Pilot Fitness for Duty Assessments - Closing Pandora’s Box

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BASS May 13, 2015
OVERVIEW

► What is the Challenge?
► How To Recognize Problems
► Barriers to Evaluation
► Findings to Date
► Strategy – Minimize Risk – Maximize Safety
What Is The Challenge?

The “Failing” Aviator

• CRM Challenge
• Reliability Question
• Efficiency / Productivity Drain
• Personnel Dilemma – HR / Legal / AD / CP
• Pre-Employment Selection
• SAFETY HAZARD !!!
Why Are We Talking?

- Long Standing Universal Dilemma
- Lack of Guidance
- NBAA Safety Committee Priority 2014 - 17
- NTSB Ten Most Wanted – 2015
- Safe Efficient Reliable Operations
- Recent Events
## Concerns about Fellow Pilot

- **Yes dealt with effectively**: 35.3% (53 responses)
- **Yes dealt with by ignoring**: 10.7% (53 responses)
- **Yes - handled with difficulty**: 25.7% (53 responses)
- **Yes still don't know how to handle**: 14.5% (53 responses)
- **Not sure**: 7.6% (53 responses)
- **No all pilots are safe and effective crew members**: 7.6% (53 responses)

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Absence of Guidance

No Standardized Evaluation System

➤ Little FAA Oversight after Initial Certs/Ratings
➤ PRIA documents non-specific
➤ ASAP / FOQA data deidentified
➤ FAA Medical certificate limited value
➤ Training Vendors Philosophies / Limitations
➤ Military / Airline models not used
NTSB MOST WANTED LIST
OF TRANSPORTATION SAFETY IMPROVEMENTS 2015
CRITICAL CHANGES NEEDED TO REDUCE TRANSPORTATION ACCIDENTS AND SAVE LIVES
REQUIRE MEDICAL FITNESS FOR DUTY

www.ntsb.gov/mostwanted
NTSB Ten Most Wanted - 2015

• Fitness For Duty
  – Medical
  – Psychological
  – Cognitive

• End Substance Impairment in Transportation
  – OTC’s
  – Prescription
  – Illicit and Alcohol
Sleep Apnea

- BMI > 40 → referral for eval
- AME still issues medical certificate
- Eval by private MD or sleep MD
- 90 days to comply & notify FAA
- Home sleep studies allowed
- Evidence of effectiveness / compliance

Usage 75% of days, > 6 hrs/day, pilots w/ 2 CPAPs

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Eliminate Substance Impairment in Transportation

- NTSB SS 14/01 - “Drug Use Trends in Aviation – Assessing the Risk of Pilot Impairment”
  - 1990 - 2012 fatal accidents – toxicology results
  - Did not evaluate Alcohol
  - OTC, Prescription and illicit drugs, overlap
  - Societal trends increasing use
NTSB SS 14/01 Findings

Percentage of Study Pilots With Positive Findings for Potentially Impairing Drugs and Conditions, and Controlled Substances, 1990-2012

- Potentially Impairing Drugs
- Drugs Indicating Potentially Impairing Condition
- Controlled Substances
- Impairing meds/conditions – 10% → 40%
- 10% diphenhydramine (Benadryl)
- Marijuana use increasing
- Older pilots have more impairing conditions
- Younger pilots use more illicit drugs
- Pilots w/o medicals had higher rates
- Lack of medication info / education
NTSB SS 14/01 Findings

Percentage of Study Pilots With Positive Toxicology Findings by Age Group, 1990-2012

- 40 and under: (n = 1,692)
- +40 to 50: (n = 1,617)
- +50 to 60: (n = 1,653)
- Over 60: (n = 1,660)

Age Group Quartiles

- All Drugs
- Drugs Indicating Potentially Impairing Condition
- Potentially Impairing Drugs
- Controlled Substances
- Illicit
Recent History

