

Aspectos de incapacitación del piloto en vuelo

**MedAire**
An International SOS Company

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EXPERT CARE, **EVERYWHERE.**

Declaración de conflicto de interés

- Paulo M. Alves es un empleado de MedAire, empresa proveedora de servicios de apoyo médico en suelo
- Opiniones expresadas son personales y no necesariamente reflejan la opinión de MedAire o International SOS

Introduction

- 5.4% of MedLink (In-flight) cases concerned operating crewmembers
- Percentages vary from airline to airline to a maximum of 13.8%
- 2.1% were pilots and 97.9% were cabin crew

The Spectrum of Pilot Incapacitation



Fit for duty

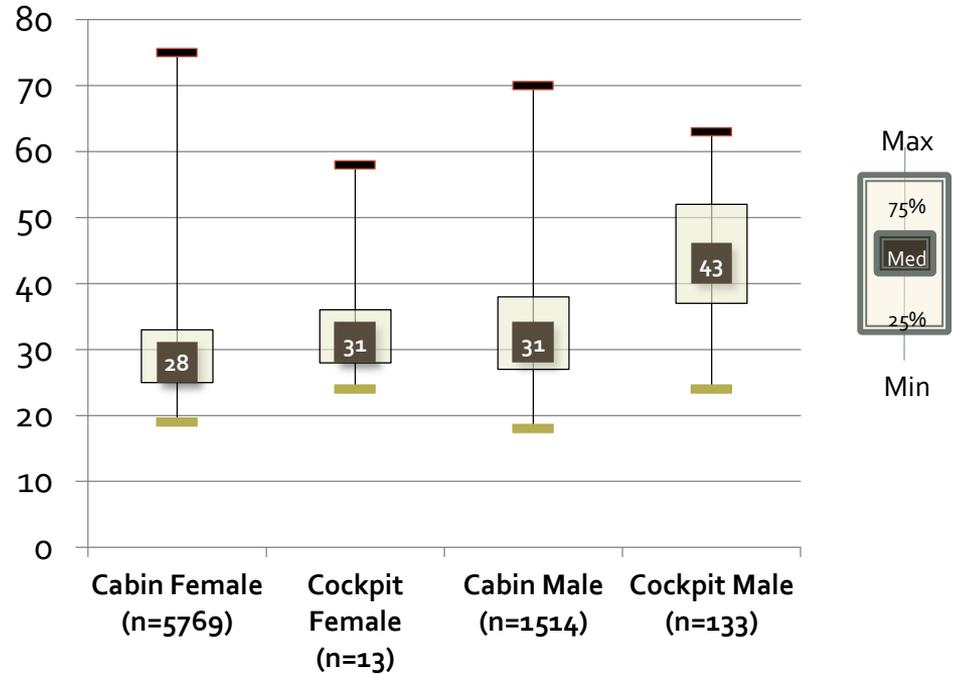
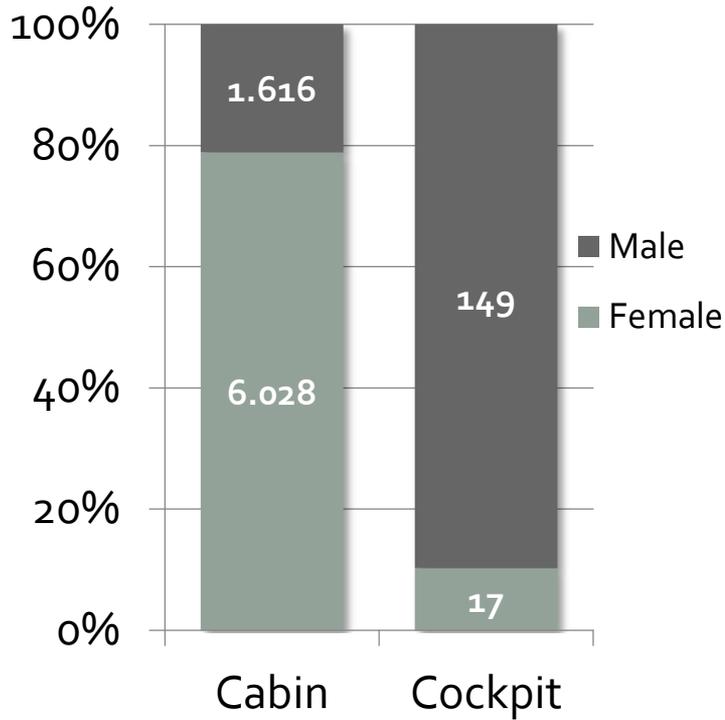
Impaired

