

FAA Medical Certification

5th Annual Aerospace
Psychology
Seminar
Sept 23, 2017
Denver, CO



- Federal Aviation
- Administration



Aerospace Medical Certification Division (AMCD)



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Agenda

- **Safety of the National Air Space**
- **Medical Certification Process**
- **Mental Health Regulations and Policy**
- **SSRI Special Issuance Program**
- **Role of Neuropsychology**



Safety of the National Air Space is Job #1

- PSA flight 182
- San Diego, CA
- 9/25/78
- Cessna 172



Sources of Risk

- **Machine e.g. powerplant, flight controls**
- **Operator e.g. training, cognitive performance, physiology**
 - Normal operator in abnormal environment e.g. spatial disorientation, hypoxia, machine interface: realm of aerospace medicine
 - Abnormal operator in normal environment: realm of clinical medicine
 - Abnormal operator in abnormal environment: realm of regulatory medicine



Myth: Flying Same as Driving

- **Acceleration**
- **3 Axes of motion – spatial disorientation**
- **Altitude**
 - Hypoxia
 - Barometric pressure changes
- **Can't just pull over and stop**
- **Force = Mass x Acceleration**



Conditions of Aeromedical Significance

Sudden incapacitation

Sudden/unpredictable onset

Subtle incapacitation

Progresses unpredictably

Difficult to monitor/recognize

Subtle impairment



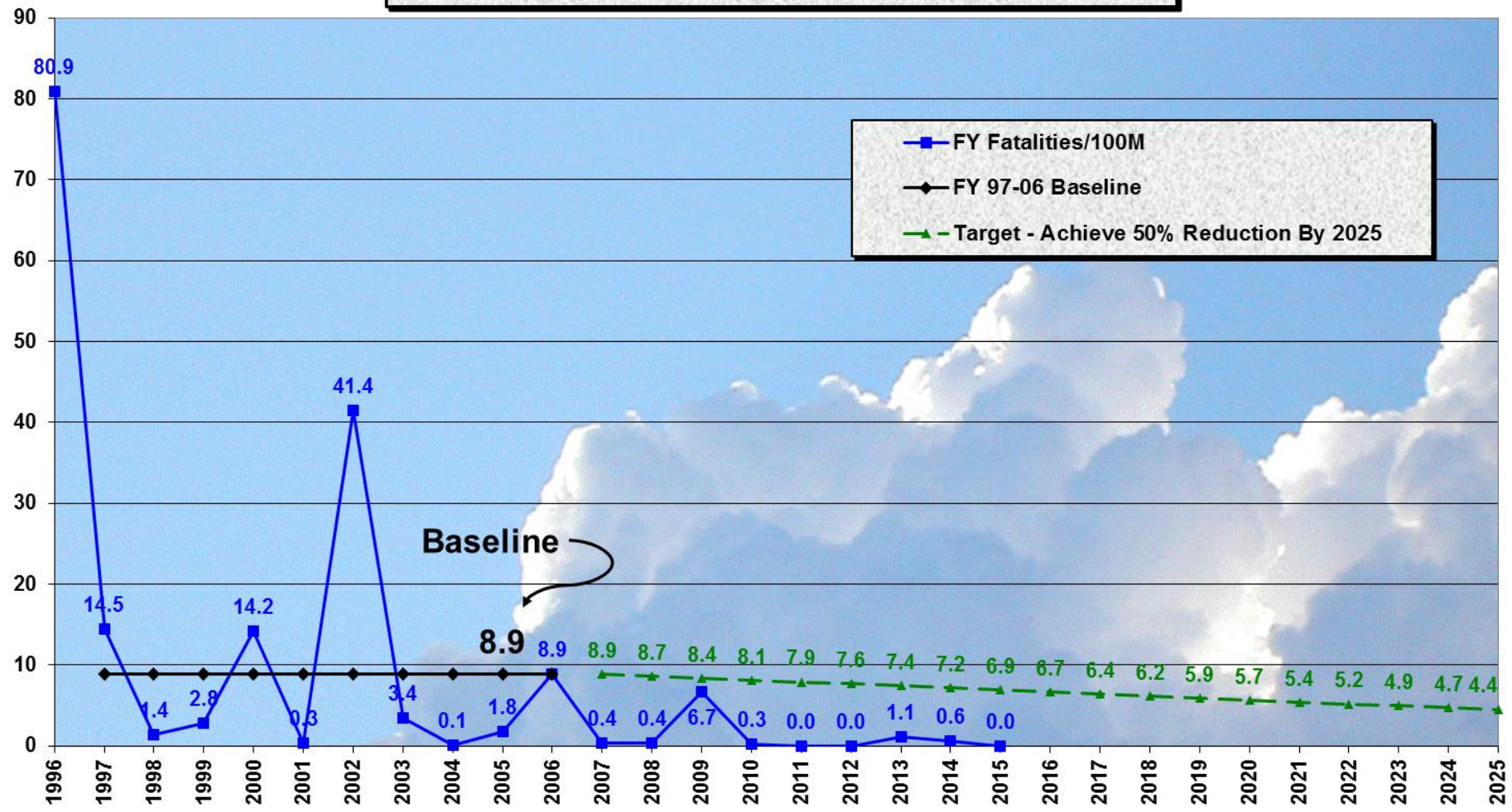
Air Carrier Fatality Rates/Targets

Fatalities per 100 Million Persons on Board

FY15 Year-to-Date Fatalities - 0

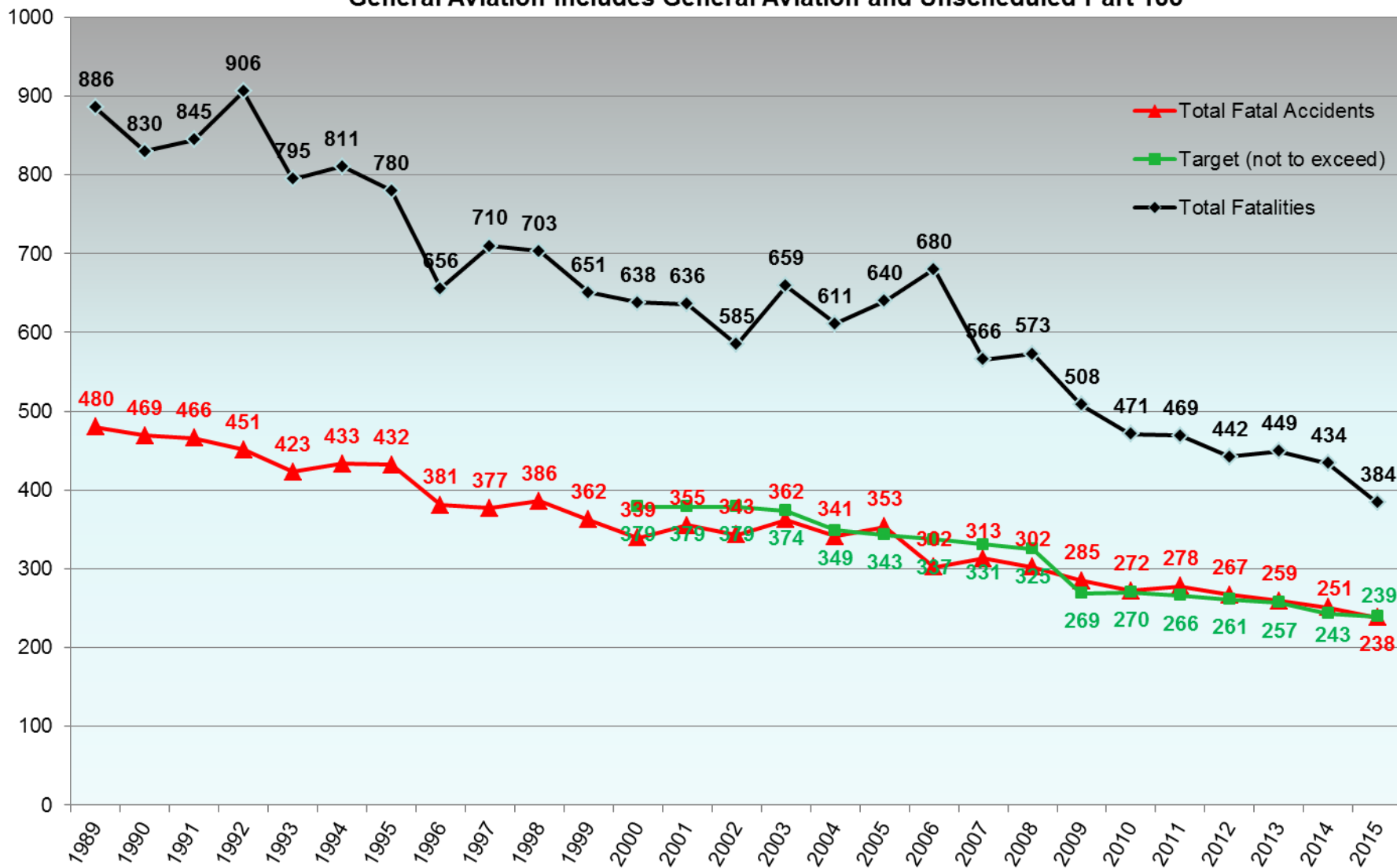
Fatality Threshold - 56

FY15 Rate Assumes No Additional Fatalities

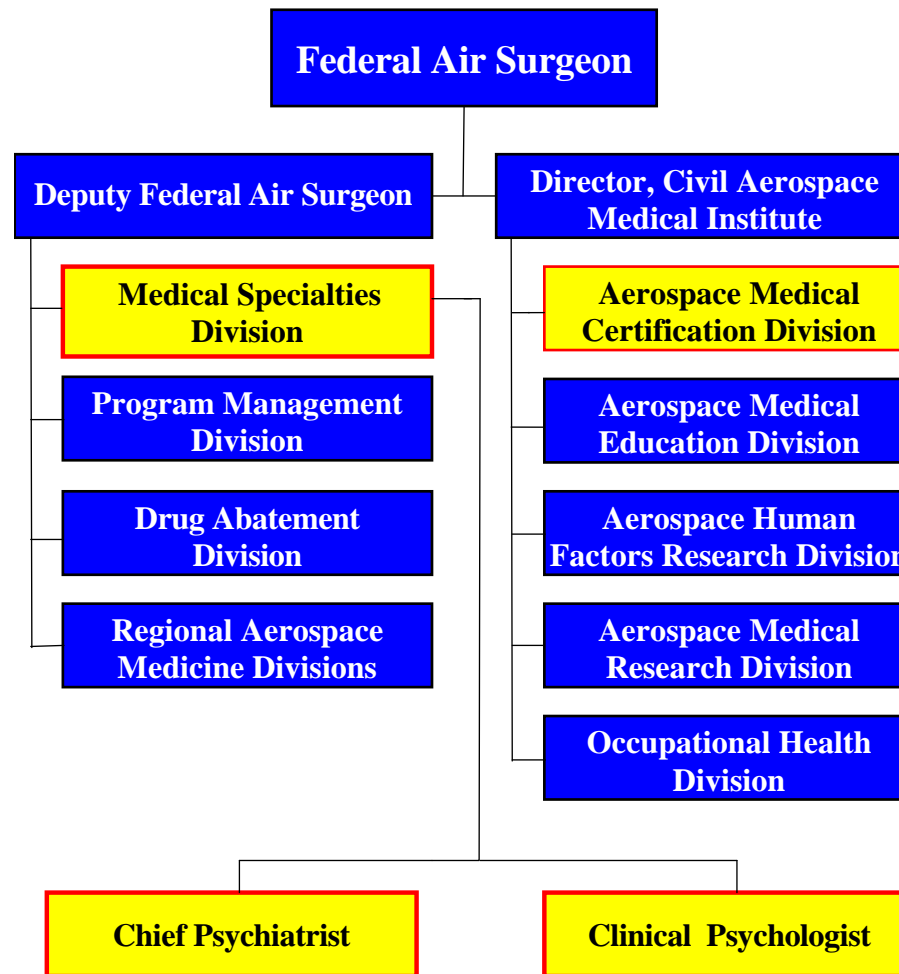


Comparison of General Aviation Fatal Accidents/Targets

General Aviation includes General Aviation and Unscheduled Part 135



Office of Aerospace Medicine



Medical Certification Process

- **MedXpress – pilot medical history**
- **AME exam**
- **Transmission to FAA**
- **Certification decision**
 - Eligible
 - SODA
 - Special Issuance
 - Denial



Décollage d'un Concorde d'Air France
An Air France Concorde taking off

Photographie/Photographer: PH. DE LAPOLLE - Air - 014000
Tout usage sauf publication d'art pour advertising purposes



Decision Level 1-- AME

- **No significant medical history**
- **No abnormal findings on exam**
- **Common medical conditions specified in the AME Guide when stable**
- **Medical conditions which require review of additional information**
- **Medical conditions which can be cleared with completion of CACI worksheet**
- **Defer**



