The Conversation

The AAM Story

Presented to: CAMA
By: Stephen Veronneau, M.D.
(For Stephen Goodman, M.D.)
Date: September 14, 2017
AVS in FAA (FY17)

**FAA Authorized Personnel:**
- **44,446 People**
  - Other Offices (83%)
  - AVS (17%)

**17% = AVS Authorized Personnel:**
- **7,591 People**
  - AFS (72%)
  - AIR (18%)
  - Other Offices (10%)

**10% of 17% = 757 People who work in:**
- Office of Aerospace Medicine - AAM
- Air Traffic Safety Oversight Service - AOV
- Office of Accident Investigation and Prevention - AVP
- Unmanned Aircraft Systems Integration Office - AUS
- Office of Rulemaking - ARM
- Office of Quality, Integration and Executive Services - AQS
- Remaining AVS Office

**FAA Total Budget:**
- **$16.41 Billion**
  - Other Offices (90.4%)
  - AVS (9.6%)

**9.6% = AVS has a budget of:**
- **$1.57 Billion**
<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Operator Certificates</td>
<td>5,514</td>
</tr>
<tr>
<td>Air Agency Certificates</td>
<td>6,610</td>
</tr>
<tr>
<td>Aircraft</td>
<td>307,781</td>
</tr>
<tr>
<td>Aviation Authorities - other countries</td>
<td>435</td>
</tr>
<tr>
<td>Check Airmen</td>
<td>8,151</td>
</tr>
<tr>
<td>Designees</td>
<td>9,381</td>
</tr>
<tr>
<td>Mechanics with Inspection Authority</td>
<td>21,685</td>
</tr>
<tr>
<td>Active Pilots</td>
<td>642,542</td>
</tr>
<tr>
<td>Non-Pilot Air Personnel</td>
<td>683,098</td>
</tr>
<tr>
<td>Flight Instructors</td>
<td>104,425</td>
</tr>
<tr>
<td>Airmen Medical Examinations</td>
<td>383,337</td>
</tr>
<tr>
<td>Approved Manufacturers</td>
<td>1,629</td>
</tr>
<tr>
<td>Aviation Industry Entities Covered by Anti-Drug &amp; Alcohol Programs</td>
<td>6,955</td>
</tr>
<tr>
<td>National Transportation Safety Board</td>
<td>683</td>
</tr>
<tr>
<td>ATCS Medical Clearance Exams</td>
<td>13,895</td>
</tr>
<tr>
<td>ATCS Credentials</td>
<td>15,422</td>
</tr>
<tr>
<td>ATSS Credentials</td>
<td>4,987</td>
</tr>
<tr>
<td>AIS Credentials</td>
<td>202</td>
</tr>
<tr>
<td>UAS Registrations</td>
<td>700,000+</td>
</tr>
</tbody>
</table>

Last update April 2017
Office of Aerospace Medicine (AAM)
Aerospace Medicine

AAM-1
Federal Air Surgeon

AAM-2
Deputy Federal Air Surgeon
  AAM-100
  Program Management Division
  AAM-200
  Medical Specialties Division
  AAM-800
  Drug Abatement Division
  AAM-Regions
  Nine Regional Aerospace Medicine Divisions

AAM-3
Director, Civil Aerospace Medical Institute
  AAM-300
  Aerospace Medical Certification Division
  AAM-400
  Aerospace Medicine Education Division
  AAM-500
  Human Factors Research Division
  AAM-600
  Medical Research Division
  AAM-700
  Occupational Health Division
Functions of AAM

Standards

• Establishes medical standards and qualifications for airmen (pilots) and air traffic control specialists (ATCSs)
• In collaboration with the Department of Transportation, establishes the standards for aviation industry drug and alcohol testing programs
• Conducts human factors and medical research supporting the development and evolution of standards

Certification

• Medical certification of pilots

Continued Operational Safety

• Recurring periodic medical certification of pilots
• Medical clearances of ATCSs
• Designation, training and oversight of Aviation Medical Examiners (AMEs)
• Aerospace medical education for pilots
• FAA Employee Drug and Alcohol Testing Programs
• Oversight of aviation industry employee drug and alcohol testing programs
The Story . . .
Scarce Resources Of Today Are

Time  Talent

Energy
AAM Strategy

Is It . . .

