Would You Fly with This Pilot?

Presented to: Civil Aviation Medical Association

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Panel Members

- James R. Fraser, M.D., FAS, FAA
- Michael W. Cullen, M.D., Cardiology
- J. Eric Ahiskog, M.D., Neurology
- Jay A. Weiss, M.D., Psychiatry/Addiction
- Courtney Scott, D.O., AMCD, FAA
- David Schall, M.D, ENT, RFS, FAA
- Richard S. Roth, Infectious Disease
Case 1: ENT
Case 2: Cardiology
Case 3: Neurology
Case 4: Ophthalmology
Case 5: Psychiatry
Case 6: Addition
Case 1: ENT

• **History**
  – 50+ yo commercial pilot with 7,500 hours
  – Several year history of vertigo
  – ENT specialist reported that extensive neuro-otology work-up showed “hypoactive labyrinth disorder”
  – Treated w/ Paxil 2011, switched to Celexa 2012 with effective symptom response

• **Applying for re-certification for First-class under SSRI program after 12 mo stability**

• **Based on what you know so far...**
Would you fly with this pilot?

1.

2.
Case 1: ENT - Discussion (1)

• What do you need to look for?
  – Primary issue: not SSRI use, but history of vertigo
  – Is “hypoactive labyrinth disorder” the right dx? Unilateral or bilateral?
  – Evidence that treatment with SSRI effective?

• FAA determination: pending
  – Awaiting receipt of complete specialty evaluation
  – Neuropsychological testing: cognitive deficits for complex visuospatial construction, visual spatial recall, and evidence of inattention and poor vigilance.
Case 1: ENT - Discussion (2)

- **Additional information:**
  - Full neurotology records showed:
    - Clinical findings: no specific findings on testing or imaging
    - Dx: “Chronic subjective dizziness” /CSD
    - Rx: SSRI (Celexa)
  - Detailed aeromedical psych evaluation: no indication of clinical psychiatric or psychological disorder
  - Repeat NP testing: normal
  - Complete symptom-free over 2 years on Celexa

- **FAA determination: SI for first-class**
  
Case 2: Cardiology

• History
  – 50+ yo former military pilot
  – 2011: developed symptomatic SVT
  – 1/2012: EP study - atypical AV nodal re-entry tract
difficult to ablate. Second attempt resulted in high-
degree AV block, but hemodynamically stable
  – 2/2012: permanent pacer implanted.

• Applying for first-class medical certificate

• Based on what you know so far...
Would you fly with this pilot?

1. YES
2. NO
Case 2: Cardiology - Discussion

- **The key aeromedical questions are:**
  1. Cardiovascular performance with the pacer in place?
  2. Status of his pacer regarding battery/generator life, etc.?
  3. Is he “pacer dependent?”

- **Need: 2 mo recovery, medical records plus:**
  - Evaluation of pacer function
  - Holter, echo, maximal stress test, pacer download reports, labs, cardiologist evaluation

- **Results: favorable, not pacer dependent**

- **FAA determination: SI for first-class**
Case 3: Neurology

- **History**
  - 60+ yo with 5000 hours
  - 18 months post GA aircraft accident with multiple spine/extremity fractures, right vertebral artery dissection/occlusion
  - LOC +, amnestic for accident; bifrontal subdural hematoma (progression @ 2 mo, resolved @ 8 mo)
  - 14 d post injury: work-up for acute confusion showed subacute L occipital infarct

- **Applying for second-class recertification**
- **Based on what you know so far...**
Case 3: Neurology

A

B
Would you fly with this pilot?
Case 3: Neurology - Discussion (1)

• **The key aeromedical questions are:**
  1. What is his risk for post traumatic seizure?
  2. What is his risk for cognitive deficiencies?

