



- Medical incidents happen to young and fit people
- Luck is not a reliable measure of probability
- Cost is not only measured in financial terms
- Unscheduled landings are not to be taken lightly
- Doctors are qualified to different levels of expertise
- Medical incidents can happen anywhere
- Hindsight is a wonderful thing, but it can never change something that has already happened





# Case Studies



## Case study One

- Large US Corporation
- Transatlantic Flight
- Medical incident, unresponsive passenger
- No Medical resource on board
- Successful Diversion and Landing
- 52 year old male deceased on arrival



## Case Study Two

- Client in the Medical arena
- Multiple aircraft with full medical resources on board (ground resource, Kits and Telemedicine)
- Corporate Doctors and passengers on board a long haul flight
- Doctors take charge when a medical situation presents itself and choose not to use the resources on the aircraft, preferring to make their own decisions
- Aircraft diverts and is met by a Golf Cart
- Passenger survives, but his speed of recovery is compromised as a result of the delay in receiving the right medication and treatment



## Case study Three

- Large US Communications Company
- Aircraft and Crew in the Hanger
- Crew member became suddenly unwell, citing dizziness as an initial symptom
- Fellow crew immediately used medical kits, including telemedicine connecting to remote doctors within seconds
- Patient was diagnosed remotely as a possible stroke victim, as a result of vital signs data
- The data provided the physicians at the medical centre to select not the nearest medical facility to the hanger, but the one most appropriate to the patients condition
- Doctors at the centre confirmed that the speed of diagnosis and transfer to their facility had made a significant difference to the potential outcome of her condition
- Patient made a full recovery and is determined to share her story as she feels that the outcomes would have been very different if she had been left to rely on regular EMS

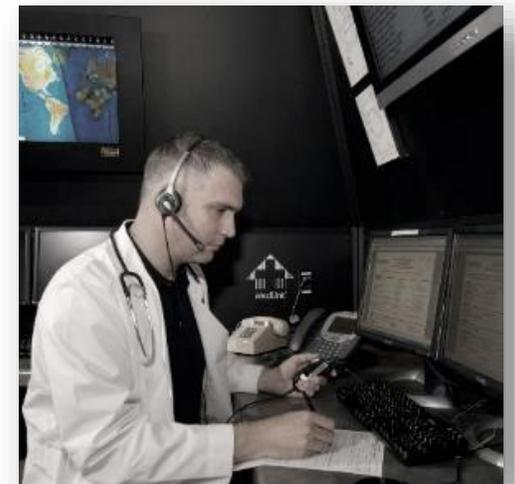


# Available Resources

# Ground Response



- Aviation Medicine trained Specialist Physicians
- 24/7 access air and ground
- Global reach
- Multiple language and cultural aspects supported
- Provision of data to assist pilots with the difficult decisions such as diverting the aircraft
- Assistance on arrival
- Crew support





# Medical Kits

- First Aid Kits – basic supplies and medication
- Emergency Medical Kit (EMK) – with prescription medication and advanced equipment
- Bespoke medical kits – built to specification and with individual requirements taken into consideration
- Automated External Defibrillator (AED) – critical in the case of a heart in fibrillation



# Telemedicine



- Improves communication of the situation generally – voice, data and imaging
- Increases effectiveness of doctors dealing with the incident – better information to make decisions
- Additional parameters – ECG, Capnometry provide detailed information for accurate diagnosis
- No room for error – live interactive communication (data shared on screen)
- Full audit trail





To bother, or not to bother?

# In Summary



- Medical incidents do and will occur, in the air and on the ground
- Age is not a limiting factor
- History is irrelevant
- Time is critical
- Landing the aircraft may not be enough
- There are many options available in terms of Medical Resources

And remember, hindsight can be a terrible thing





Thank you