Daily?

Annually?

Quarterly

. . . It’s All Three
Who Gets to Play? ... And Why?

Global Program

Increasing Focus

Increase Opportunities
Managing in An Uncomfortable World

Uncertainty Just Ahead
Solutions

- Not Insulated
- Specialty Panels
- Internal Certification Panel (ICP)
Credible Leaders

Board Specialties

– Occupational Medicine
– Neuro-Otology
– Internal Medicine
– Surgery
– Aerospace Medicine
– Psychiatry
– Ophthalmology
– Emergency Medicine
– Radiological Specialist
Total Personnel and Resources

- Safety Technical Specialists: 147
- Inspectors: 55
- Operational Support: 50
- Physicians, PAs, Nurses: 57
- Safety Critical: 72
- Research: 72

AAM is a $60 Million Per Year Program
Over 500,000 Airmen As of Sept 1st, 2017
380,132 Airmen Exams in CY16

Exams Transmitted to AAM in CY2016

3rd Class, 97,486, 26%

2nd Class, 64,886, 17%

1st Class, 217,760, 57%
## Airmen Education

<table>
<thead>
<tr>
<th>Course Title</th>
<th># Offerings</th>
<th>GA Airmen</th>
<th>Commercial Airmen</th>
<th>Total Trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiology</td>
<td>50</td>
<td>396</td>
<td>494</td>
<td>890</td>
</tr>
<tr>
<td>Post-Crash Survival</td>
<td>20</td>
<td>34</td>
<td>153</td>
<td>187</td>
</tr>
<tr>
<td>CRM</td>
<td>6</td>
<td>0</td>
<td>131</td>
<td>131</td>
</tr>
<tr>
<td>WINGS Safety Events</td>
<td>17</td>
<td>1208</td>
<td>847</td>
<td>2055</td>
</tr>
<tr>
<td>Briefs</td>
<td>20</td>
<td>0</td>
<td>657</td>
<td>657</td>
</tr>
<tr>
<td>USAF Spatial Disorientation Briefs</td>
<td>11</td>
<td>0</td>
<td>262</td>
<td>262</td>
</tr>
<tr>
<td>Other</td>
<td>32</td>
<td>289</td>
<td>149</td>
<td>438</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>156</strong></td>
<td><strong>1927</strong></td>
<td><strong>2693</strong></td>
<td><strong>4620</strong></td>
</tr>
</tbody>
</table>
Airmen Exam Activity

DIWS Exams
1/1/2017 - 9/7/2017
Data Source: DIWS
Data Owner: Dr. David O’Brien, AAM-300

Class 1 157,547
Class 2 44,403
Class 3 52,191
Deferred 12,698
Denied 1,826
Incomplete 159
Null 40

Bar chart showing exam totals by month:
- January: 31,880
- February: 30,593
- March: 36,029
- April: 32,235
- May: 33,801
- June: 33,984
- July: 31,625
- August: 34,756
- September: 3,961
AAM AME Demographics

Total AMEs = 2,854
HIMS AMEs = 178
First Class AMEs = 1,882

Top 10 Specialties

<table>
<thead>
<tr>
<th>Medical Specialty</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Practice/General Practice</td>
<td>1,368</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>513</td>
</tr>
<tr>
<td>Aerospace Medicine</td>
<td>255</td>
</tr>
<tr>
<td>Occupational/Industrial Medicine</td>
<td>196</td>
</tr>
<tr>
<td>Other</td>
<td>109</td>
</tr>
<tr>
<td>General Surgery</td>
<td>70</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>64</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>59</td>
</tr>
<tr>
<td>Otorhinolaryngology</td>
<td>36</td>
</tr>
<tr>
<td>Orthopedic Surgery</td>
<td>33</td>
</tr>
</tbody>
</table>
# AME Training Activity