Decision Level 2—AMCD or RFS

- **Eligible +/- warn**
- **SODA/MFT**
- **Special Issuance**
 - AME Assisted (AASI) 6 years with annual follow-up
 - Time limited
- **Defer to Federal Air Surgeon's Office**
- **Deny**
 - General denial appeals to Federal Air Surgeon
 - Final denial appeals to NTSB



Decision Level 3 — Federal Air Surgeon

- Any complex case referred by AMCD or RFS
- Initial special issuance for antidepressants
- All heart transplants
- General denial appeals
- Air Traffic Control appeals



Aeromedical Certification

(CY 2015)

378,263 Total applications received

Class 1	Class 2	Class 3	TOTAL
212,617	67,080	98,566	378,263



Aeromedical Certification

(CY 2015)

Special Issuance Certificates Granted

Class 1	Class 2	Class 3	TOTAL
15,992	5,884	11,728	33,604



Aeromedical Certification

(CY 2015)

4,288 denials (1.13% of all applications)

- **4,088 failed to pursue or failed to provide requested information**
- **200 denials (0.052% of all applications) when all information requested is provided**



Myth: Denial Is a Common Event

- **378,263 Applications submitted CY2015**
- **33,604 Special Issuances (9%)**
- **4,288 Initial denials (1%)**
- **200 provided all required follow-up but denial sustained (0.05%)**



Special Issuances Categories

(CY 2015)

Diagnosis	Total
Cardiovascular	12,621
Diabetes	6,702
Sleep Disorders	6,523
Cancer	2,304
Psychiatric	998
Substance use	1,333
SSRI	293
Neurologic	654
Transplants	178



The FARs:

Title 14, CFR Part 67-Standards – Mental Specific

“No established medical history or clinical diagnosis of ...”

- **Personality Disorder severe enough to have repeatedly manifested itself by overt acts**
- **Psychosis**
- **Bipolar Disorder**



Title 14, CFR Part 67- Standards- Mental - General

- **No other personality disorder, neurosis, or other mental condition that the Federal Air Surgeon, based on the case history and appropriate, qualified medical judgment relating to the condition involved....**
- **Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held**



Other generally disqualifying conditions include:

- **Depression**
- **ADD/ADHD**
- **OCD**
- **Anxiety**
- **Other Personality Disorders**



Psychiatric Special Issuances

(as of 8/31/16)

Conditions	#
Depression	471
Anxiety	283
Bipolar spectrum	5
ADD/ADHD	40
Obsessive Compulsive	18
PTSD	53



Current Special Issuances Psychiatric – Aug 2016

1 st Class	2 nd Class	3 rd Class	Total
278	129	494	901



Title 14, CFR Part 67-Standards-Mental Substance Dependence

No substance dependence, except where there is established clinical evidence, satisfactory to the Federal Air Surgeon, of recovery, including sustained total abstinence from the substance(s) for not less than the preceding 2 years.



Title 14, CFR Part 67-Standards-Mental Dependence (cont.)

Substance" includes: Alcohol; other sedatives and hypnotics; anxiolytics; opioids; central nervous system stimulants such as cocaine, amphetamines; hallucinogens; phencyclidine; cannabis; inhalants; and other psychoactive drugs and chemicals; and



Title 14, CFR Part 67-Standards-Mental Dependence (cont.)

Substance dependence" means a condition in which a person is dependent on a substance, other than tobacco or ordinary xanthine-containing beverages (e.g., caffeine), as evidenced by ...



Title 14, CFR Part 67-Standards-Mental Dependence (cont.)

- Increased tolerance, **OR**
- Manifestation of withdrawal symptoms, **OR**
- Impaired control of use, **OR**
- Continued use despite damage to physical health or impairment of social, personal, or occupational functioning.



DSM 5

Substance Use Disorders

- **A cluster of cognitive, behavioral, and physiological symptoms indicating continued use of the substance despite significant substance-related problems.**



DSM 5

Alcohol Use Disorder

- **A problematic pattern of alcohol use leading to clinically significant impairment or distress as manifested by at least two of the following criteria, occurring within a 12 month period.**



- **DSM 5**

- **Alcohol Use Disorder – Criteria (11)**

- 1. Often taken in larger amounts and longer time than intended**
- 2. Persistent desire or unsuccessful efforts to cut down or control use**
- 3. Increased time obtaining, using, recovering**
- 4. Craving to use**
- 5. Use results in failure to fulfill obligations**



