



Losing the Right Stuff ! Pilot Fitness for Duty A Review

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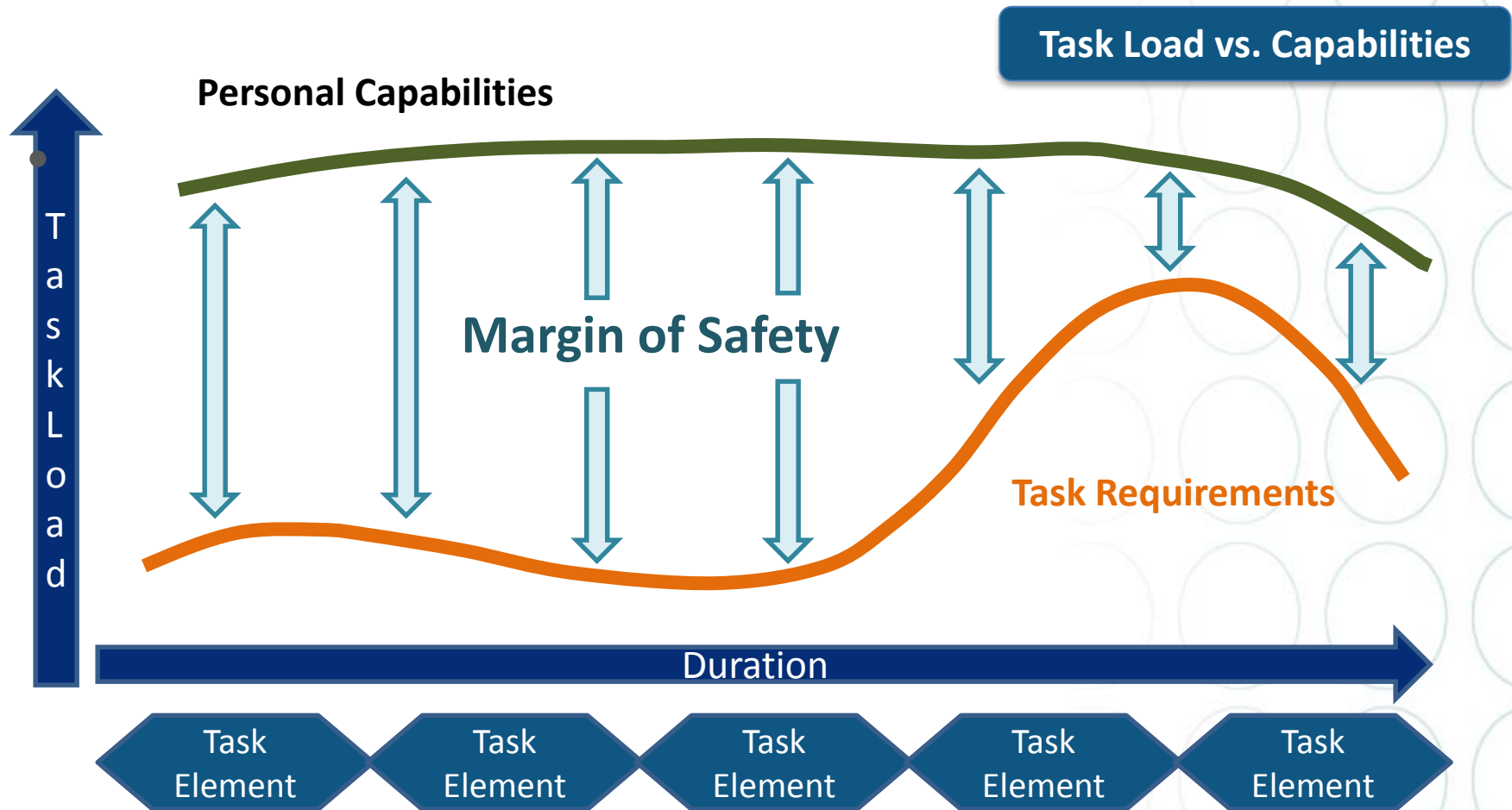
Aviation Medicine Advisory Service

