

Mental Health Screening in Aviators- AsMA Recommendations

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Jet Blue Incident

- 27 March 2012 A320-200 flight from New York to Las Vegas
- 49 yo Captain, 12 yr veteran of Jet Blue
- Had appearance of an acute psychotic episode: “preaching”, threats of a bomb and inevitable crashing
- First Officer locked him out of the cockpit
- Subdued by passengers
- Aircraft diverted to Amarillo, Texas
- Treated in Mental Health Facility, following prescribed medications
- No precursors



Air Canada Incident

- 28 January 2008
- Air Canada Boeing 767 146 passengers/9 crew Toronto to London, UK
- Incident mid-flight over Atlantic
- 58 yo experienced co-pilot
- Co-pilot arrived late, “quite harried”
- Fatigued and taking couple of rest breaks became “belligerent and uncooperative”, “talking to God”, “confused and disoriented”
- Captain removed co-pilot from cockpit and restrained
- Diverted to Shannon, Ireland
- After landing, co-pilot forcibly removed from plane by crew
- Treated in psychiatric unit for 11 days before released



Other possible incidents

- Japan Air Lines DC-9 crash into Tokyo Bay, 9 Feb 1982
- Royal Air Maroc ATR 42 crash in the Atlas Mountains, 21 Aug 1994
- EgyptAir Boeing 767 crash into the Atlantic Ocean, 31 Oct 1999



AsMA Response

- Discussed by AsMA Executive Committee: Do we need to say something?, rates?, screening?, adequacy?
- Formed Ad Hoc Task Group on “Pilot Mental Health Issues” of AsMA mental health and aerospace medicine experts



Group members

- Dr. Philip Scarpa - NASA, AsMA VP, Coordinating Chair (aerospace medicine)
- Dr. Thomas Bettes – Medical Director, American Airlines (occupational medicine)
- Dr. Gary Beven – Chief, BHP, NASA-JSC (psychiatry)
- Prof. Robert Bor – UK (clinical psychology)
- Dr. Christopher Flynn - Texas Medical Center, Houston, former NASA (psychiatry)
- Dr. John Hastings – (neurology and aerospace Medicine)
- Dr. Marvin Lange – Canada/ICAO (psychiatry)
- Dr. Roy Marsh – Former NASA and USAF (psychiatry)
- Dr. Joseph McKeon – (aerospace medicine)
- Dr. Kent McDonald – USAFSAM (psychiatry)
- Dr. Russ Rayman - (aerospace medicine)
- Dr. Warren Silberman – Former FAA (aerospace medicine)
- Dr. Jarnail Singh – ICAO (aerospace medicine)



Consultants

- Dr. Tony Evans - ICAO
- Dr. Sandy Mitchell – former BA 747 Captain, physician, IFALPA flight Safety, ICAO medical study participant
- Dr. Walter Sipes – NASA, former USAF psychologist
- Dr. Gordon Turnbull – UK CAA advisor



Guidelines

- AsMA should say something about aviator mental health issues, “teachable moment”
- Should include mental health education and awareness
- Not enough mental health/wellness assessment in periodic aviator screening
- Caution not to be too reliant on recent cases – rare, or screening for acute psychosis – difficult to predict
- However, emphasis on awareness and screening for mental health stressors and predictable mental health conditions
- Should include or reference proven screening tools and approaches
- Cover private, civil, and military aviation
- Maintain an international perspective
- Acknowledge Pilot/AME culture issues



Recommendations

- **“Serious Mental Health illness involving sudden psychosis are relatively rare, and their onset is impossible to predict”**
 - The working group believes that an extensive psychiatric evaluation as part of the routine pilot aeromedical assessment is neither productive nor cost effective and therefore not warranted



Recommendations

- **“However, more attention should be given to mental health issues during the aeromedical assessment of pilots”**
 - There are many other mental health conditions, such as depression, anxiety/panic disorders, and substance misuse, which are far more common, show patterns that facilitate early detection, and have proven effective treatment strategies



Recommendations

- **“Quick and effective methods to assess pilot mental health exist that could easily be performed during the aeromedical assessment”**
 - These methods, which consist of questions and interview techniques, will have minor impact to the current examination and should not prove burdensome for the pilot or examining physician
 - Methods should be approached to help promote a nonthreatening environment and build rapport with the aviator. Asking the pilot aviator about work/fatigue, home and family, may reveal stressors



More common, predictable, treatable

- Fatigue?
- Anxiety?
- Depression?
- Mania?
- Alcohol abuse?
- Drug abuse?
- Life Stressors?