<table>
<thead>
<tr>
<th>FY</th>
<th>Date of Seminar</th>
<th>Seminar Type</th>
<th>Seminar Location</th>
<th>Total Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY17</td>
<td>10/24/2016</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>12/2/2016</td>
<td>Refresher (1)</td>
<td>Tuscon AZ</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>2/10/2017</td>
<td>Refresher (1)</td>
<td>St Petersburg, FL</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>3/20/2017</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>5/1/2017</td>
<td>Refresher (1)</td>
<td>Denver, CO</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>6/19/2017</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8/11/2017</td>
<td>Refresher (1)</td>
<td>Washington, DC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9/14/2017</td>
<td>CAMA (4)</td>
<td>Greensboro, NC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9/22/2017</td>
<td>Refresher (1)</td>
<td>Denver, CO</td>
<td></td>
</tr>
<tr>
<td>FY18</td>
<td>10/23/2017</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12/1/2017</td>
<td>Refresher (1)</td>
<td>Portland, OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2/9/2018</td>
<td>Refresher (1)</td>
<td>Atlanta, GA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3/19/2018</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5/7/2018</td>
<td>AsMA (3)</td>
<td>Dallas, TX</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6/11/2018</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8/10/2018</td>
<td>Refresher (1)</td>
<td>Washington, DC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9/1/2018</td>
<td>Refresher (1)</td>
<td>Denver, CO (exact date tbd)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9/27/2018</td>
<td>CAMA (4)</td>
<td>Anchorage, AK</td>
<td></td>
</tr>
<tr>
<td>FY19</td>
<td>10/22/2018</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12/7/2018</td>
<td>Refresher (1)</td>
<td>Salt Lake City, UT (tentative)</td>
<td></td>
</tr>
</tbody>
</table>
# AME Training Activity

<table>
<thead>
<tr>
<th>FY</th>
<th>Date of Seminar</th>
<th>Seminar Type</th>
<th>Seminar Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY17</td>
<td>10/24/2016</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
</tr>
<tr>
<td></td>
<td>12/7/2016</td>
<td>Refresher (1)</td>
<td>Tuscon AZ</td>
</tr>
<tr>
<td></td>
<td>2/10/2017</td>
<td>Refresher (1)</td>
<td>St Petersburg, FL</td>
</tr>
<tr>
<td></td>
<td>3/20/2017</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
</tr>
<tr>
<td></td>
<td>5/1/2017</td>
<td>Refresher (1)</td>
<td>Denver, CO</td>
</tr>
<tr>
<td></td>
<td>6/19/2017</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
</tr>
<tr>
<td></td>
<td>8/11/2017</td>
<td>Refresher (1)</td>
<td>Washington, DC</td>
</tr>
<tr>
<td></td>
<td>9/14/2017</td>
<td>CAMA (4)</td>
<td>Greensboro, NC</td>
</tr>
<tr>
<td></td>
<td>9/22/2017</td>
<td>Refresher (1)</td>
<td>Denver, CO</td>
</tr>
<tr>
<td>FY18</td>
<td>10/23/2017</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
</tr>
<tr>
<td></td>
<td>12/1/2017</td>
<td>Refresher (1)</td>
<td>Portland, OR</td>
</tr>
<tr>
<td></td>
<td>2/9/2018</td>
<td>Refresher (1)</td>
<td>Atlanta, GA</td>
</tr>
<tr>
<td></td>
<td>3/19/2018</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
</tr>
<tr>
<td></td>
<td>5/7/2018</td>
<td>AsMA (3)</td>
<td>Dallas, TX</td>
</tr>
<tr>
<td></td>
<td>6/11/2018</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
</tr>
<tr>
<td></td>
<td>8/10/2018</td>
<td>Refresher (1)</td>
<td>Washington, DC</td>
</tr>
<tr>
<td></td>
<td>9/1/2018</td>
<td>Refresher (1)</td>
<td>Denver, CO</td>
</tr>
<tr>
<td></td>
<td>9/27/2018</td>
<td>CAMA (4)</td>
<td>Anchorage, AK</td>
</tr>
<tr>
<td>FY19</td>
<td>10/22/2018</td>
<td>Basic (2)</td>
<td>Oklahoma City, OK</td>
</tr>
<tr>
<td></td>
<td>12/7/2018</td>
<td>Refresher (1)</td>
<td>Salt Lake City, UT</td>
</tr>
</tbody>
</table>