Incapacitated

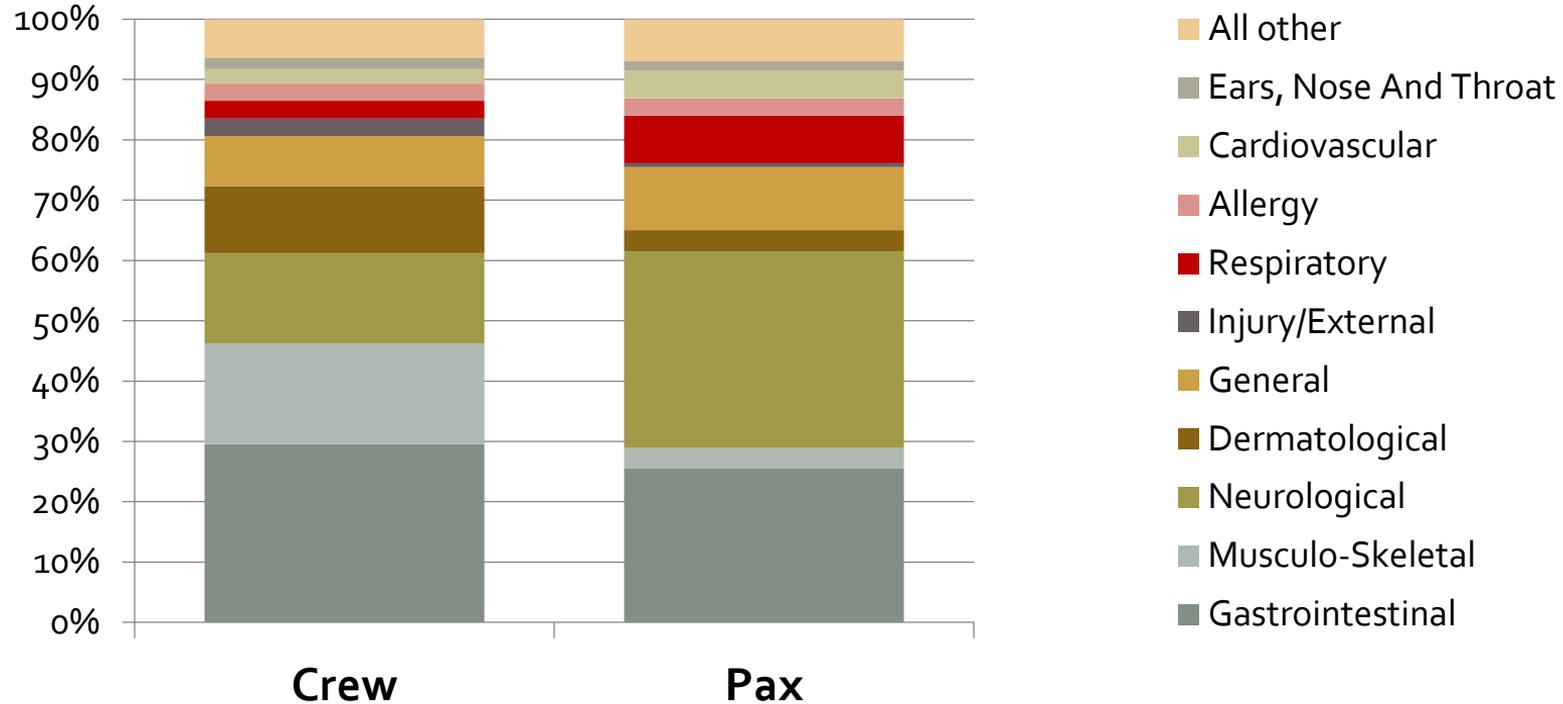
Questions

- What is the nature of the in-flight events?
- What is the operational impact?
- What is the best approach from overall safety standpoint?
 - Medicate?
 - Any additional concerns?
 - Divert?