Business Aviation Safety Standdown

May 5, 2016

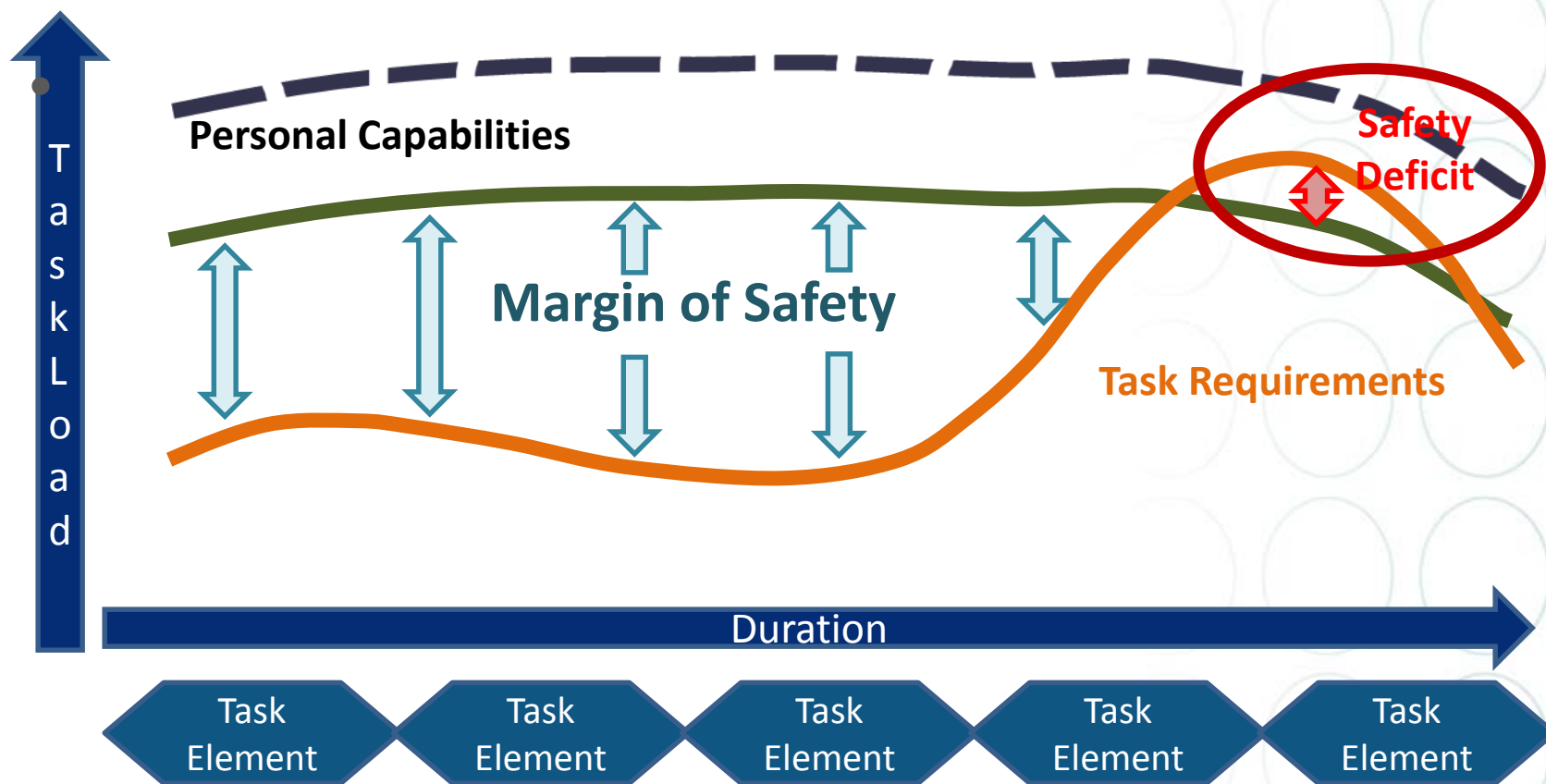


Task Load vs. Capabilities





Task Load vs. Capabilities





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
- SAFETY HAZARD !!!





What Is Fitness For Duty?

A person is *able to perform essential job functions* and is *not limited* because of:

- Physiological – Medical
- Cognitive
- Psychological and/or
- Psychiatric conditions



Not Just for Flight Crew!

Fitness for duty applies to pilots, maintenance technicians, flight attendants, dispatchers, and ground handlers.



However, my work to date has concentrated mainly on pilots and that is what I will present here.



What Is Fitness For Duty?



It is NOT an
On/Off Switch!



FFD is a Soft Threshold!

Anything we can do
to improve personal capabilities
is a positive step in
advancing safety.



Why Are We Talking?

- Long Standing Universal Dilemma
- Lack of Guidance
- NBAA Safety Committee Priority 2014 - 17
- NTSB Ten Most Wanted – 2015 - 2016
- Safe Efficient Reliable Operations
- Recent Events





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 evaluation 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



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NTSB MOST WANTED LIST

OF TRANSPORTATION SAFETY IMPROVEMENTS 2016

REQUIRE MEDICAL FITNESS FOR DUTY





NTSB Ten Most Wanted – 2015/6

- Fitness For Duty
 - Medical
 - Psychological
 - Cognitive
- End Substance Impairment in Transportation
 - OTC's
 - Prescription
 - Illicit and Alcohol



