

# Office of Aerospace Medicine

## Aeromedical Assessment Updates

Presented to: CAMA  
Anchorage, AK

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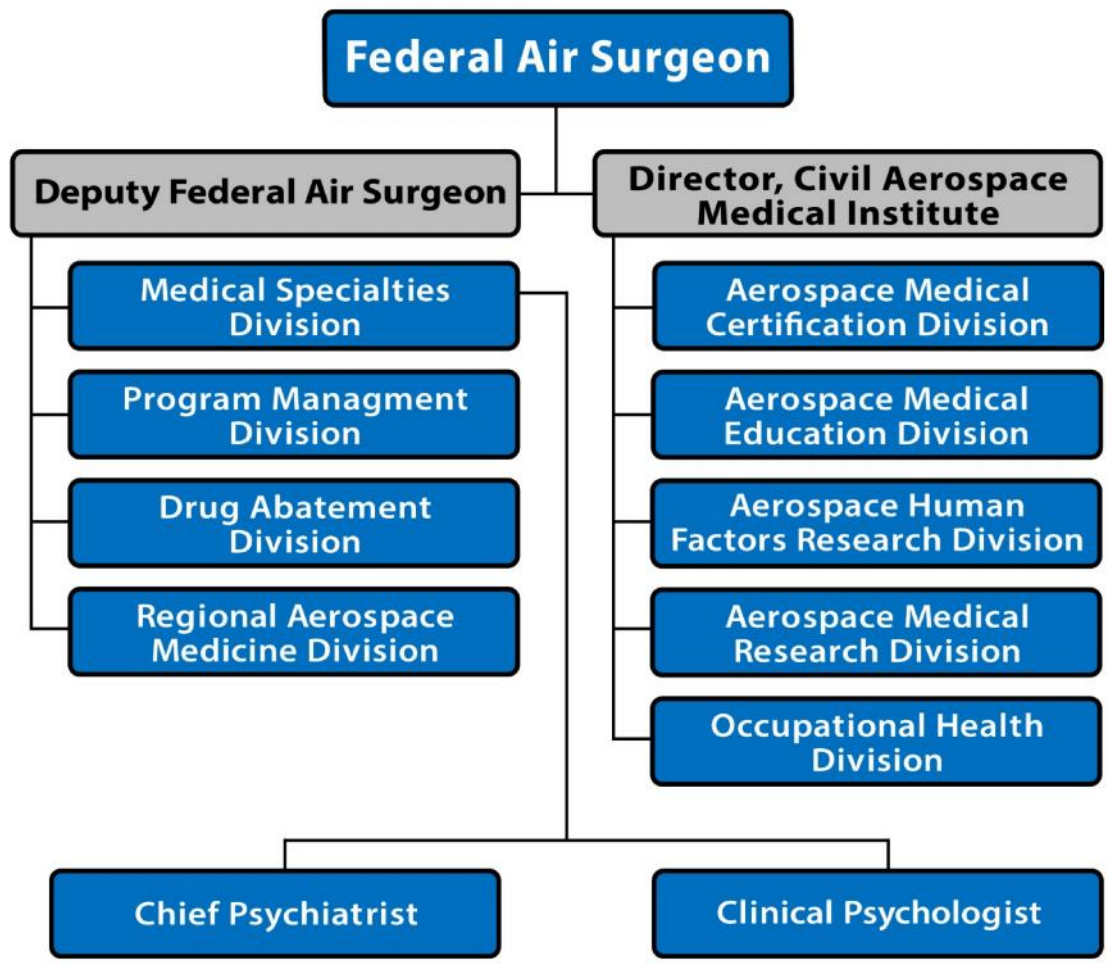
Federal Aviation  
Administration



# Agenda

- **Introduction - Background**
- **Organization - Programs**
- **Safety Data**
- **Certification Data**
- **Recent Decisions and Issues**
- **Questions**