Gender and Age



Diagnostic categories – Crews versus Pax



Diversions:

All crews versus passengers

	Diverted	Not-diverted	Total
Crew	109	7329	7438
Row%	1.47%	98.53%	100.00%
Pax	1943	129,144	131,087
Row%	1.48%	98.52%	100%
Total	2052	136,473	138,525
Row%	1.48%	98.52%	100.00%

- OR: $0.81 < 0.99 < 1.20$
- Fisher exact: $p=0.8$

Diversions: Cockpit versus Cabin Crew

	Diverted	Not-diverted	Total
Cockpit	20	148	168
Row%	11.9%	88.10%	100.00%
Cabin	102	7713	7815
Row%	1.31%	98.69%	100%
Total	122	7861	7983
Row%	1.53%	98.47%	100.00%

- OR: 6.16 < 10.22 < 16.95
- Fisher exact: p<0.001

Pilots Medicated and Flight Haul

	Medicated	Not-Medicated	Total
Short	1	3	4
Row%	25%	75%	100.00%
Medium	14	23	37
Row%	37.8%	62.16%	100.00%
Long	104	64	168
Row%	61.9%	38.1%	100.00%

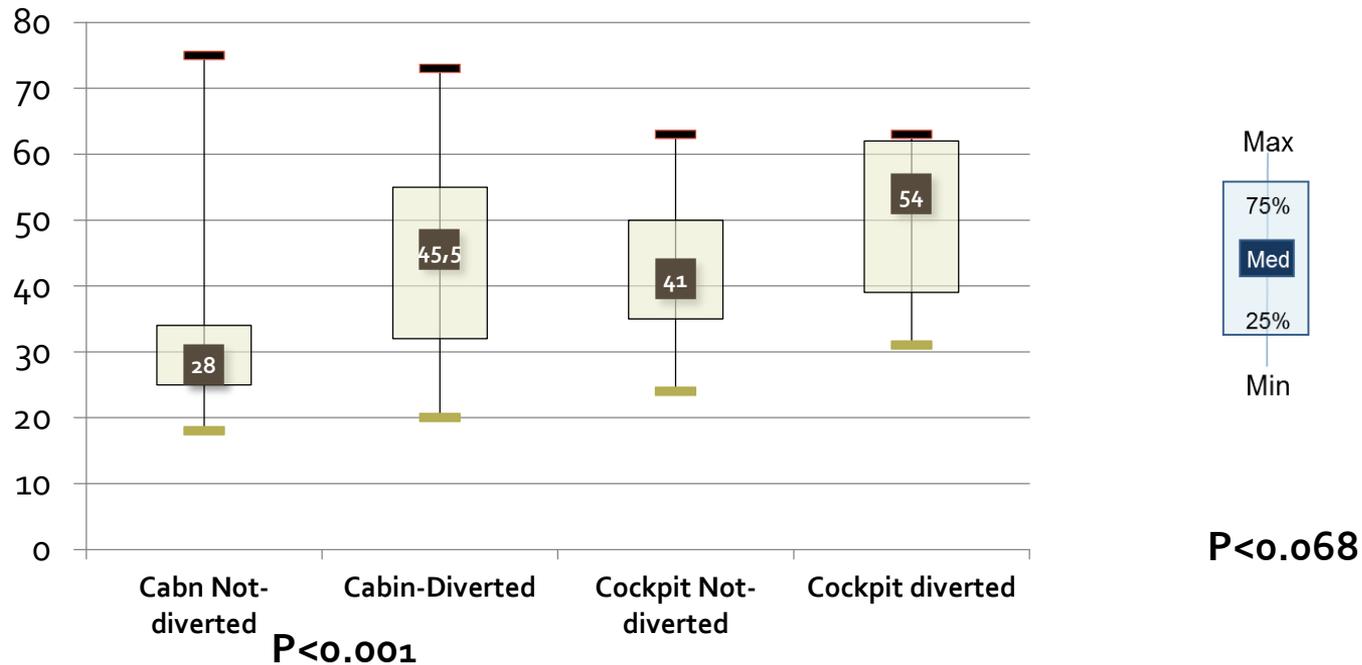
- X^2 p=0.0007

Diversions versus Medication

	Diverted	Not-diverted	Total
Medicated	8	96	104
Row%	7.69%	92.31%	100.00%
Not-medicated	12	52	64
Row%	18.75%	81.25%	100%
Total	20	148	168
Row%	11.90%	88.10%	100.00%

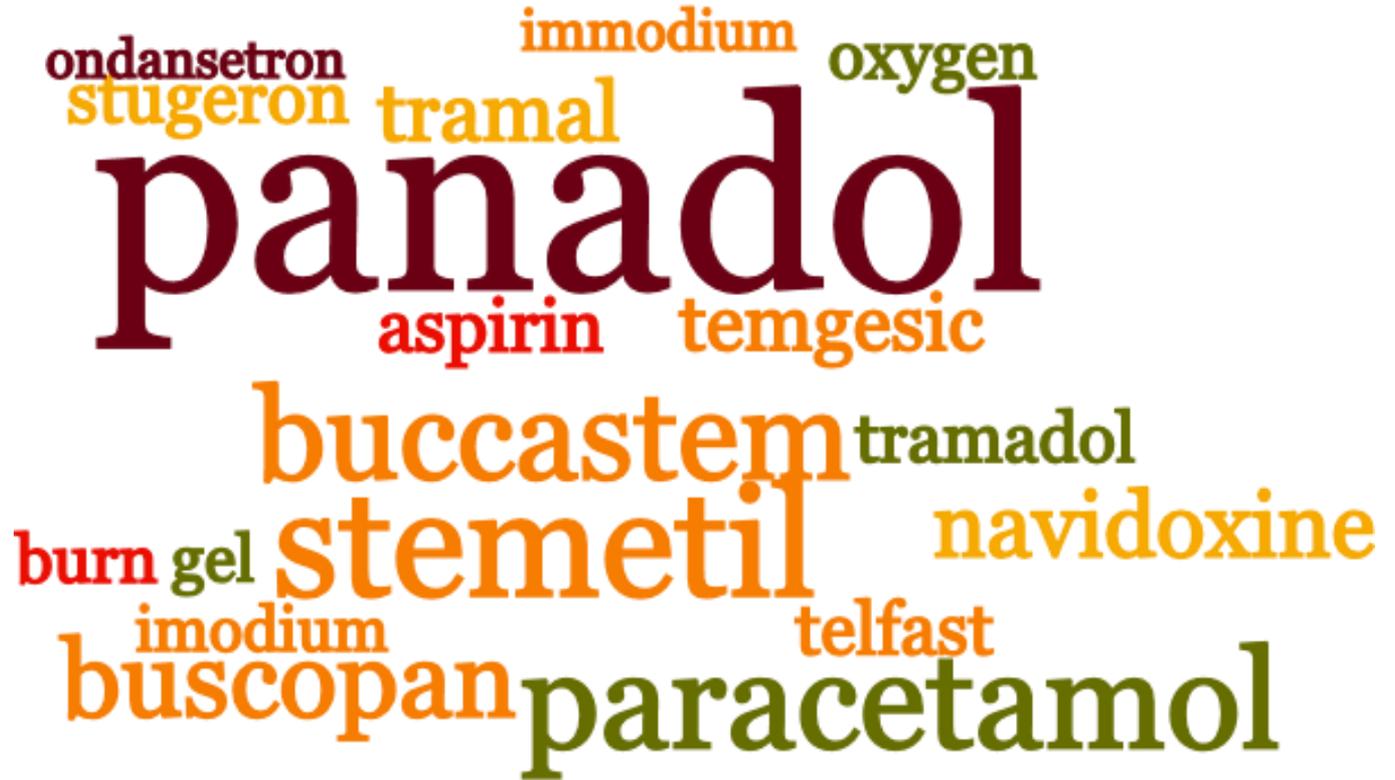
- OR: $1.06 < 2.77 < 7.02$
- Fisher exact: $p=0.047$