- Airline Pilot Contracts
- FAA Policies – SSRI’s, OSA, Substance Abuse
- NBAA Safety Committee
  - Fatigue Working Group
  - Fitness For Duty WG
- NTSB Ten Most Wanted
- Germanwings Event
Identifying the Problem

In the Aircraft

- FMS Programming Errors
- Checklist Omissions
- Altitude Deviations
- SOP Non-Compliance
- Missed Radio Calls / Clearances
- Requests for Physical Assistance
Identifying the Problem

In the Flight Department

- Training Problems
- Do Not Pair Requests
- Frequent Sick Leave Use
- Repeated Fatigue Calls
- Emphasizing Outside Troubles
- Suspected Impairment
How Did FFD Problems Show?

- Other pilots taking up the slack/covering for the pilot: 18%
- Non-compliance with company SOPs: 16%
- Attitude/interactions with fellow crew/ground: 14%
- Loss of situational awareness: 12%
- Apparent medical illness: 10%
- Multiple FAR or procedure deviations: 8%
- Apparent frequent fatigue: 6%
- Training problems/failures: 4%
- Attitude/interactions with: 2%
- Apparent physical compromise: 2%
- Drug or alcohol problems: 0%
Assessing the Failing Aviator

- What Triggers Initiating Action?
- How Should the Evaluation Progress?
- What Expertise Is Required?
- Will It Be Fair? Comprehensive?
- What Are Potential Outcomes?
- Company / Individual Liabilities?
Barriers to Evaluation - Cockpit

- Protection of Fellow Pilots / Friends
- Potential Loss of Career / Income
- “Not That Serious – I Can Cover”
- Meeting Operational Demands
Barriers to Evaluation - Cockpit

- Denial – Personal or Other Pilots
- FAA Medical Certification Fears
- Fear to get Involved
- Rationalization “Just having a Rough Spell”
Evaluation Barriers - Management

• Aviation Department Leadership
  • Operational Demands
  • Not in SMS
• No FAA Guidance
• Internal Medical Staff / AME Not Trained
• Absence of 3rd Party Evaluator
  • Independent & Knowledgeable
Evaluation Barriers - Management

• Legal
  • Age Discrimination Suit
  • Privacy Concerns
  • Not in Pilot Contract

• Human Resources
  • No Written Policy / Procedure
  • Lack of Insurance Coverage for Evals
  • Lack of Disability / LOL Insurance
Aviation Department FFD Policy?

50 Responses

- Yes - standardized and consistent: 10%
- Yes ad hoc depending on circumstances: 30%
- Yes Tolerance: 0%
- Yes Termination: 0%
- No: 50%
- Don't have a Clue: 10%
Why Evaluate?

Critical Threat & Safety Risk!

Aviation Department

• National Airspace System
• Cockpit Workload
• Puts Principals at Risk
• Reputation

Pilot – Personal Health

• Physical / Psychological / Cognitive Well Being
• Treatable Medical Condition
Why Evaluate?

SAFETY!!! SAFETY!!! SAFETY!!!

• Staffing Decisions

• Training Effectiveness / CRM

• Improved Health / Longevity

• Career Protection

• Financial Protection
  – Pilot – Insurance Disability
  – Company – Maximize Resources – Minimize Liability
Fitness For Duty Evaluations

Fundamental Assumptions

• Experienced & Previously Well-Performing Professional Aviators Do Not Have a Decline in Skills and Function Without an Explainable, and Potentially Treatable Reason.