# **Aerospace Medicine Programs**

**Aeromedical Standards**

**Airman Medical Certification**

**ATCS Medical Clearance**

**Substance Abuse/Dependence**

**Aeromedical Education**



# Aerospace Medicine Programs

## Research

**Protection and survival of aircraft occupants**

**Medical accident investigation**

**Toxicology and the effects of drugs on human performance**



# Aerospace Medicine Programs

## Research (continued)

**Impact of disease and disability on human performance**

**Human factors of flight crews, air traffic controllers, mechanics, and others involved in the operation and maintenance of aircraft and air traffic control equipment**



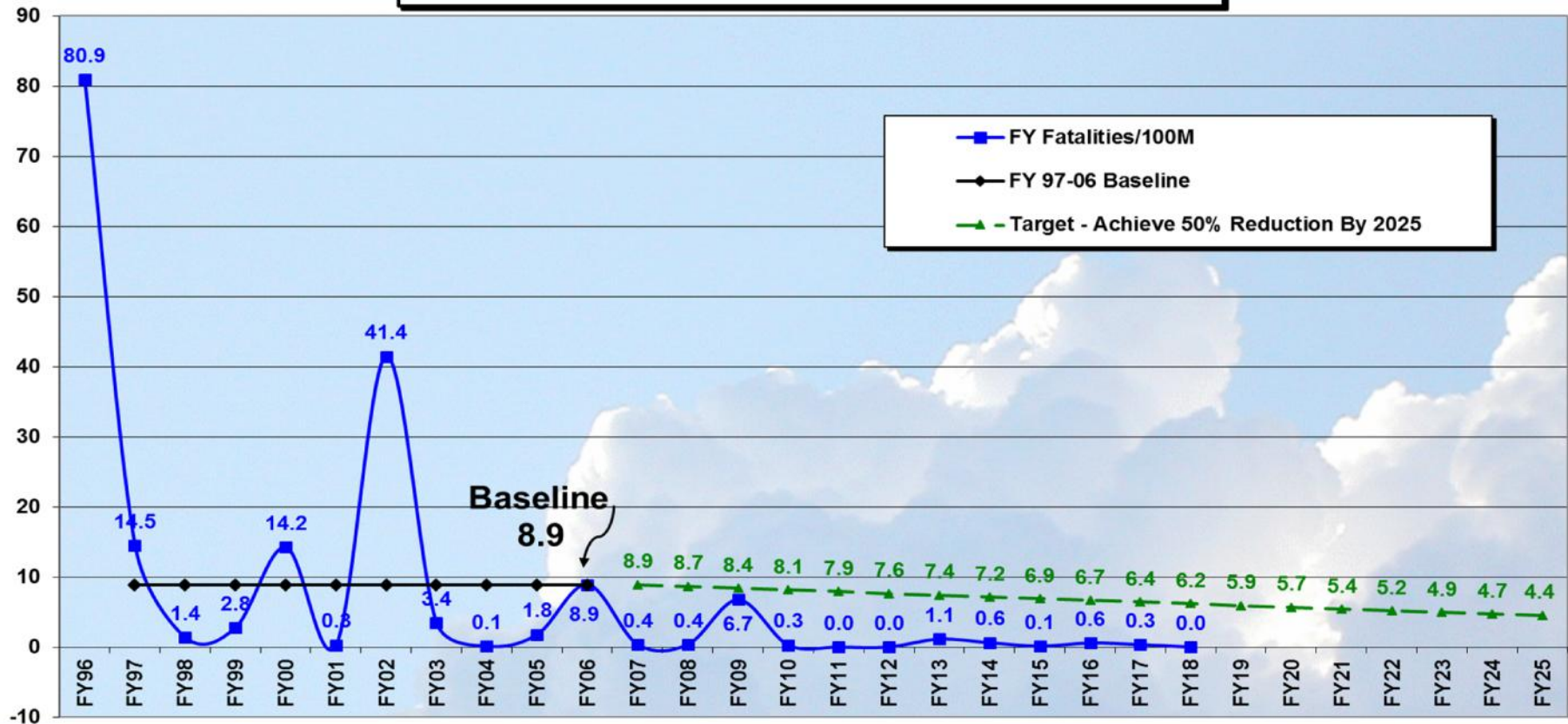
# Safety Data





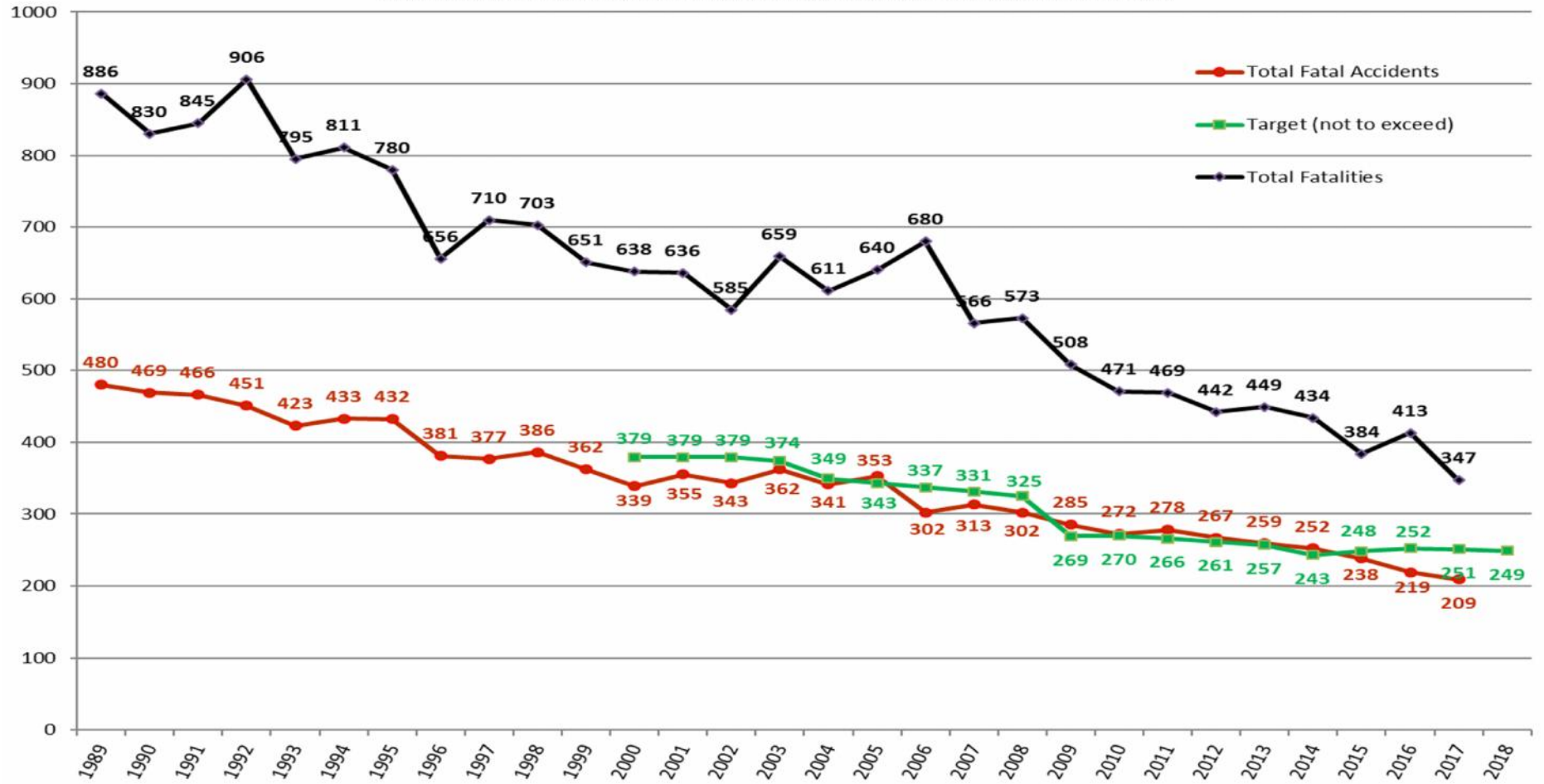
## Air Carrier Fatality Rates/Targets Fatalities per 100 Million Persons on Board

FY18 Year-to-Date Fatalities - 0  
Fatality Threshold - 55  
FY18 Rate Assumes No Additional Fatalities