Diversions and Crew Age



Medication Recommended (Taken)

Cabin Crew

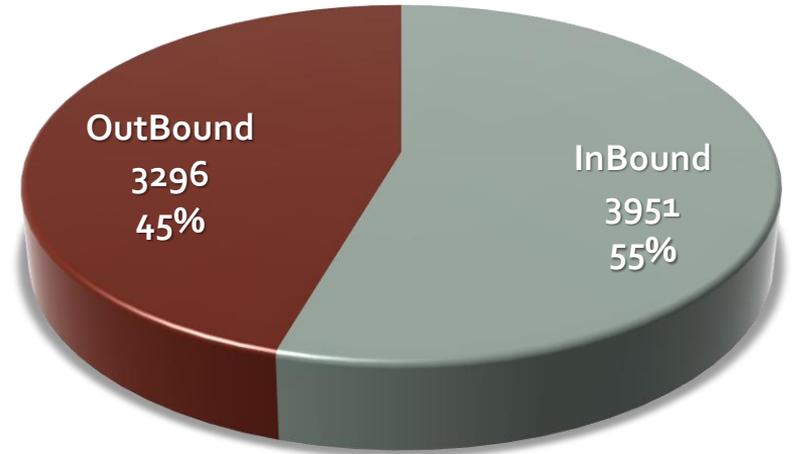
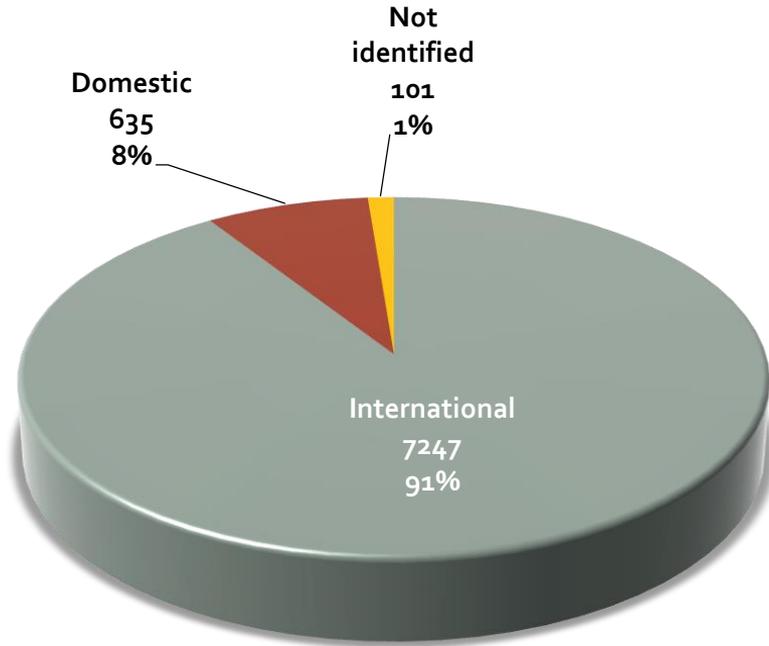


Medication Recommended (Taken)