DSM 5

- **Alcohol Use Disorder – Criteria (cont.)**
 6. Continued use despite problems
 7. Social, occupational, recreational activities are given up
 8. Recurrent use in physically hazardous situations
 9. Use despite knowledge of alcohol caused physical or psychological problems
 10. Tolerance
 11. Withdrawal



DSM 5

Alcohol Use Disorder

- **Qualifiers:**
 - **Mild - 2 to 3 symptoms**
 - **Moderate - 4 to 5 symptoms**
 - **Severe - 6 or more symptoms**



Title 14, CFR Part 67-Standards-Mental

No substance abuse within the preceding 2 years defined as:

- **Use of a substance in a situation in which that use was physically hazardous, if there has been at any other time an instance of the use of a substance also in a situation in which that use was physically hazardous**
- **A verified positive drug test result acquired under an anti-drug program or internal program of the U.S. Department of Transportation**



Title 14, CFR Part 67 Standards Mental

No substance abuse within the preceding 2 years defined as: (cont.)

- **Misuse of a substance that the Federal Air Surgeon, based on case history and appropriate, qualified medical judgment relating to the substance involved, finds**



Title 14, CFR Part 67-Standards-Mental

No substance abuse within the preceding 2 years defined as: (cont.)

- **Makes the person unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held or**
- **May reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the person unable to perform**



Current Special Issuances for Substance Abuse (By class of exam as of 8/31/16)

	1 st Class	2 nd Class	3 rd Class	Total
Alcohol Dependence	522	50	73	645
Alcohol Abuse	93	73	121	287
Drug Dependence	75	10	36	121
Drug Abuse	105	43	71	219
	795	176	301	1272



Role of the HIMS AME

Evaluate the quality of an airman's Recovery Program and make a recommendation to the FAA regarding the Special Issuance of his or her FAA Medical Certificate.

*** Human Intervention Motivation Study**



Antidepressants

- **Mild/moderate depression or other diagnosis**
- **Stable 6 months**
- **No history psychosis, suicidal ideation, multiple meds, electroconvulsive therapy**
- **Use of fluoxetine, sertraline, citalopram or escitalopram only**
- **SSRI specification sheet**



Antidepressants

- **Ongoing monitoring by psychiatry, treating doc, 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**
- **Minimum 6 months treatment before SI consideration**



SSRI Renewal Process Improvement

- **Created certification aid**
- **Created AME checklist**
- **AME authorized to issue if all items green**
- **All documentation still goes to FAA**