**Seminar Type Distribution**: Basic (2) - Refresher (1)

**Cost Distribution**: 40K - Basic (2) - Refresher (1)

**Total Cost Distribution**: 40K - Basic (2) - Refresher (1)

**Value Distribution**: FAA, TSO, AME Appl, AME
Drug Abatement (CY2016)

- 6,932 Regulated Companies
- 433,752 Safety-Sensitive Employees
- 58,458 alcohol tests were completed, with 153 alcohol tests over 0.04% and 22 refusals
- 234,118 drug tests were completed, with 1,757 positives and 366 refusals
- 1,657 inspections were conducted
- 199 investigations were initiated
FAA Experience with “BasicMed”

An Alternative Process to the Third Class Medical Certification of U.S. General Aviation Pilots
FAA Extension, Safety, and Security Act (FESSA) 2016 and BasicMed

• 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.
- One-time authorization for Special Issuance of a Medical Certificate for the following conditions
Conditions Requiring a One Time Special Issuance Authorization Under BasicMed

• Mental: 4

• Neurology: 3

• Cardiac: 4
Conditions Requiring a One Time Special Issuance Authorization Under BasicMed

• Mental:
  – Personality Disorder
  – Psychosis
  – Bipolar Disorder
  – Substance Dependence
Conditions Requiring a One Time Special Issuance Authorization Under BasicMed

• Neurology:
  – Epilepsy
  – Disturbance of Consciousness without Satisfactory Medical Explanation of Cause
  – Transient Loss of Control of Nervous System Functions without Satisfactory Medical Explanation of Cause
Conditions Requiring a One Time Special Issuance Authorization Under BasicMed

• Cardiac:
  – Myocardial Infarction
  – Coronary Artery Disease Requiring Treatment
  – Cardiac Valve Replacement
  – Heart Replacement
What does a pilot have to do to use BasicMed? Just two things!

Requirement #1

Get a physical exam from any state-licensed physician.

- Print the comprehensive medical examination checklist (CMEC) from faa.gov/go/basicmed or your course provider and complete the airman portion

- Bring the CMEC FAA Form 8700-2 to your exam.

- Keep your completed checklist somewhere safe

- Required every 48 months
Comprehensive Medical Evaluation

Performed by any state-licensed physician

– Hopefully the airman’s family or treating physician

The Physician must sign an attestation statement

– Discussed all items on the checklist and any medications that could interfere with operating aircraft or motor vehicle
– Performed examination on all items on the checklist
– Certify: “not aware of any medical condition that, as presently treated, could interfere with the individual’s ability to safely operate an aircraft.”
What does a pilot have to do to use BasicMed? Just two things!

Requirement #2

Take the free online course:

- See faa.gov/go/basicmed for a list of course providers.
- When taking the course, you must:
  - Provide the physician’s name, state license number, address, and phone.
  - Attest to your health and consent to a National Driver Registry check.
- Required every two years
Attest to your health…

• For any neurological or mental health condition(s), every 2 years the pilot must certify that they are under the care of a state-licensed medical specialist.

• This requirement also applies to any neurological or mental health condition for which they have held an Authorization of a Special Issuance Medical Certificate.

• While FESSA only specifies neurological or mental health conditions, a responsible pilot should regularly see their physician for any medical condition they may have.
Certificate Considerations

• If an airman has both a third-class medical certificate and met all the requirements for BasicMed, they must decide which rule they will fly under for each flight
  – No switching mid flight

• A third-class medical examination and certificate cannot be substituted for the comprehensive medical examination by a state licensed physician for BasicMed requirements
AME Role in BasicMed

• Aviation Medical Examiner (AME) designation is completely separate from BasicMed

• The decision of an AME to participate in BasicMed as the “state licensed physician” is an individual choice
  – This work would be outside of the AME Designation, and instead would be part of the physician’s non-AME practice

• AMEs should check with their insurance carriers
Pilots should assess their fitness before every flight

• Is there any medical deficiency (see 14 CFR 61.53) that makes me unsafe for flying?

• Do I pass the IMSAFE checklist?

• Am I clear of the effects of prescription and over-the-counter drugs?