Pilots

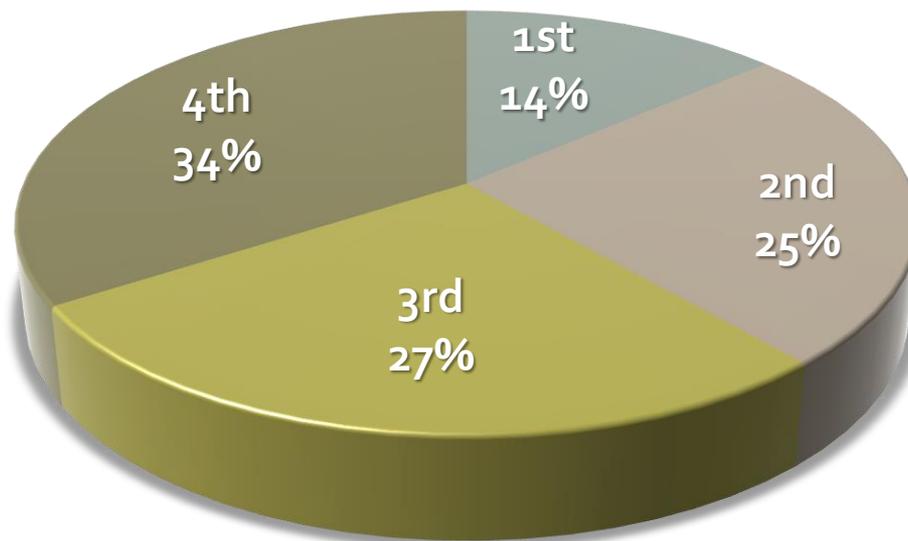


Operational Profile – All Crew



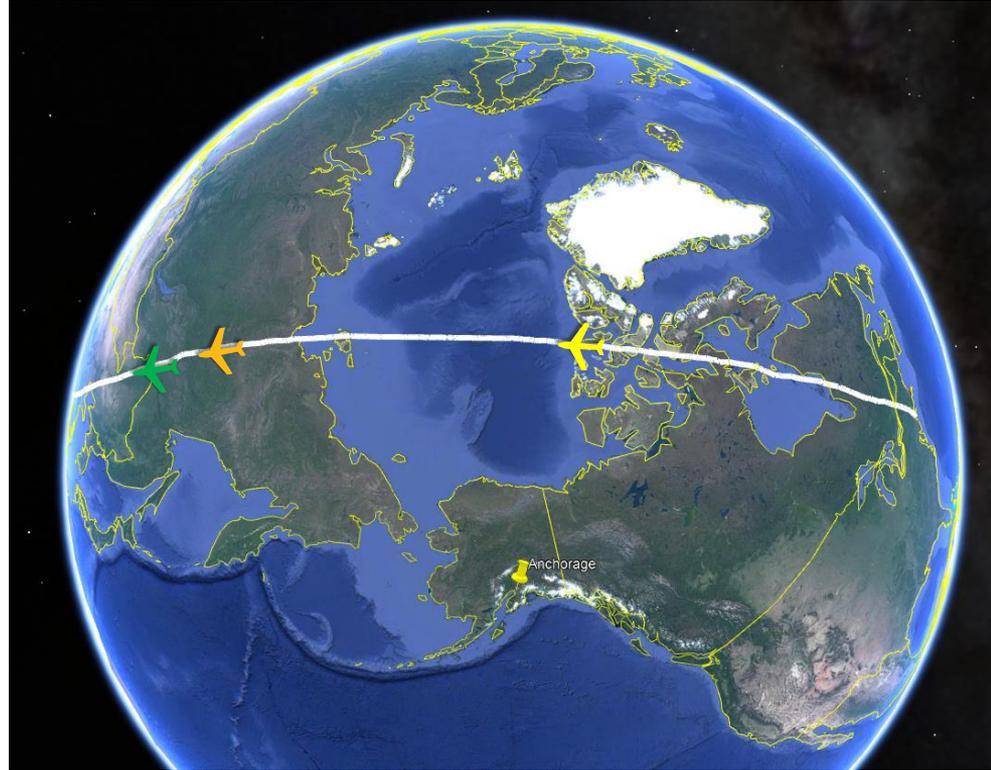
Flight Duration Quartile

Pilot cases 2017/2018 – Long-Haul Only

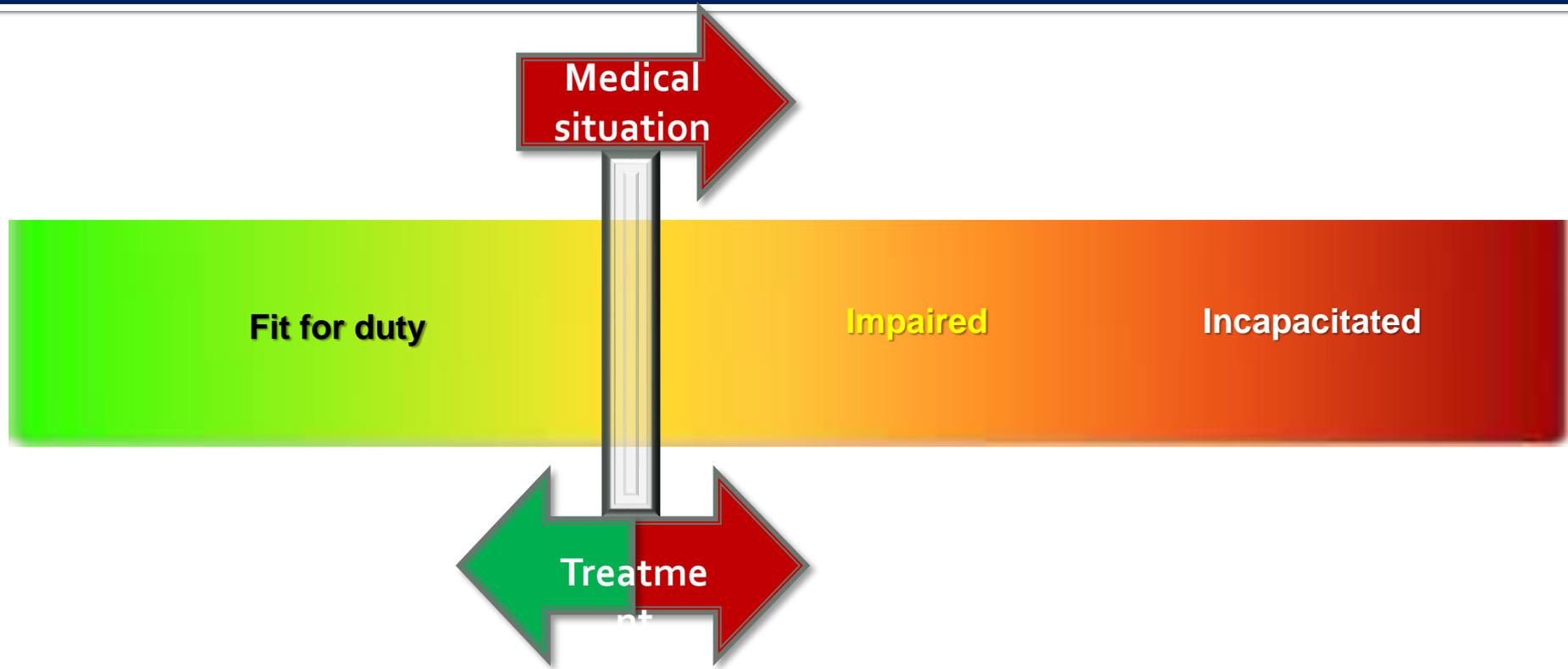


Case Study – Slightly adapted from a real case

- East coast US to Southeast Asia – 14.5 hours
- 55 years old male pilot
- Past Hx of kidney stones – thinks it is different now
- Took Panadol – Tramadol recommended
- PA for medical personnel



Elements of a fit to operate decision



CRM Perspective

Aviate (Fly)
Navigate

Communicate



CRM Perspective – PIC Impairment

Talk to
doctor

Aviate
Navigate
Communicate



Conclusions

- IFMEs affecting crews are not infrequent
- GI issues are number 1 for crews
- Suspected stroke were the leading cause for diversions for crew cases and are also a frequent one for pax
- Crews had significantly more injury-related cases and less neurological cases
- Diversion rates are not different for cases affecting crews and pax overall

Food for Thought

- Most cases were acute in nature, not amenable to be capture during routine medicals
- Very complex CRM scenario
- Altered dynamics
- Loft scenarios?
- Should MedLink actively engage the pilot flying?



Gracias!!