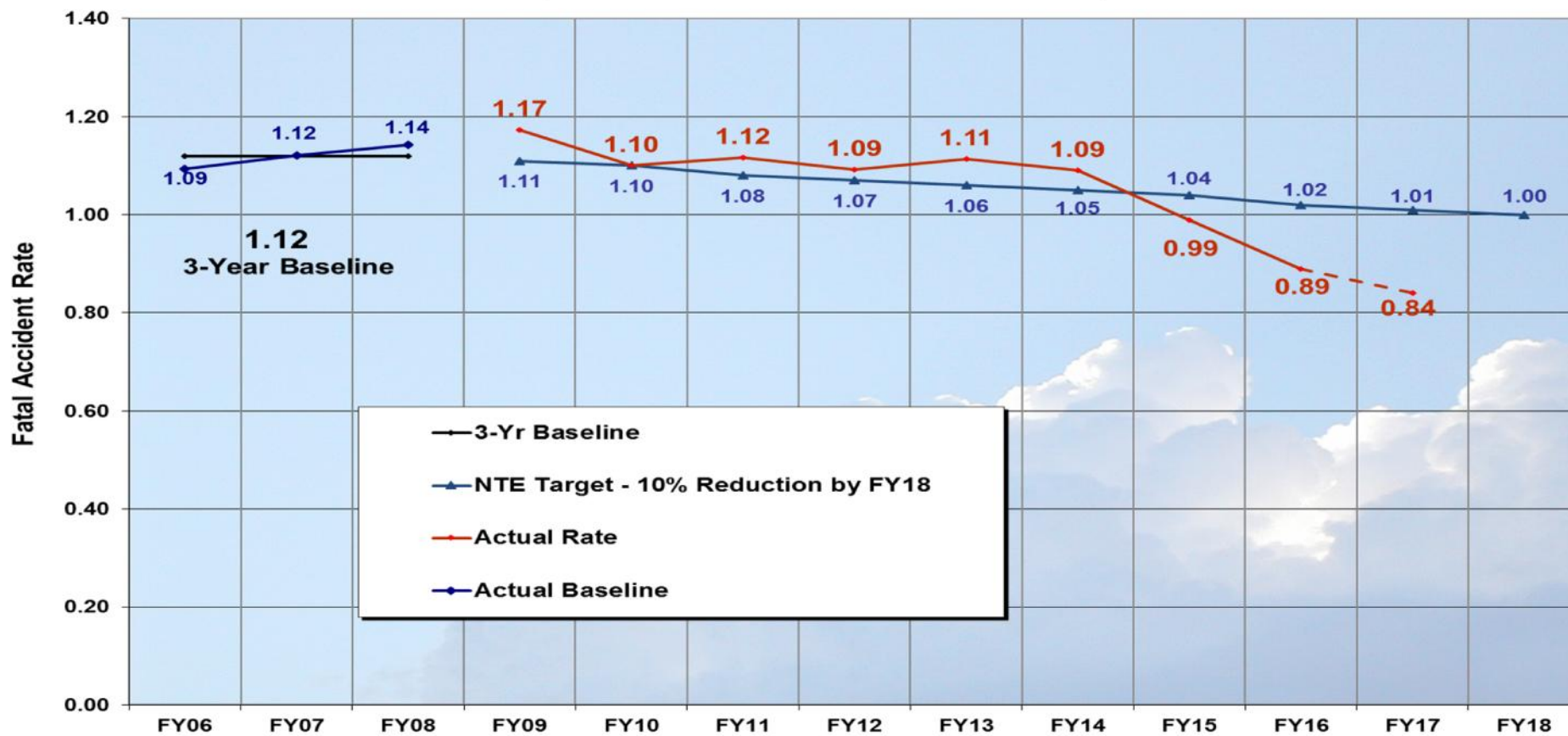


## Comparison of General Aviation Fatal Accidents/Targets

General Aviation Includes General Aviation and Unscheduled Part 135



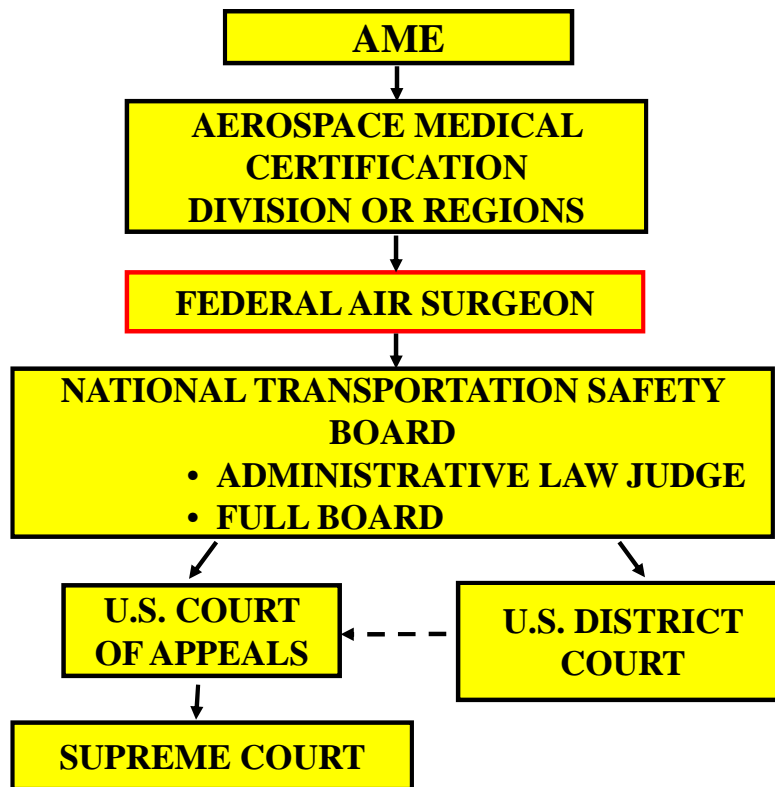
## AVS Safety Performance GA Fatal Accident Rate (Fatal Accidents/100,000 Hours)



# Certification



# Airman Medical Certification Review and Appeals Process



# **PILOTS BILL OF RIGHTS**

## **Public Law 112-153 112<sup>th</sup> Congress**

### **(August 2012)**

- **Notice to Airmen – incorporated in MedXPress**
- **Letter to Airmen – with every communication**
- **Appeal rights to US District Court**
- **Section 4 of law called for GAO review of Medical Certification**



# Aeromedical Certification

( CY 2017)

**383,251 Total applications received**

Class 1	Class 2	Class 3	TOTAL
230,391	63,629	81,234	375,254

10,937

17,123

7,997



# Aeromedical Certification

(CY 2017)

## Special Issuance Certificates Granted

Class 1	Class 2	Class 3	TOTAL
18,535	5,847	8,077	32,459
1,605		3,290	1,719



# Myth: Denial Is a Common Event

- **375,254 Applications submitted CY2017**
- **32,459 Special Issuances (9%)**