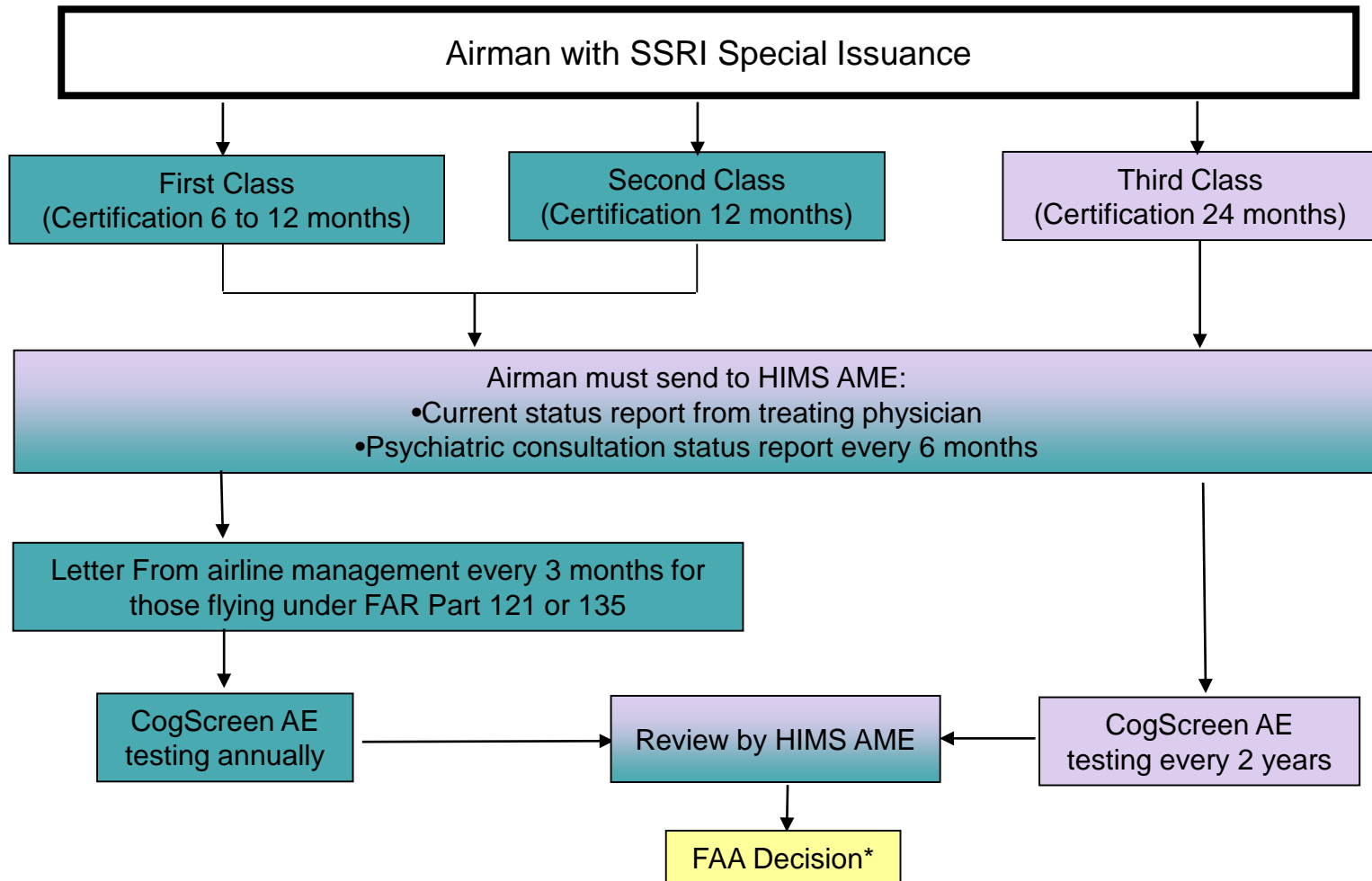


FAA Certification Aid

- **Cog screen results**
 - Specify norm used and session number
 - Address LRPV, Taylor factors, base rates
 - Submit entire (approx 13 pages) report
 - Submit results and rationale for any additional testing done
- **Clinical neurocognitive evaluation**
 - Overall neurocognitive status
 - **Agree to notify FAA/AME immediately for adverse changes in condition**



SSRI Follow Up Path



*Note: HIMS AME may issue if subsequent certification exam does not coincide with required neurocognitive testing and if all follow-up material is acceptable



Antidepressants

(as of 1/11/2016)

	Class 1	Class 2	Class 3	Total
SI	109	37	147	293
Deny	17	11	40	68
Processing	17	2	42	61
Totals	143	50	229	422



Safety of the National Air Space is Job #1

SSRI

HIV

Substance abuse

Brain injury

Aging aviator

**Neurodegenerative
Diseases**



BasicMed: FAA Extension, Safety, and Security Act (FESSA) 2016

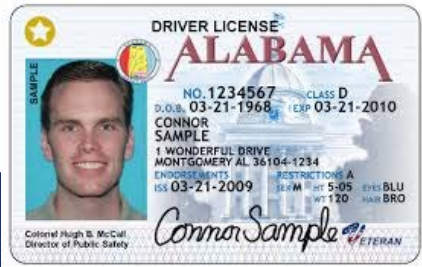
- This is a Flight Standards rule that is an alternative to third-class medical certification to fly certain small aircraft
 - 14 CFR Part 68
- 14 CFR Part 67 has not changed and third-class medical certification is not going away
- Final Rule was published in January 2017
- Short Title -- BasicMed



The Basics:

What Does a Pilot Need to Use BasicMed??

- A valid U.S. driver's license
- An FAA Medical Certificate that was valid at any time after July 14, 2006.
- The most recent application for a Medical Certificate was not denied.
- The most recent Medical Certificate was not revoked, suspended, or withdrawn.
- Requires a one-time authorization for Special Issuance of a Medical Certificate for the following conditions:



Conditions Requiring a One Time Special Issuance Authorizations Under BasicMed

- **Mental: 4**
- **Neurology: 3**
- **Cardiac: 4**



Conditions Requiring a One Time Special Issuance Authorizations Under BasicMed

- **Mental:**
 - Personality Disorder
 - Psychosis
 - Bipolar Disorder
 - Substance Dependence



Questions?

- **We're all headed the same direction**