• **Initial evidence suggests “severe” TBI**
  – get all of the medical documentation in order to accurately determine the actual severity of the brain injury
  – Critical records: initial presentation (EMT, ED records), records through clinical recovery (duration and type of long-term or persistent symptoms).
Case 3: Neurology - Discussion (2)

- **Moderate TBI**
  - Intracranial hemorrhage: no parenchymal hemorrhage or hemosiderin residua
    - Left occipital infarct: ischemic/embolic (traumatic)
    - Bifrontal subdural hematomas: dural tear exacerbated by anticoagulation
  - Neurocognitive status: No evidence of residual cognitive deficiencies from prior accidents; GCS 15 on admission; normal clinical neuro exam post recovery; no clinical evidence suggesting deficits

- **FAA determination: SI 2 yrs post recovery**
Case 4: Ophthalmology

- **History**
  - ~20 yo: 7d esophoria; OS 20/30 (distant and near)
  - hx of “perinatal encephalopathy/diplegic cerebral palsy” and strabismus corrected by surgery
  - Exam: mild articulation problems; slight incoordination; heel cord contractures but nl gait
  - Flight instructor letter: able to preform all pre-flight and cockpit functions

- **Applying for initial third-class student pilot**
- **Based on what you know so far...**
Would you fly with this pilot?

1. YES
2. NO
Case 4: Ophthalmalogy - Discussion

• 2 basic concerns
  1. Does he meet visual standards?
  2. Does he have the neuromuscular capability to fly an aircraft?

• Deferred for vision, neuro concerns
  – Neuro: felt to have static condition; passed MFT
  – Ophth: unlikely to have break in fusion or diplopia

• FAA determination:
  – Regular Issuance for third-class
Case 5: Psychiatry

• **History**
  – 23 yo third-class pilot with 400 hours; at initial examination in 2007 with another AME, issued unrestricted medical certificate.
  – At the exam in your office, the a/m discloses a recent hospitalization for “dehydration;” and at age 7 was diagnosed with ADHD and Asperger’s syndrome.
  – He denies any use of medications, and is very sincerely explains that he never really had ADHD or Asperger’s, and that he did not benefit from a short trial of medication.
  – By history and exam otherwise qualified; aside from being overly talkative you detect no overt indication of any mental disorder.

• **Applying for re-certification**

• **Based on what you know so far...**
Would you fly with this pilot?
Case 5: Psychiatry - Discussion

- **What issues does the AME face?**
  - suggests DQ diagnosis of ADHD or Asperger’s syndrome
  - Why was a/m issued un-restricted medical certificate previously?
  - Issue or not issue a medical certificate?
    - Issuance not an option, at least without checking with AMCD/region to see if ADHD/Asperger’s resolved previously
    - Deferral likely most appropriate

- **Additional information eventually showed:**
  - Recent hotline call that a/m had not disclosed full history
  - Recent hospitalization: transient psychogenic paralysis
  - 12+ yrs tx by peds psychiatrist specializing in ADHD/Asperger’s

- **FAA determination: denial**
Case 6: Addiction

- **History**
  - 50 yo Class 1 pilot with 11,000 hours
  - Off-duty incident overseas involving bizarre behavior and a black-out. Initially, pilot claimed his drink had been spiked.
  - Admitted to heavy drinking and previous use of Zoloft in 2002.
  - Inpatient treatment 9/2012: diagnosed with alcohol dependence and anxiety requiring treatment (Zoloft)
  - Neuropsychological testing in 6/2012 showed cognitive deficits (including LRPV > 0.95); 6/2013 testing in showed resolution.
  - Now over 12 months on stable dose of Zoloft.

- **A/m applying through the HIMS & SSRI programs**

- **Based on what you know so far...**
Would you fly with this pilot?

1. YES

2. NO
Case 6: Addiction - Discussion

- Seeing more frequently: substance dependence plus mood disorder requiring SSRI
- “Straight-forward” decision regarding alcohol dependence: self-admitted he had a problem
- Combo tx for EtOH dependence and anxiety (+ Zoloft): stability of recovery and behavior/mood.
- Deficits on neuropsych testing: see frequently, but often improve with sustained recovery

- FAA determination: SI under HIMS & SSRI
Case 7: HIV on Anti-viral medication

- 39 y/o First-class with Major Airline
- When developed HIV was med-board out of USAF as KC-135 pilot
- Flown for 21 years with 10,700 flight hours
- Aircraft B 737
- Medication only COMPLERA (=Emtricitabine, Rilpivirine, Tenofovir)
- Favorable status report
Would you fly with this pilot?