Useful Proven Screening Tools

- The CAGE Questionnaire

Ewing, JA. JAMA 1984; 252:1905-7

- The Altman Self-Rating Mania Scale

Altman EG, Hedeker D, Peterson, JL, Davis JM. Biol Psychiatry 1997; 42:948-55

- An Ultra-Brief Screening Scale for Anxiety and Depression: the PHQ-4

Kroenke K, Spitzer RL, Williams JBW, Lowe B. Psychosomatics 2009; 50:613-21

- The NIDA Quick Screen

National Institute on Drug Abuse.

<http://www.nida.nih.gov/nidamed/screening/nmassist.pdf>



The CAGE Questionnaire

CAGE Questions

1. Have you ever felt you should cut down on your drinking?
2. Have people annoyed you by criticizing your drinking?
3. Have you ever felt bad or guilty about your drinking?
4. Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover (eye-opener)?

CAGE Questions Adapted to Include Drug Use (CAGE-AID)

1. Have you ever felt you ought to cut down on your drinking or drug use?
2. Have people annoyed you by criticizing your drinking or drug use?
3. Have you felt bad or guilty about your drinking or drug use?
4. Have you ever had a drink or used drugs first thing in the morning to steady your nerves or to get rid of a hangover (eye-opener)?

≥ 2 = potential abuse



The Altman Self-Rating Mania Scale

0-4 scoring

Question 1 – happiness level

Question 2 – self-confident level

Question 3 – need for sleep level

Question 4 – talking level

Question 5 – activity level

Score ≥ 6 = high probability of mania/hypomania



The Ultra-Brief Screening Scale for Anxiety and Depression: the PHQ-4

Over the last 2 weeks how often have you been bothered by these problems?	Not at All	Several Days	More Days than Not	Nearly Every Day
Feeling nervous, anxious, or on edge	0	1	2	3
Not being able to stop or control worrying	0	1	2	3
Feeling down, depressed, or hopeless	0	1	2	3
Little interest or pleasure in doing things	0	1	2	3

Scores = normal (0-2), mild (3-5), moderate (6-8), and severe (9-12)



The NIDA Quick Screen

In the past year, how often have you used the following?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Alcohol -For men, ≥ 5 drinks/day -For women, ≥ 4 drinks/day					
Tobacco Products					
Prescription Drugs for Non-Medical Reasons					
Illegal Drugs					

Positive = "Yes" to any



Recommendations

- **“It is recognized that there may be barriers affecting a frank discussion of mental health issues between an aeromedical examiner and a pilot”**
 - Culture exists - Highly independent, in control, fear of losing medical cert.
 - Successful approaches = aim to provide a “safe zone” for reporting and discussion. These approaches show increase rates of reporting and intervention



APA Project Wingman

- Allied Pilots Association (American Airlines Pilots union)
- Provides confidential “safe zone” of peer EAPs, without retribution
- Provides counselling, referral to competent professional authority, public outreach to increase awareness, and de-stigmatization of mental health care
- Resulted in dramatic increase reporting & counseling



Recommendations

- **“Physicians performing aeromedical assessments should receive additional periodic training in aviation mental health issues”**



Recommendations

- **“Similarly, aircrew, their families and flight organizations (civil and military) be made more aware of mental health issues in aviation”**
 - Awareness beyond the physician should facilitate greater recognition, reporting and discussion
 - Training for aviators to improve management of impairment or incapacitation due to mental health problems could be included during CRM training, when this does not already occur
 - Training should be standardized throughout the global community as much as possible



Recommendation Summary

- A routine extensive evaluation for serious psychiatric illness is not recommended
- Greater attention should be given to more common, predictable, and treatable mental health conditions and life stressors
- Recommend use of Low Burden, Quick and Effective methods in aeromedical assessment
- Encourage rapport-building, and providing a nonthreatening “safe zone” for reporting and discussion
- Facilitate these changes through additional training for physicians, aircrew, families and flight organizations
- Encourage global standardization of training and approaches



Recommendations Letter sent to:

- US Federal Aviation Administration
- European Aviation Safety Agency
- UK Civil Aviation Authority
- International Civil Aviation Organization
- International Air Transport Association
- European Society of Aerospace Medicine
- Civil Aviation Medical Association
- Association of Aviation Medical Examiners
- Airline Pilots' Association, International
- US Airlines Pilots' Association
- Allied Pilots Association
- Coalition of Airline Pilots Associations
- Independent Pilots Association
- Southwest Airlines Pilots' Association
- International Federation of Air Line Pilots' Associations
- Australian and International Pilots Association
- Aircraft Owners and Pilots Association
- International Society of Women Airline Pilots
- Canadian Airline Pilots' Association



Recommendations published

- In AsMA Journal
 - Aviation, Space, and Environmental Medicine, Vol 83, No. 12, December 2012
- On AsMA Website
 - www.asma.org



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Thank You