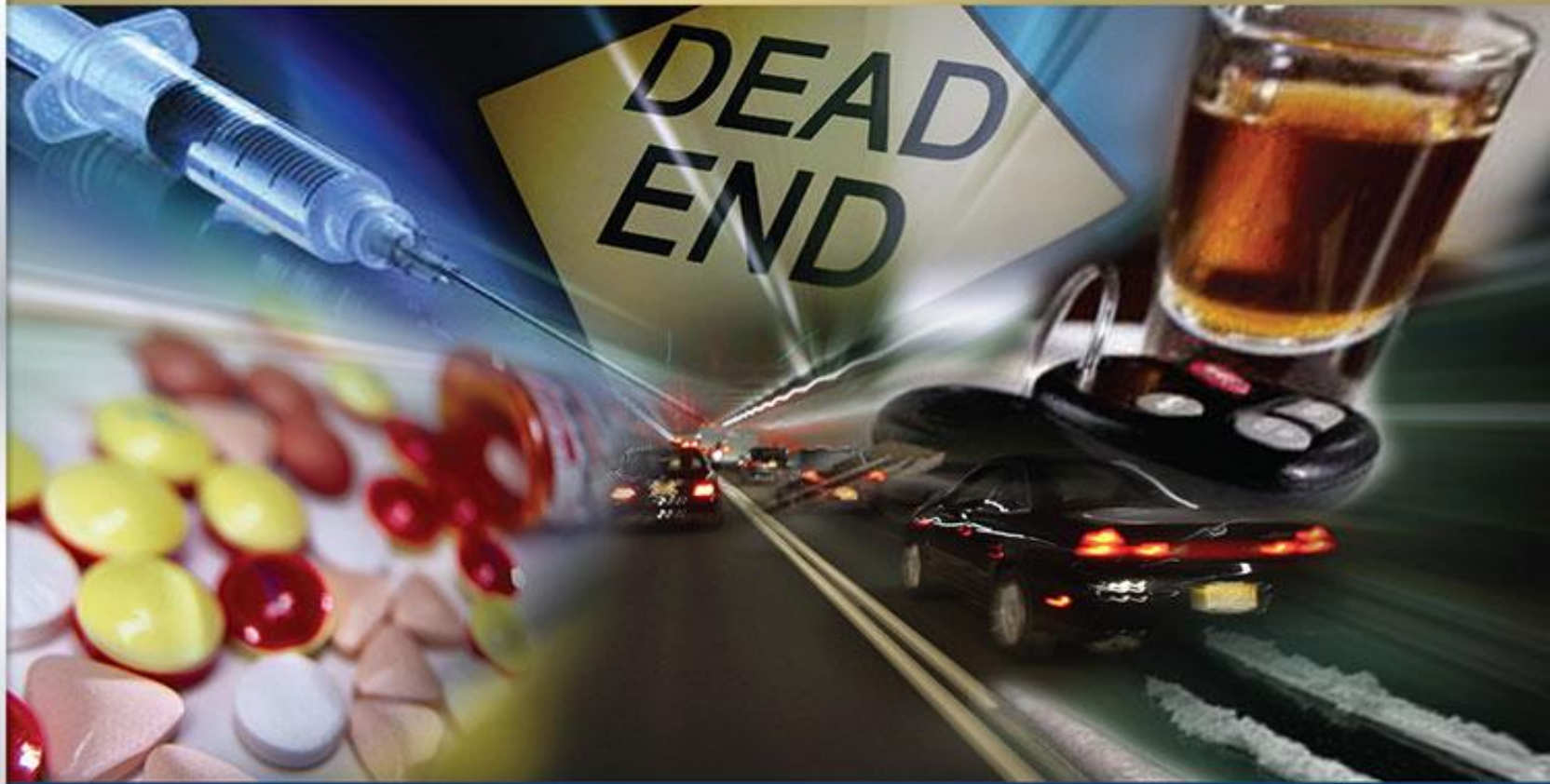
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NTSB MOST WANTED LIST OF TRANSPORTATION SAFETY IMPROVEMENTS 2015