1. YES

2. NO
Case 7: Continued

- Would you fly with this airman?

https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/ame/ame/guide/dec_cons/disease_prot/hiv/

Application for special issuance must include reports of examination by a physician knowledgeable in the treatment of HIV infected persons and a medical history emphasizing symptoms and treatment referable to the immune and neurologic system. In addition, these reports must include a "viral load" determination by polymerase chain reaction (PCR), CD4+ lymphocyte count, a complete blood count, and the results of liver function tests. An assessment of cognitive function (preferably by Cogscreen or other test battery acceptable to the Federal Air Surgeon) must be submitted. Additional cognitive function tests may be required as indicated by results of the cognitive tests. At the time of initial application, viral load must not exceed 1,000 copies per milliliter of plasma, and cognitive testing must show no significant deficit(s) that would preclude the safe performance of airman duties.
Case 7: Continued

• Would you fly with this airman?
  https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/ame/ame/guide/dec_cons/disease_prot/hiv/

Application for special issuance must include reports of examination by a physician knowledgeable in the treatment of HIV-infected persons and a medical history emphasizing symptoms and treatment referable to the immune and neurologic system. For initial consideration, see the Human Immunodeficiency Virus (HIV) Specification Sheet (PDF) for the required clinical reports and documentation (including cognitive testing).

• If granted Authorization for Special Issuance, follow-up requirements will be specified in the Authorization letter. However, the usual requirements will be:
  • First 2 years of surveillance: see the Under 2 Year Surveillance HIV Specification Sheet (PDF)
  • After the first 2 years of surveillance: see the After 2 Years Surveillance HIV Specification Sheet (PDF)
Case 7: Continued

HUMAN IMMUNODEFICIENCY VIRUS (HIV)

Persons who are infected with the HIV and who do not have a diagnosis of Acquired Immunodeficiency Syndrome (AIDS) may be considered for any class medical certificate, if otherwise qualified. Persons on an antiretroviral medication will be considered only if the medication is approved by the U.S. Food and Drug Administration and is used in accordance with an acceptable drug therapy protocol. Current studies should be submitted no later than 30-days from test date. In order to be considered for a medical certificate the following data must be provided:

1. A current report from a physician knowledgeable in the treatment of HIV-infected persons and a medical history emphasizing symptoms and treatment referable to the immune system.

2. Current viral load determination by polymerase chain reaction (PCR), (for persons who have had an AIDS defining illness 2 determinations 1-month apart);

3. Current CD4 (for persons who have had an AIDS defining illness 2 determinations 1-month apart), and lymphocyte count;

4. Current complete blood count (CBC) with differential;

5. Results of current liver function tests;

6. BUN and creatinine

7. a. A current assessment of cognitive function (preferably by CogScreen-AE [Aeromedical Edition] or other test battery) must be provided with the initial application. Follow-up neurological-psychological evaluations are required annually for first and second-class pilots and every other year for third-class.

b. If CogScreen-AE is not available, we suggest the following:
   1. MMPI
   2. WAIS-R
   3. Memory Test (one of the following)
      a. Wechsler Memory Scale
      b. Rey auditory Verbal Learning Test
   4. Trails Making Test (A&B)
   5. Category Test (booklet or machine)
   6. Sensory-Motor Screening
   7. Language Functioning Test (one of the following)
      a. Speech Sounds Perception Test
      b. Aphasia Screening Test

All of the above should be submitted together in one mailing to:

Federal Aviation Administration
Aeromedical Certification Branch-AAM-311
Mike Monroney Aeronautical Center
PO Box 25062
Oklahoma City OK 73125

OR by Federal Express, UPS, Airborne, etc. to:

Federal Aviation Administration
Aeromedical Certification Branch-AAM-311
Mike Monroney Aeronautical Center
6700 S MacArthur Blvd Room B-59
Oklahoma City OK 73169

8. For applicants with a history of cytomegalovirus (CMV) retinitis, a current ophthalmological evaluation with visual fields must be provided with the initial application and at 6-month intervals thereafter.
Case 7: continued

• Labs:
  – GLUC 97; BUN 16, CREATININE 1.13, eGFR 82;
  – WBC 6,5K, H&H 16.5/48, PLT CT 217k
  – Absolute CD4+ 200
  – HIV 1 RNA <20

• CogScreen testing: LRPV score 0.995
  – AXIS I; No diagnosis
  – AXIS II; No diagnosis
  – GAF 85
Case 7: Continued

• Would you fly with this airman?

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QUESTIONS?