• Assessments Can Identify Pilots Who Can be Safely Returned to the Cockpit with Treatment and Identify Those Who Cannot Safely Fly.
Fitness For Duty Evaluations

• Professional Pilots
• 40+ pilots evaluated to date
• Age a risk, but not exclusively
• Common theme – Cognitive impairment
• 1/3 each – Medical / Psychological / Cognitive
• ~ 70% treated → returned to flying safely
• Some voluntarily retire
Fitness For Duty Evaluations

Age Cohort

- < 45
- 45 - 49
- 50 - 54
- 55 - 59
- 60 - 64
- 65 - 69
- 70+
Antidepressant Medications

FAA Policy Change

– April 2010

Celexa, Prozac, Zoloft, Lexapro

– > 6 months

– Extensive testing/documentation annually

– Psychiatrist visit quarterly

– Cognitive testing annually

– HIMS sponsor AME

– Very high hurdles

– coming down

– May add Wellbutrin to allowed medications

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Potential Causes – Medical

- Sleep Apnea / Sleep Disorders / Fatigue
- Medication Side Effects
- Heart / Lung Disease
- Endocrine – Diabetes, Thyroid
- Hearing / Vision Deterioration
- Acute Medical Conditions
- Neurological Disease
- Anemia / Heavy Metal Poisoning
Fitness For Duty

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Potential Causes – Psychological

- Life Events (Family, Legal, $$, Work)
- Post-Traumatic Stress Disorder – PTSD
- Depression
- Substance Abuse
- Anxiety Disorders
- Personality Traits
- Loss of Desire to Fly / Work
FAA Mental Health Policy

• Counseling Encouraged
  – EAP, Clergy, CIRP – Not Reportable
  – Family / Marital counseling Not Reportable*

• Depression / Anxiety Reportable
  – No medications / Off meds 2 mo.
  – Pilot / Counselor Agree OK

• April 2010 – 4 SSRI’s Allowed
  – Testing and Monitoring
  – Single Dose/Single medication – 6 months
Evaluation Limitations

- Absence of Medical Records
- Heavily Reliant on Individual Responses
- Validation Questions
- Identifies Traits
- Generally Not Predictive
- Historical / Future Factors
- Depression / Substance Abuse Questionnaires
Germanwings Event

- History of Depression 2009 and subsequent
- Treated w/ Meds & Psychotherapy
- FAA Required Info 2010
- Minimized On-going Rx
- EASA DQ’s Medications
- FAA / TC Allow Meds / Talk
- Counselors – Report vs. Privacy/Effectiveness
- Social Stigma / Financial Impact ➔ Conceal
Potential Causes - Cognitive

- Mild Cognitive Impairment – Reversible
- Alzheimer’s / Dementia
- Surgery
- Substance Dependence
- Brain Injury / Bleed / Tumor
- Impairing Medications
- Most Treatable / Cognitive Rehab
Aging Pilots Fitness For Duty

Mean Score +/- 2 Standard Deviations of 24 Neurocognitive Abilities as a Function of Age

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Fitness For Duty Solutions

- Ethical – Fair to All
- Optimizes Health
- Reduces Liability
- Reduces Costs
- Integral to SMS

- **ENHANCES SAFETY!**
Key Elements - Company

- Leadership – Understanding and Support
- Process – Clearly Defined with Timeline
- Legal – Negligible Liability Profile – 3rd party
- HR – Regular Comm, Adequate Pilot Benefits
- Aviation Director – Pilot Availability Estimate
  - Honest, accurate, timely info
- SAFETY PROGRAM – Principals, Pilots, Public
Key Elements - Pilots

- Confidentiality / Dignity / Respect
- Benefits Protection – Disability, Loss of License
- Evaluation
  - Comprehensive for Health
  - Aeromedical Context & Expertise
  - Update on Progress Routinely
- FAA Medical Certification Advocacy
- Safety → Health → Career
Closing Pandora’s Box

• Ethical Program – Unlike Status Quo
• Policy Emphasis, Not Regulatory
• Financial Protections for All
• Return to Optimum Health
• Graceful Exit, if Necessary
• Safety Priority – Balances Many Factors
Fly Safely! Stay Healthy!

→ Fitness For Duty Plan
   → Enhances Safety
   → Optimizes Health
   → Preserves Careers
   → Reduces Risks