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NTSB MOST WANTED LIST

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END SUBSTANCE IMPAIRMENT IN TRANSPORTATION





NTSB 10 Most Wanted

Eliminate Substance Impairment in Transportation

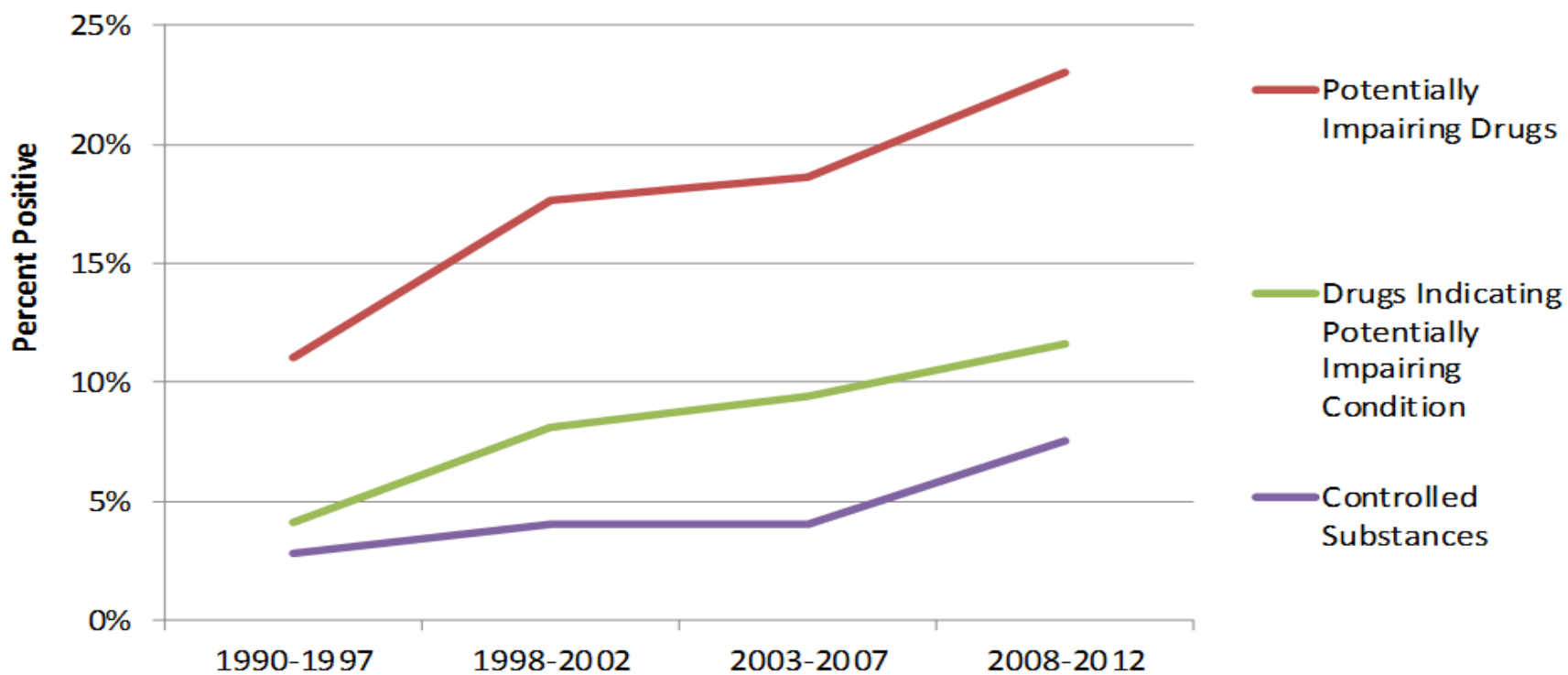
- NTSB SS 14/01 - “Drug Use Trends in Aviation – Assessing the Risk of Pilot Impairment”
 - 1990 - 2012 fatal accidents – toxicology results
 - Did not evaluate Alcohol
 - OTC, Prescription and illicit drugs, overlap
 - Societal trends increasing use





