Are You Prepared for an In-Flight Medical Emergency?

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Medical Emergencies Happen Everyday

On average 29,000 in-flight medical events happen each year

- Beyond the possibility of in-flight emergencies, medical incidents happen while at the destination that can impact your return.
- Security incidents and natural disasters can also impact your mission, from overextended infrastructures in affected areas to threats to personal safety.
- Planning for many possible outcomes prepares you for the unexpected
  - Know the health history of your passengers/crew
  - Anticipate possible diversion points and research airports
    - Emergency response services
    - Nearby medical resources
    - Security threats (en route and on-the-ground)

SOURCE: MedAire MedLink In-Flight Data
YOUR LIFE IS A CYCLE

ORIGIN

DESTINATION
3 POINTS OF MEDICAL INTERVENTION

- ORIGIN
- PRE FLIGHT
- EN ROUTE
- DESTINATION
- AT DESTINATION
Question:

Have you ever had a medical issue for crew or passengers either In-flight or On-the-Ground (at destination)?

Answer:

a) Yes, In-flight
b) Yes, On-the-ground
c) Yes, both In-flight and On-the-ground
d) No, not yet
BUSINESS AVIATION IN-FLIGHT MEDICAL EVENTS

- Gastrointestinal: 22%
- Neurological: 13%
- ENT: 8%
- Cardiovascular: 6%
- Injury/External: 6%
- Respiratory: 6%
- Dermatological: 5%
- Infectious: 5%
- Musculo-skeletal: 4%
- Allergy: 4%
- Urological: 3%
- Dental: 2%
- All Other: 16%
BUSINESS AVIATION IN-FLIGHT MEDICAL EVENTS

WHEN DO THEY OCCUR

- Within the **first 25%** of flight time
- **less than 2500 miles** from origin
- **33%** of calls are from domestic flights
Question:

Gastrointestinal complaints are one of the major concerns flight crew members experience in-flight.

Answer:

a) True
b) False
FLIGHT CREW IN-FLIGHT MEDICAL EVENTS

- Gastrointestinal: 37%
- Neurological: 17%
- Urological: 6%
- External: 6%
- ENT: 5%
- Dental: 5%
- Ophthalmological: 4%
- Trauma: 3%
- Musculo-skeletal: 3%
- Infectious: 3%
- Allergy: 3%
- All Other: 8%

Level Of Impairment:
- None: 0.26
- Mild: 0.2
- Moderate: 0.26
- Severe: 0.46
When a medical event impacts your mission

Pilot death at destination on international mission

• Greg Kulis, Pilot | LBrands
Question:

Drowning causes more deaths to U.S. travelers than Vehicle Accidents when out of the country?

a) True
b) False
## Causes of Death While Traveling

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>Vehicle Accident</td>
<td>3410</td>
</tr>
<tr>
<td>Homicide</td>
<td>2187</td>
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<tr>
<td>Suicide</td>
<td>1668</td>
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<tr>
<td>Drowning</td>
<td>1515</td>
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<tr>
<td>Other Accident</td>
<td>1470</td>
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<tr>
<td>Terrorist Action</td>
<td>358</td>
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<tr>
<td>Air Accident</td>
<td>349</td>
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<tr>
<td>Drug-Related</td>
<td>299</td>
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<tr>
<td>Disaster</td>
<td>166</td>
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<tr>
<td>Maritime Accident</td>
<td>127</td>
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<tr>
<td>Natural Disaster</td>
<td>38</td>
</tr>
<tr>
<td>Hostage Related</td>
<td>20</td>
</tr>
</tbody>
</table>

U.S. Department of State, Data from October 2002 to December 2016
Unscheduled Landings
Not only a logistical nightmare

• Medical events are not the only cause of diversion (i.e. Technical problems, weather issues, etc.)

• Before diverting, do you know:
  – Emergency Services support at diversion point?
  – Security concerns in the region near the airport, on the ground vs. overflight?
  – Entry and departure policies of the destination country?
When your passenger is ill, finding a medical facility or medical assistance is paramount.

What if the nearest facility is in a dangerous region? What about the best facility?

- Does your flight plan include security information at possible diversion points?
- Does your diversion plan monitor the differences in threats based on altitude?

The closest option isn’t always the safest.
Flying in high-risk air space

The most direct route isn’t always the safest route

- What if the best facility requires flying or changing altitude over a dangerous region?
  - Does your diversion plan monitor the differences in threats based on altitude?
  - Can you provide a safe route around your threats while still providing emergent care for ill passengers and safe arrival of other passengers and crew?
Flying in high-risk air space

Venezuela

• 2013 - ‘Law on Control for Comprehensive Aerospace Defense (LCCAD)’ enacted to address ‘control and integral protection of airspace’, Since 2014, at least 13 civilian aircraft have been downed under the LCCAD.

• This underlines the need to obtain proper flight clearances prior to take-off and adhere to flight plans on routine operations.

04 November 2014: Venezuelan Air Force Shoots Down Trespassing Plane
Diverting while flying domestically

Familiarity with a region does not equal an understanding of the security environment

• What happens if a security incident impacts your destination?
  – Major Incidents can cause mass transit diversions, putting strain on smaller airports and local infrastructures
What to expect from ground based support

Whether Medical and/or Security assistance, what should you expect from a provider

- Review your checklist
- Ask the tough questions
- Don’t hesitate to ask for an action plan to a complicated scenario
- Don’t let the first time you contact your ground-based support happen during an emergency
Before a trip, the following actions could help to reduce medical & security risk management:

1) Research destination
2) Plan for emergencies before a trip
3) Train/practice for emergency situations
4) Understand available resources
5) All of the above
In conclusion

You can avoid diversion and interruptions to your missions

- Prepare for all possible outcomes – research and plan
- Train regularly to ensure you can respond – practice drills
- Rely on the support of ground-based assistance and other resources to help when the incident goes beyond your capabilities.
Questions?

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- Rely on the support of ground-based assistance to help when the incident goes beyond your capabilities.