• Do I have any risk factor that might lead to me becoming suddenly incapacitated during flight?

• Do I have any risk factors that might interfere with my ability to think clearly and/or react rapidly?
BasicMed Implemented
What aircraft may pilots fly under BasicMed?

• Any aircraft authorized under federal law to carry not more than 6 occupants and

• Maximum certificated takeoff weight of not more than 6,000 pounds
Operating requirements & limitations under BasicMed

• Passengers: Maximum of 5, with 6 total seats

• Flight rules: VFR or IFR
  No operation for compensation
  No speed beyond 250 knots
  Less than 18,000 feet MSL

• Location: Only within the United States
Where can you learn more?

BasicMed Resources:

- faa.gov/go/AME
- faa.gov/go/basicmed
- Section 61.113 and new Part 68
- Advisory Circular 68-1
FAA Experience with BasicMed

• No oversight or checks for falsification
  - Did not actually see a physician
  - Is not under the care of a physician
  - Did not truthfully disclose medical history

• No feedback notification system for the airman if found not to qualify under BasicMed conditions

• No process for handling a positive NDR report
  - Evaluation of the DUI circumstances
  - Notification of airman
  - Certificate action – there is no medical certificate

• Process for collecting number of flight hours
  - Need flight hours to calculate an accident rate
  - Current number of fatal accidents under BasicMed = 5
FAA Experience with BasicMed (cont.)

- Receive a monthly list of all BasicMed qualified airmen
- Conducting a monthly review of demographics of BasicMed airmen
  - Age
  - Class of prior medical certification
  - Date of last medical certificate
  - Special Issuance information
- Tracking all fatal BasicMed accidents
FAA Experience with BasicMed (cont.)

Age at BasicMed Date

Count

Age (Years)

0 15 25 35 45 55 65 75 85 95

0 100 200 300 400 500 600 700 800 900 1000

Bill Mills AAM631 6-5-2017
FAA Experience with BasicMed (cont.)

- 16,442 total pilots
- Average age - 64.0 years old
- Max age - 93.5 years old and youngest is 16.3 years old
- There are 28 pilots 90 years old or older
- There are 863 pilots 80 - 89 years old
- There are 4,310 pilots 70 - 79 years old
- There are 167 pilots from 20-29 years old
- There are 8 pilots less than 20 years old
FAA Experience with BasicMed (cont.)

![Bar Chart]

**Highest Airman's Certificate**

- **Certificate**
  - Airline Transport Pilot
  - Commercial Pilot
  - Commercial Pilot (Foreign Based)
  - Private Pilot
  - Private Pilot (Foreign Based)
  - Recreational Pilot
  - Sport Pilot
  - Student Pilot

**Count**

- 0
- 2,000
- 4,000
- 6,000
- 8,000
- 10,000
- 12,000

Bill Mills AAM631
9-5-2017
FAA Experience with BasicMed (cont.)

Years Since Last FAA Flight Physical

Count

Years Since Last FAA Flight Physical
• 5,693 (34.9%) of BasicMed qualified pilots received special issuance medical certificates
• 8.8% of all pilots, and 11.5% of 3rd-class pilots require a special issuance medical certificate
FAA Experience with BasicMed (cont.)

Number of New BasicMed Pilots per Day

Count

BasicMed Date (Labels ≥ 2 weeks)

04/23 05/07 05/21 06/04 06/18 07/02 07/16 07/30 08/13 08/27

Bill Mills; AAM631
9-5-2017
Over 500,000 Airmen As of Sept 1st, 2017
ATCS Activity

New Hires

Dispositions by Month FY17

Cumulative Dispositions FY17

On Board

FY17 On-Board ATC Clearances Issued by Month
Data as of 7/31/17
AVS Overview

• AVS Services and Offices:
  • Flight Standards Service (AFS)
  • Aircraft Certification Service (AIR)
  • Office of Aerospace Medicine (AAM)
  • Air Traffic Safety Oversight Service (AOV)
  • Office of Unmanned Aircraft Systems Integration (AUS)
  • Office of Accident Investigation and Prevention (AVP)
  • Office of Rulemaking (ARM)
  • Office of Quality, Integration, & Executive Services (AQS)