NTSB SS 14/01 Findings

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





NTSB SS 14/01 Findings

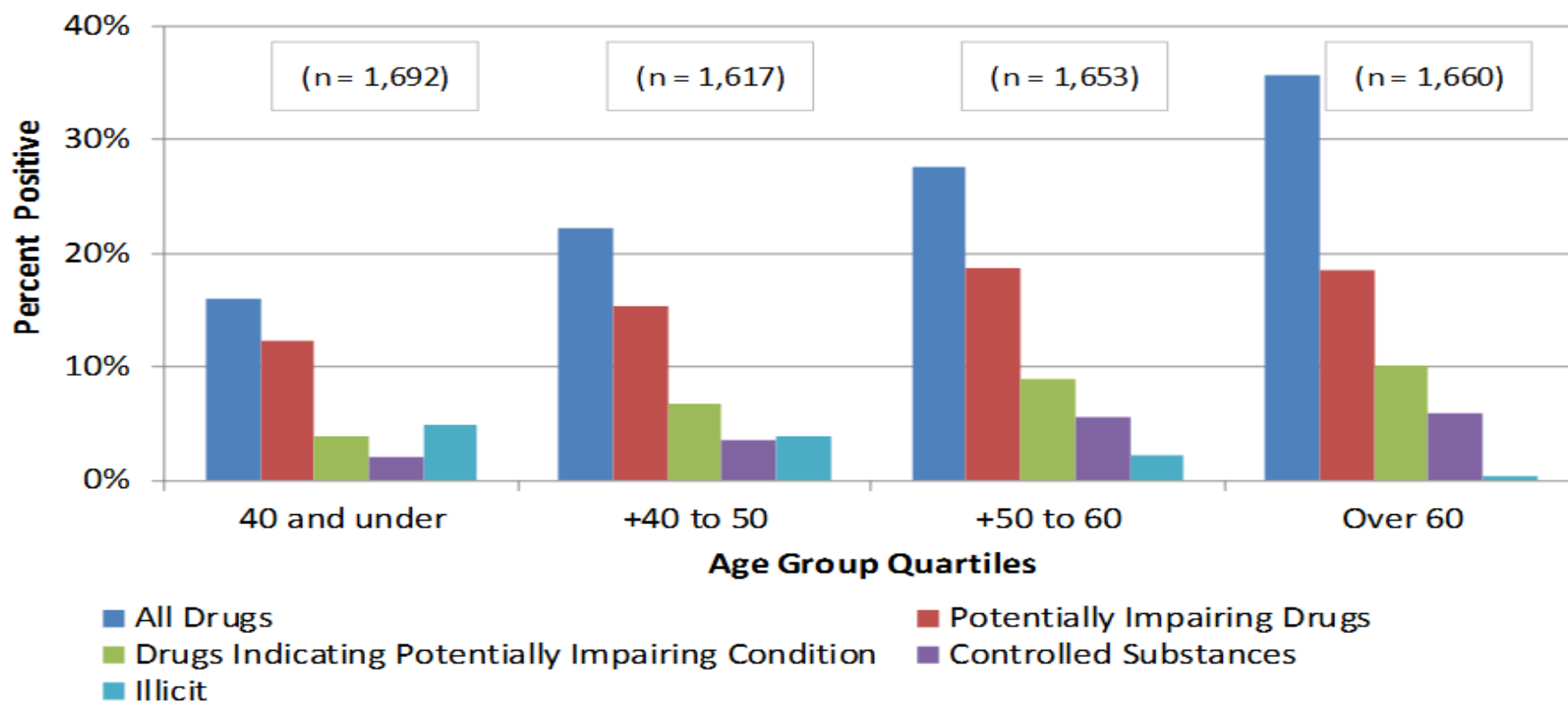
- Impairing meds/conditions – 17% → 40%
- 10% diphenhydramine (Benadryl)
- Marijuana use increasing
- Older pilots have more impairing conditions
- Older pilots use more Narcotics
- Younger pilots use more illicit drugs
- Pilots w/o medicals had higher rates
- Lack of medication info / education





NTSB SS 14/01 Findings

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





Recent History

- Airline Hiring Practices – FFD Programs
- FAA Policies – SSRI's, OSA, Substance Abuse
- FAA ARC – Pilot Fitness 2015
- 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





Assessing the Failing Aviator

- What Triggers Initiating Action?
- How Should the Evaluation Progress?
- What Expertise Is Required?
- Will It Be Fair? Comprehensive?
- 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 / IS-BAO
- No FAA Guidance
- Internal Medical Staff / AME Not Trained
- Absence of 3rd Party Evaluator/ Resources
 - 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





