

*AVIATION FATIGUE MANAGEMENT SYMPOSIUM:
PARTNERSHIPS FOR SOLUTIONS*

“Air Traffic Control and Tech Operations”



Aviation Fatigue
Management
Symposium:
Partnerships
for Solutions
June 17-19, 2008

*Presented by
Federal Aviation
Administration*

**Shiftwork:
Air Traffic Control and
Technical Operations**



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Shiftwork: Air Traffic Control and Technical Operations

Issues – ATC versus Tech Ops

- There are differences between scheduling practices. We looked at some Tech Ops schedules to understand some of the differences. There was extensive discussion around these and other issues. (Examples: Types of shifts; Number of hours allowed per day)
- There is a difference between the schedule and the shifts that are actually worked.

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Objective 1: Major fatigue challenges and drivers in Shiftwork

- **Staffing and Position Management, including but not limited to:**
 - Insufficient Staffing (both ATC and Tech Ops)
 - Too Much Time on Position [ATC] (mostly on afternoon shift/thunderstorms; then come back/swing shift; cumulative effect)
 - Too Much Time on Task [Tech Ops] (coupled with reduction of proficiency) [UK has data]
 - Last Minute Schedule Changes
 - Shift Start/Stop Times
 - Too Much Overtime Required
 - Staff to traffic doesn't take into account circadian rhythms
 - Poor sector resource management

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Objective 1: Major fatigue challenges and drivers in Shiftwork (con't)

- **Scheduling Policies and Practices,
including but not limited to:**
 - Call Backs
 - No breaks
 - Access to Leave
 - Individual Input to Schedule
 - Lack of Flexibility of Schedules
 - Shift swapping [managers and employees]
 - Overtime (10 hour days/6 day weeks)
 - Relief Periods

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Objective 1: Major fatigue challenges and drivers in Shiftwork (con't)

- **Scheduling Policies and Practices,
including but not limited to: (con't)**
 - Overtime Volunteer Procedures
 - Accounting for Individual Differences in Scheduling
 - Last Minute Schedule Changes
 - Shift Start/Stop Times
 - 24/7/365 Facilities
 - No negotiations of schedules
 - Unpredictability of schedule [see what railroads have done]

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Objective 1: Major fatigue challenges and drivers in Shiftwork (con't)

- **Personal/Individual Fatigue Management, including but not limited to:**
 - Age
 - Domestic Situation (New born, etc.)

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Objective 1: Major fatigue challenges and drivers in Shiftwork (con't)

- **Current Cultures, including but not limited to:**
 - Rigid HR Policies
 - Lack of Ratified Contract (relates to staffing)
 - LR Conflicts/Stress
 - Conflicting Agency Goals (Safety v. Efficiency)

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Objective 1: Major fatigue challenges and drivers in Shiftwork (con't)

- Ability to Nap/Lack of Ability to Nap
- Quiet Rooms
- OJTI (on the job training instruction)

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Objective 1: Major fatigue challenges and drivers in Shiftwork (con't)

- Fatigue at end of shift and driving home
- Fatigue from Working Bad Weather
- Larger Geographic Areas to Work (more time behind the wheel)

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Objective 2: Major current and historical barriers to fatigue mitigation in Shiftwork

- The mission has to get done
- Insufficient staffing (at some facilities)
- FAA Policy: Not allowed to have “distractions” in operating quarters (i.e., book, listen to radio)
- FAA Policy: Not allowed to nap
- No place to rest (in some facilities)

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Objective 2: Major current and historical barriers to fatigue mitigation in Shiftwork (con't)

- Barriers to straight shifts—not maintaining operational proficiency
- Awareness of fatigue in self and others
- Trust (Just Culture)
- Economics

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Objective 3: List major fatigue mitigation concepts and opportunities

- **Strategic Napping/Rest (including closing one's eyes)**
 - Short term: Change/remove wording in applicable orders and regulations
 - Interpretation on agency side about rest during breaks (i.e., break is not part of assigned duty time)
 - Build in breaks to schedules
 - Mid-term/Long term: Formal program for strategic napping and/or providing napping facilities written policy
 - Address the legality and
 - Address issue of sleep inertia

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Objective 3: List major fatigue mitigation concepts and opportunities (con't)

- **Address Length of Time Off Between Shifts**
 - Short Term: Evaluate options to identify minimum time between shifts of work week; Use a computer tool that includes FAST or similar; must demonstrate inclusion of science to determine evaluation approach
 - Mid-Term/Long Term: Increase the length of time off in between the shifts

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Objective 3: List major fatigue mitigation concepts and opportunities (con't)

- **Initiate FRMS**

- (Policy; steering group; Education & Train; Monitoring Outcomes; Education; Alertness mgt.; Scheduling)
- Need a technology initiative to develop assessments of schedules (automated tools; beyond SAFE to incorporate traffic levels)
- Need full participation of all stakeholders (mgt.; unions; fatigue experts as technical experts; FAA medical; NTSB; etc.) at very beginning so that everybody is at the table
- Conduct pilot study at higher risk facility for AT and TO

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Objective 3: List major fatigue mitigation concepts and opportunities (con't)

- **Awareness**

- Public awareness about fatigue (ease acceptability); also get a public advocates
- Access to health care for sleep disorders
- Survey Current Environment for Baseline
- Survey of Retired/-Resigned ATCS
- Do a study concerning workload and recovery periods
- Individual differences

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Objective 3: List major fatigue mitigation concepts and opportunities (con't)

- **Scheduling**
 - Build breaks into Schedule (Tech Ops)
 - Having People/Staffing on Call
 - Not be disciplined for calling in fatigued
- **Use of Fatigue Modeling**
- **Add fatigue into ASAP/ATSAP**

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Contentious Issues

- **Labor - Management Relationships**
- **Staffing Levels**

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Concluding Remarks

- There was high level of interaction between the discussion group participants.
- Participants gained an understanding of the complexities involved in developing and implementing fatigue mitigation strategies

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Concluding Remarks (con't)

- There are commonalities but many differences between ATC and Tech Ops fatigue mitigation strategies
- Recognition that there are differences between individual facilities

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