- **4,220 Initial denials (1.1%)**
- **3,837 failed to pursue (0.9%)**
- **383 provided all required follow-up but denial sustained 0.1%)**



# Aeromedical Certification

(CY 2017)

**4,220 initial denials (.9% of all applications)**

**3,837 failed to pursue or failed to provide requested information**

<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
5,322	4,851	4,568	4,560	5,159	3,613



# Special Issuances Categories

(CY 2017)

Diagnosis	Total	
Cardiovascular	11,757	790
Diabetes	6,538 (521)	
Sleep Disorders	7,796	320
Cancer	1,887	
Psychiatric	1,367	290
Substance use	1,403	110
SSRI	285	
Neurologic	568	
Transplants	172	



# Medical Certification of Airmen Special Issuances-Substance Dependence (CY 2017)

	Class 1	Class 2	Class 3	Total
Alcohol Abuse	140	73	165	378
Alcoholism	532	50	81	663
Drug Abuse	123	42	89	254
Drug Dependence	78	11	19	108
	873	176	354	1,403
	159		55	110



# “Recent” Decisions and Current Issues



# Antidepressants

- **Mild to moderate depression only**
- **No history of psychosis or suicidal thoughts**
- **4 authorized medications**
  - **Fluoxetine**
  - **Sertraline**
  - **Citalopram**
  - **Escitalopram**