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

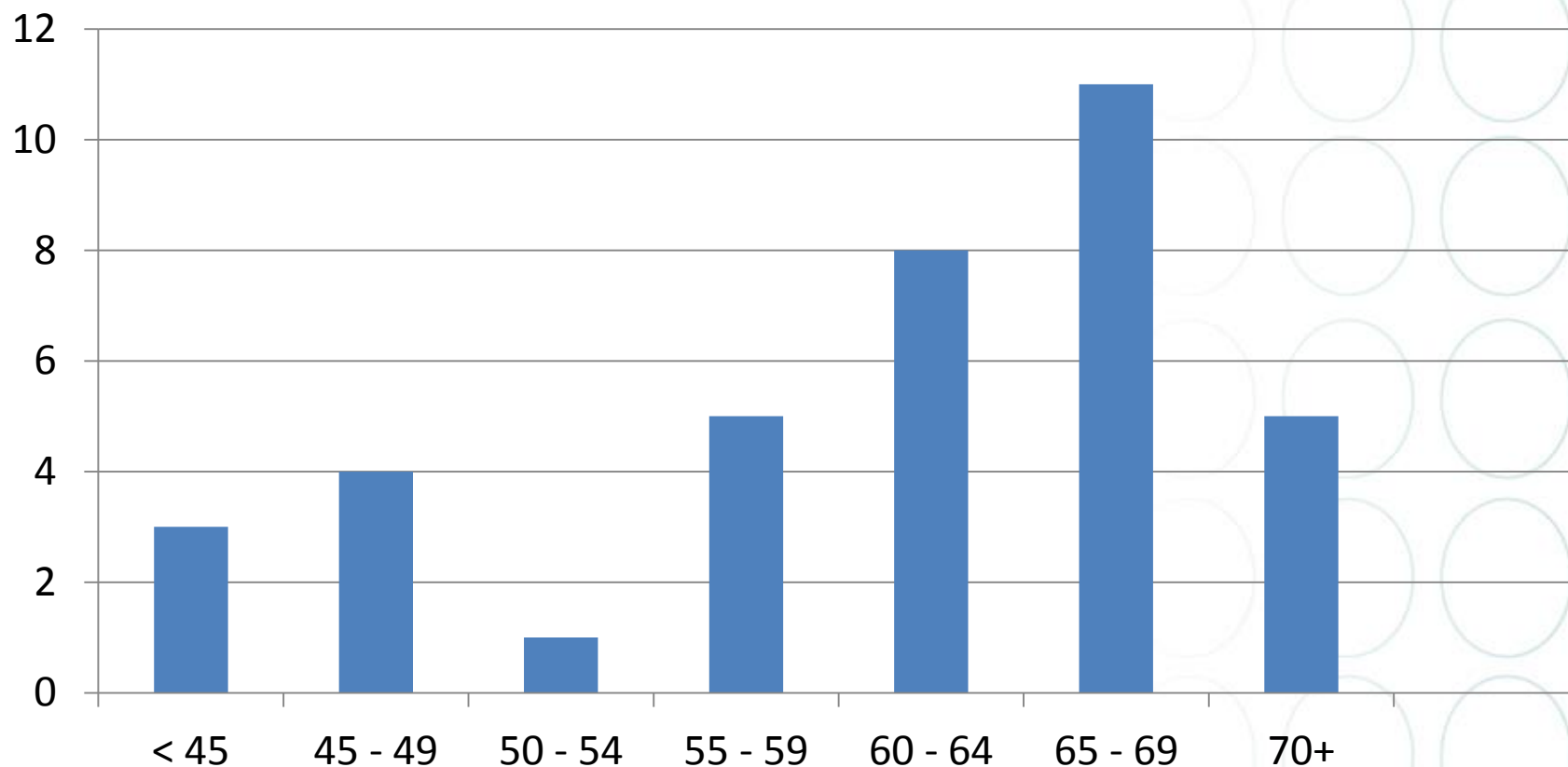
- Professional Pilots
- 48 pilots evaluated to date
- Age a risk, but not exclusively
- Common theme – Cognitive impairment
- 1/3 each – Medical / Psychological / Cognitive
- ~ 55% treated → returned to flying safely
- Some voluntarily retire - 25%, Perm DQ – 20%





Fitness For Duty Evaluations

Age Cohort







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







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





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





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





Potential Causes - Cognitive

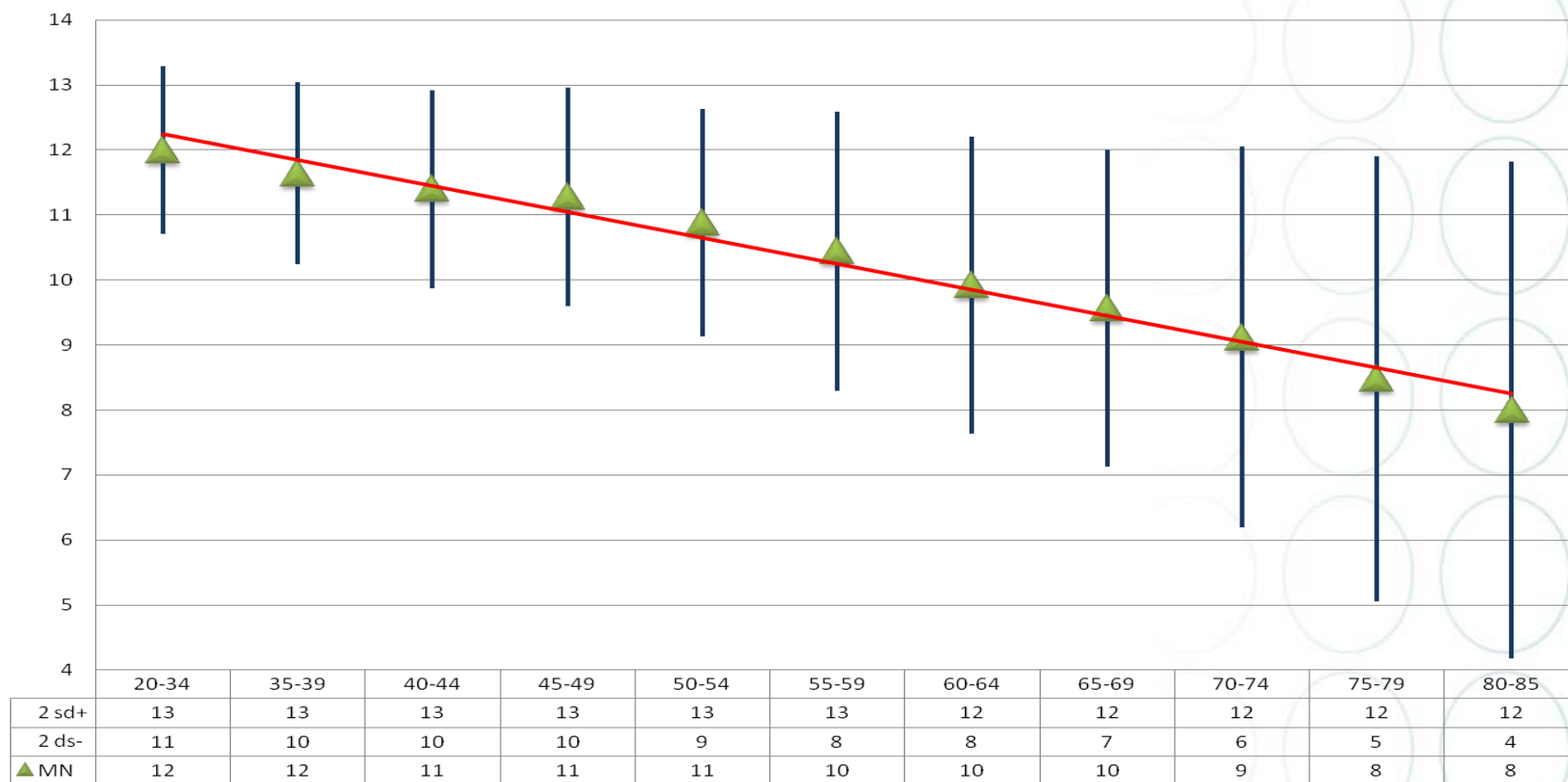
- Mild Cognitive Impairment – Reversible
- Impairing Medications
- Alzheimer's / Dementia
- Substance Dependence
- Surgery – Older Pilots
- Brain Injury / Bleed / Tumor
- **Most Treatable / Cognitive Rehab**





