Fatigue: The Silent Safety Epidemic

Wednesday, October 17, 2018
9:15 a.m. - 10:00 a.m.

Flight Attendant/Flight Technician Safety Sub-Committee of the NBAA Safety Committee
Would your entire crew be ready to respond?

Sources: Skybrary (2018)
Fatigue as Causation in Mishaps

• 1993 American International Airways 808 first accident citing fatigue as causal
• East Coast Jet 81 (2008), Total Corp (2014), Cleveland/Lake Erie (2016)
• 15% - 20% of accidents caused by fatigue (NASA)
• 88% of accidents fatigue is contributing (NTSB)
• FAR 117 (2014)

Sources: enter sources here
Fatigue defined

Sources: Åkerstadt, Connor, Gray & Kecklund, 2008
Effects of Fatigue

Sources: Banks & Dinges (2007)
Fatigue Clearly Defined

Sources: The Economist (December 8, 2016)
Is fatigue a concern in business aviation?

Sources: Rosekind (2000), Wollmuth (2017)
Is fatigue a concern in business aviation?

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When it occurs, how serious of a concern is fatigue?

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When it occurs, how serious of a concern is fatigue?

Pilots

- Serious: 65%
- Moderate: 31%
- Minor: 4%

FA/FT

- Serious: 62%
- Moderate: 33%
- Minor: 5%

Sources: Rosekind (2000), Wollmuth (2017)
Polling Questions 1 & 2

Fatigue Management Issues

1. Does your company have a fatigue management (crew duty) program that is published?
   a) Yes
   b) No

2. Are all crew members included in your fatigue management program?
   a) Pilots only
   b) Pilots and cabin crew
   c) Pilots and cabin crew and maintenance team
   d) No fatigue management plan in place
Shift in Aircraft Utilization

Time zones crossed per flight

Rosekind

0-3: 94%
4-6: 4%
6+: 2%

NBAA

0-3: 74%
4-6: 16%
6+: 10%

Sources: Rosekind (2000), Wollmuth (2017)
Shift in Aircraft Utilization

Time zones crossed per flight

Sources: Rosekind (2000), Wollmuth (2017)
Report times

Sources: Rosekind (2000), Wollmuth (2017)
Report times

Pilots
- 0000-0359: 12%
- 0400-0759: 11%
- 0800-1159: 10%
- 1200-1559: 10%
- 1600-1959: 25%
- 2000-2359: 32%

FA/FT
- 0000-0359: 17%
- 0400-0759: 14%
- 0800-1159: 16%
- 1200-1559: 12%
- 1600-1959: 13%
- 2000-2359: 10%

Sources: Rosekind (2000), Wollmuth (2017)
Polling Questions 3 & 4

Fatigue Management Issues

3. Does your fatigue management apply only to
   a) Prep, Flight time and post flight of the aircraft
   b) First time showing up for work until time you depart for rest.
   c) Limited time allowed for pre and post flight of aircraft.

4. How much preflight time is allotted in your fatigue management plan?
   a) One hour
   b) Two hours
   c) Three hours
   d) Crew duty starts when you arrive on site.
Alcohol use as a sleep aide

Sources: Rosekind (2000), Wollmuth (2017)
Alcohol use as a sleep aide

Pilots

- never: 80%
- rarely: 9%
- sometimes: 7%
- often: 3%
- very often: 1%

FA/FT

- never: 70%
- rarely: 9%
- often: 11%
- sometimes: 9%
- very often: 1%

Sources: Rosekind (2000), Wollmuth (2017)
Medication use as a sleep aide

Sources: Rosekind (2000), Wollmuth (2017)
Medication use as a sleep aide

Sources: Rosekind (2000), Wollmuth (2017)
Polling Questions 5 & 6

Fatigue Management Issues

5. How much post flight time is allotted in your fatigue management plan?
   a) One hour
   b) Two hours
   c) Three hours
   d) No limit on post flight time allotted.

6. Are you in favor of Controlled Rest in the Flight Deck (CRIF)?
   a) Yes
   b) No
   c) Undecided
Fatigue Related Facts

- Mean age up from 45.2 to 49.6
- Commute times are up from 33 to 64 minutes
- Airline as method of commute up from 1% to 7.5%
- Increase in use of sleep aides/health supplements
- Perceived efficacy increase of sleep aides
- Sleep quality down from 89% to 68%
- Average sleep increased by 24 minutes
- FDA level devices that measure fatigue still non-existent

The Paradox of Knowledge

Knowledge that does not change behavior is useless. But knowledge that changes behavior, quickly become irrelevant.

Sources: Yuval Noah Harrari (2016)
A Thesis
Submitted to the Graduate Faculty
of the
University of North Dakota
in partial fulfillment of the requirements
for the degree of
Master of Science

Grand Forks, North Dakota
June
2017
Karen Hall

Flight Attendant

Flight Attendant perspective on fatigue.
Creighton Anderson
Flight Tech
Abbvie US LLC

Flight Tech perspective on fatigue.