

*AVIATION FATIGUE MANAGEMENT SYMPOSIUM:
PARTNERSHIPS FOR SOLUTIONS*

“Maintenance, Ramp Operations and Dispatch”



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

*Presented by
Federal Aviation
Administration*

Maintenance, Ramp Operations and Dispatch

The statements in this report reflect discussions among symposium participants and do not reflect the official position of the Federal Aviation Administration.



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Maintenance, Ramp Operations and Dispatch

This discussion group was comprised of dynamic industry experts from maintenance, ramp operations and dispatch to:

- **Establish major fatigue challenges and drivers**
- **Identify the barriers**
- **Identify fatigue mitigation strategies**

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- “Risk factors” are always present
- Combination of risk factors – not just a lack of sleep – adds to fatigue
- Physiology of fatigue is the same – but the challenges and drivers for maintenance, ramp, and dispatch are different

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Maintenance, Ramp Operations and Dispatch

- Regulations and SMS
 - Tues Vs. Wed
 - TC & Nav Canada
- Fatigue makes you funny
- The AV Guy



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Major Fatigue Challenges and Drivers in Maintenance, Ramp, and Dispatch

- Inadequate sleep
 - Sleep disorders, interrupted sleep, circadian rhythm de-synchronization, poor sleep hygiene
- Modified work schedules
 - Flight mechanics, field trips
- Outside employment
 - Working two or more jobs

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Major Fatigue Challenges and Drivers in Maintenance, Ramp, and Dispatch

- Excessive overtime or shift swaps
 - Repetitive shifts; overtime by choice or demand
- Personal health and quality of life issues
 - Poor eating habits; lack of exercise; drugs, alcohol, tobacco use; OTC medications; outside stressors

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Major Fatigue Challenges and Drivers in Maintenance, Ramp, and Dispatch

- **Productivity Pressures**
 - Individual and corporate financial considerations
 - Performance evaluations
 - Mismatch of number of required employees to assign workload
 - High intensity periods
 - Operational demands such as to weather issues, delayed flights, and inadequate staffing (sometimes for an entire shift)
 - Smaller operations with only one dispatchers (unable to leave post)

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Major Fatigue Challenges and Drivers in Maintenance, Ramp, and Dispatch

- Repetitive and tedious tasks
 - Back shop inspection tasks
- Nutrition and hydration choices at work
 - Selections for high sugars, caffeine
- Commuting
 - Station closures, reductions in force, driving long distances, mercy of public transportation, cost of living

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Major Fatigue Challenges and Drivers in Maintenance, Ramp, and Dispatch

- Environments / equipment / tools
 - Hot/cold, snow, sleet, rain, poor lighting, poor ergonomics, vibration, confined spaces
 - Changing technologies (NextGen)
- Employee – management relationship (lack of trust)
 - Lack of a “just culture”

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Major Fatigue Challenges and Drivers in Maintenance, Ramp, and Dispatch

Individual	Organizational
Attain adequate sleep	Provide science-based rest periods
Professionalism/ code of conduct	Organizational safety culture
Self reporting / self analysis	Workload and staffing
Fiscal responsibility	Fiscal responsibility

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Barriers





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Major Barriers to Fatigue Mitigation in Maintenance, Ramp, and Dispatch

- Performance based fatigue measurements
- Top leadership commitment to effectively execute the program
- Lack of two-way feedback
- Research results are not communicated or implemented

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Major Barriers to Fatigue Mitigation in Maintenance, Ramp, and Dispatch

- Research information is not easily translated for industry use
- Lack of human factors and fatigue training; lack of recurrent / sustainable training
- Lack of self-awareness of fatigue effects

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Major Barriers to Fatigue Mitigation in Maintenance, Ramp, and Dispatch

- Lack of transition from awareness to behavior change
- Lack of audits
- Lack of self-reporting programs
- Lack of tools to capture fatigue as a contributing factor
- Interpretation of the CFRs

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Mitigation





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Major Fatigue Mitigation Concepts and Opportunities - Individual

- Establish personal minimums regarding maximum work hours
- Consider professional help in case of sleep disorders
- Participate in wellness and nutrition programs

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Major Fatigue Mitigation Concepts and Opportunities - Individual

- Seek duplicate inspection when fatigued or working longer hours
- Educate family members



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Major Fatigue Mitigation Concepts and Opportunities - Organization

- Develop a professional code of conduct
 - Labor unions, employee associations, professional organizations (PAMA, SAE)
- Develop corporate standards for workload and staffing
- Provide human factors awareness training
- Promote a “just culture”
 - Non-punitive fatigue reporting program
 - Measurement tools for effectiveness

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Major Fatigue Mitigation Concepts and Opportunities - Organization

- Audit to identify planned versus actual hours worked and differences in errors by shift
- Establish organizational standards regarding maximum work hours
- Adopt appropriate best practices from other professions

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Major Fatigue Mitigation Concepts and Opportunities - Organization

- Consider a napping or break policy
 - No “mechanic rest seat”
 - No regulatory dispatcher relief policy
- Offer wellness and nutrition programs
- Discuss fatigue-induced events in recurrent training

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Major Fatigue Mitigation Concepts and Opportunities - Organization

- Educate people to recognize the onset of fatigue and take appropriate countermeasures
 - Self and others
- Consider schedule boring and repetitive tasks during day shifts
- Demonstrate top leadership commitment to effectively execute the FRM program

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Major Fatigue Mitigation Concepts and Opportunities - FAA

- Consider fatigue risk management guidelines for maintenance, ramp, and dispatch
 - Reflect on potential fatigue mitigation guidance for 8900.1
 - Contemplate FAA fatigue risk assessment guidelines
- Think about updating current and future advisory material to include FRM

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Concluding Remarks

- Encouraging shift from regulatory enforcement - to SMS implementation
- Clear message regarding Roles and responsibilities
 - Individual
 - Organizational
 - FAA
- Importance of a “just culture”
- Everyone is a stakeholder in effective fatigue management and mitigation

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