Aging Pilots Fitness For Duty

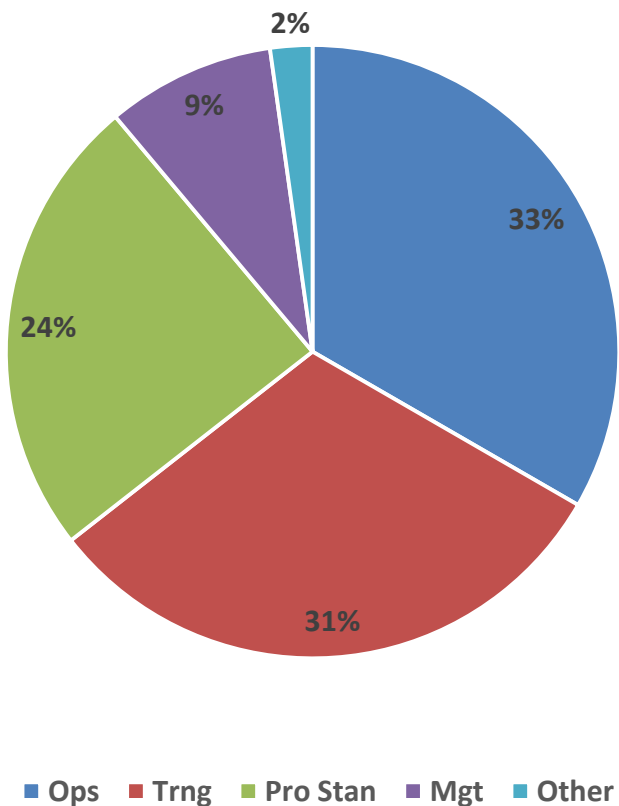
Mean Score +/- 2 Standard Deviations of 24 Neurocognitive Abilities as a Function of Age





Case Identification

Initial Sources of Challenge Identification



Observations

- Fellow crewmembers are critical partners in HR QA
- Training needs to be highly disciplined and an advocate for Safety. Should you send an unbiased observer to relieve the vendor from this responsibility?
- Management [9%] can not be the first line of assurance in HR QA.