## Antidepressants (Continued)

- **Special Issuance**
  - **Single medication only**
  - **Stable on medication - minimum of 6 months**
  - **Close monitoring**
    - **Specially trained HIMS AME sponsor**
    - **Psychiatrist**
    - **Psychologist**

## Antidepressants (Continued)

- **Ongoing monitoring by psychiatrist, treating physician, neuropsych testing, HIMS AME**
- **No dosage changes or medical monitor changes without prior coordination**
- **Changes in condition must be reported to HIMS AME and FAA immediately**
- **Process improvement team addressed backlog in processing**





# Antidepressants

(CY 2017)

	Class 1	Class 2	Class 3	Total
SI	122	19	144	285
Deny	30	16	75	121
<b>Totals</b>	<b>152</b>	<b>35</b>	<b>219</b>	<b>406</b>



# Obstructive Sleep Apnea

(CY 2017)

Selection	Class 1	Class 2	Class 3	Total
1	3,768	1,253	995	6,016
2	708	553	1,077	2,338
3	221,010	59,817	75,638	356,465
4	6,952	2,434	3,103	12,489
5	107	58	116	281
6	14	12	45	71
<b>Total</b>	<b>232,559</b>	<b>64,127</b>	<b>80,974</b>	<b>377,660</b>



# Obstructive Sleep Apnea

(CY 2017)

Selection	Total	BMI Average
1	6,016	32.6
2	2,338	32.2
3	356,465	27.2
4	12,489	33.9
5	281	37.2
6	71	32.2



# Obstructive Sleep Apnea

	<b>Disposition - Selection #5 (High Risk for OSA, Evaluation Req.)</b>
<b>45 %</b>	<b>Negative Evaluation - warning</b>



# Obstructive Sleep Apnea

	<b>Disposition - Selection #6</b> <b>(Very High Risk for OSA, deferred)</b>
<b>24 %</b>	<b>Negative Evaluation - warning</b>



## CACI CONDITIONS

Arthritis	Hypertension
Asthma	Hypothyroidism
Bladder Cancer	Migraine/Chronic HA
Breast Cancer	Mitral Valve Repair
Chronic Kidney Disease	Pre-Diabetes
Colitis	Prostate Cancer
Colon Cancer	Renal Cancer
Glaucoma	Retained Kidney Stones
Hepatitis C – Chronic	Testicular Cancer