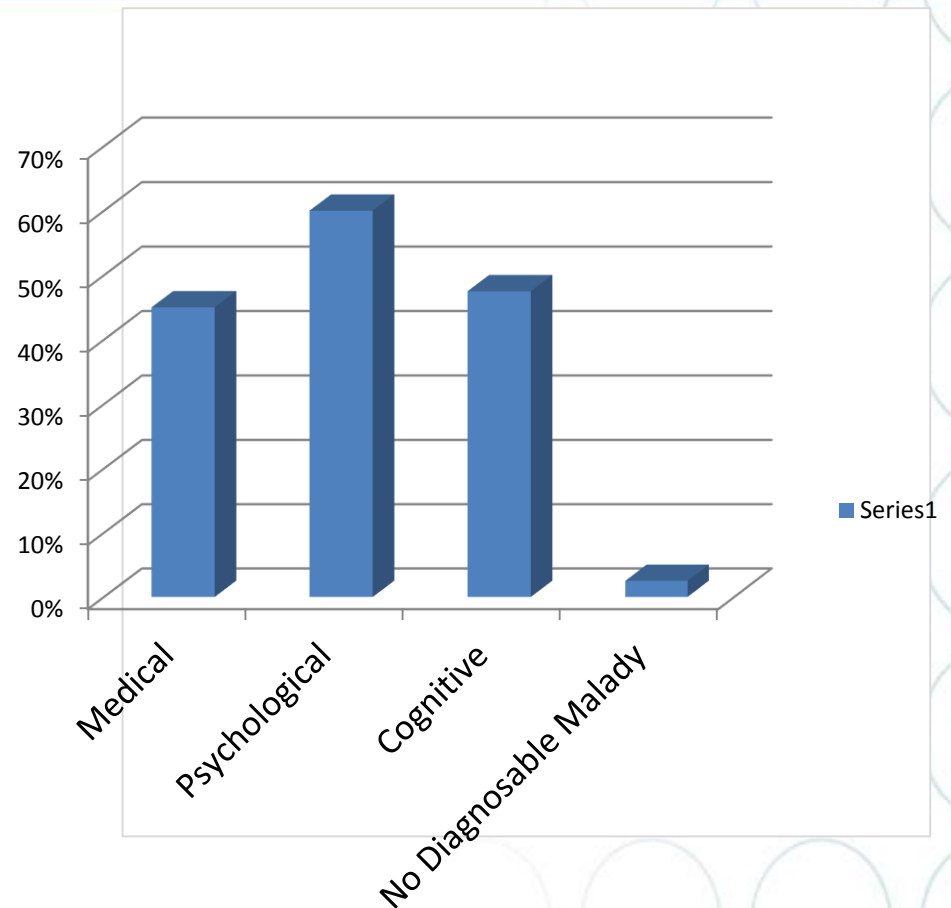
Identified Conditions

42% - Medical

57% - Psychological

43% - Cognitive

2% - No Diagnosis



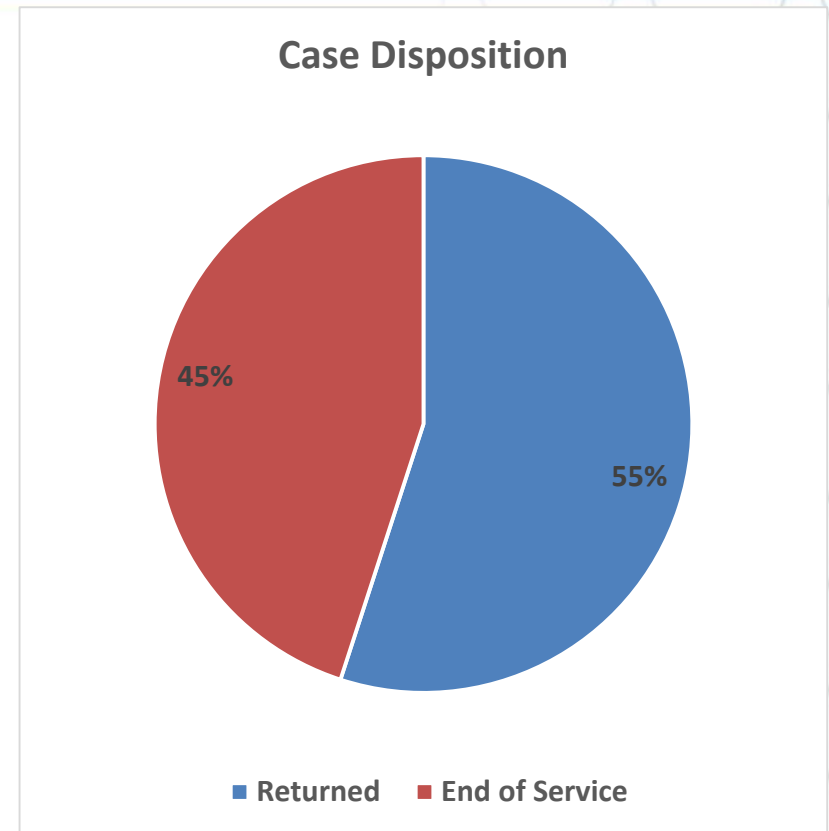


Case Dispositions

55% - Return to Duty

25% - Elective
Retirement – No Rx

20% - Permanent DQ





Personal Assessments

AIM Section 8 – 1 – 1 I'M SAFE

I - Illness

M – Medications

S – Stress

A – Alcohol

F – Fatigue

E – Eating/Hydration





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
- 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





NBAA FFD WG Future Efforts

- Accepted
 - Scenario Based Webinars
 - NBAA Web Page resources
 - Provider / Partner links
 - Guide to Create/Execute FFD
 - ? Seminars / Workshops
- Excluded
 - NBAA insurance programs
 - Stand alone I'M SAFE assessment tools
 - ORM matrices





FFD Program Goals

- 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



Textron Safety Stand Down 1/4/16
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