# 3<sup>rd</sup> Class Medical “Reform”

## AOPA/EAA Petition for Exemption 2012



**House Bill – 3708      Senate Bill – 2103**  
**General Aviation Protection Act 2014**

**FAA Expedited Rule Making Project**  
**April 2, 2014**

**Pilot's Bill of Rights – 2 (PBOR-2)**  
**2/25/2015**





**Senate Bill (PBOR-2)  
S. 571 passed 12/15/2015.**

**FAA Extension, Safety, and Security  
Act of 2016**

**President signed into law on July 15, 2016**

**FAA Final Rule  
Published January 2017**

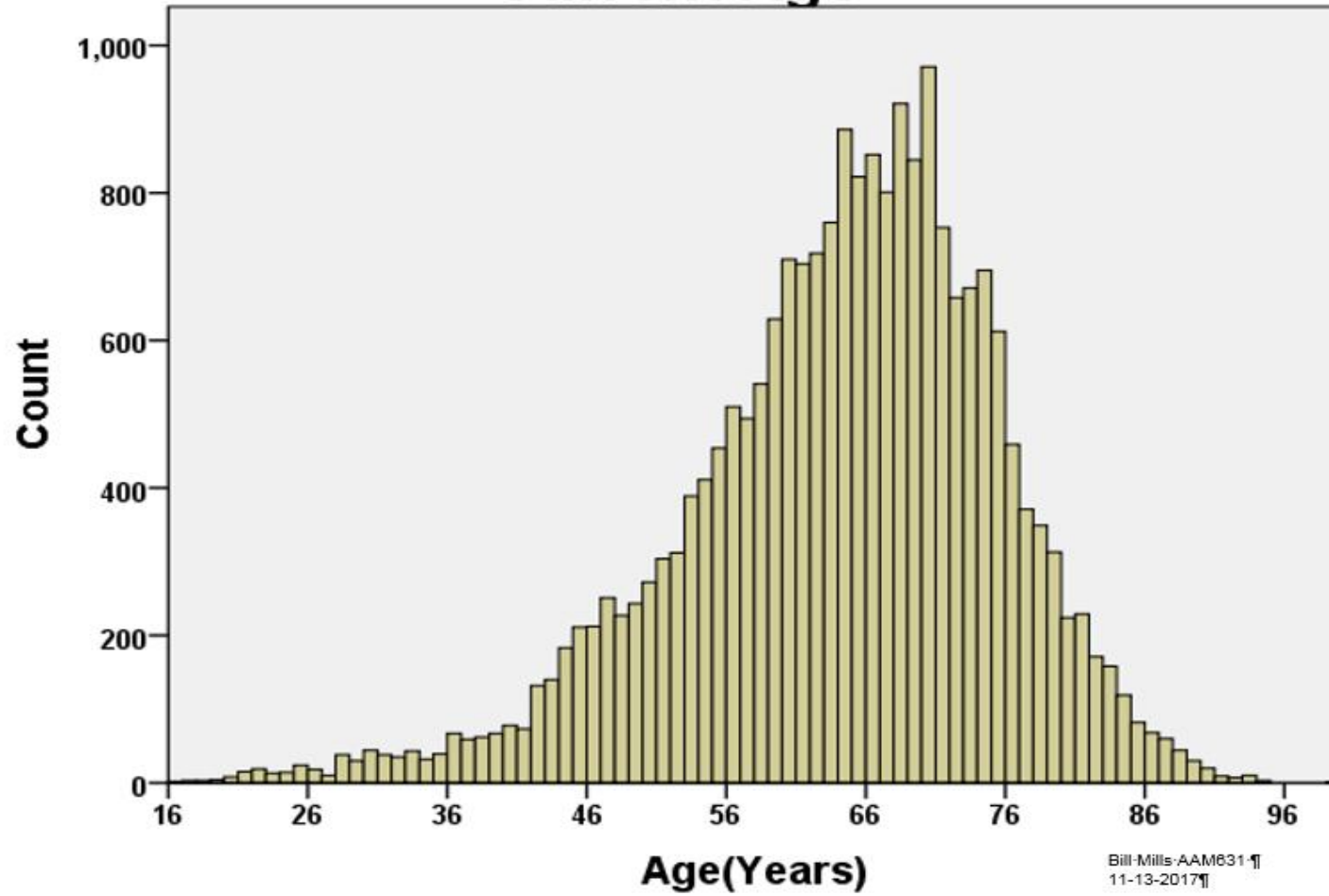
**BasicMed – implementation May 1, 2017**



# BasicMed Statistics and Questions



# Current Age



**Average Age is 65.4 years old  
Max = 99.2 and Min = 15.9**

**5.9% (2,310) are 80 years of age or  
more**



# **38,888 BasicMed pilots**

**9/13/18**

- **29.2% (11,372) with last medical certificate being a Special Issuance**
- **6.2% of 3<sup>rd</sup> class pilots have a Special Issuance**



# Special Issuance Pathology

Pilots	Medical Diagnosis
3,756	Coronary artery disease (50% or greater)
1,736	Atrial fibrillation
1,024	Traumatic brain injury, concussion, amnesia, coma (30 minutes or more), loss of memory
523	Stroke, embolism, transient ischemic attack (TIA), Amaurosis Fugax
498	Vascular--thrombosis, occlusion, stroke, embolism, aneurysm, spasm, hematoma, subdural or epidural
367	Diabetes treated with insulin
3,081	Diabetes treated with oral meds
264	Pacemaker



# Accidents

(5/1/17 to 9/13/18)

- **BasicMed pilots involved in at least 76 aviation accidents due to lag in NTSB data**
- **Known fatal accidents = 26**  
**(total fatalities=35)**
- **Causes still under investigation**

# QUESTIONS?

