

Aerospace Medical Association

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September 21, 2015

Michael Huerta, Administrator
Federal Aviation Administration
800 Independence Ave, SW
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Subject: Pilot Mental Health - Updated Expert Working Group Recommendations

In September 2012, the Aerospace Medical Association distributed our Pilot Mental Health Working Group's recommendations for improving the awareness and identification of pilot mental health issues during the aeromedical assessment of pilots (Atch 1) and published the working group's recommendations in our scientific journal later that year (Atch 2).

Following the tragic Germanwings Flight 9525 accident in the French Alps in March 2015, the Aerospace Medical Association Pilot Mental Health Working Group reconvened to review the recommendations. As a result, the working group updated the recommendations and these are attached for your awareness and use (Atch 3). We encourage all organization involved in flight safety to carefully review the recommendations and implement the recommendations as part of your normal operations.

The Aerospace Medical Association is committed to the safety of the flying public and supports the current medical standards agreed upon internationally that aviators suffering from any medical condition that jeopardizes flight safety (including mental illness) should be restricted from flying duties. We offer the above recommendations and measures and encourage data collection to validate their effectiveness. Success of these recommendations to promote mental health awareness and improve mental health screening will require involvement of the entire aviation community of air crew, employers, regulators, and health care providers. We recognize that there are no simple solutions, that testing for mental illness is not infallible, that some measures will take time without showing immediate effect, and that the risk of hazards in flying will never be zero, but we believe these implemented recommendations should help reduce the already low flight safety risk due to mental illness.

Sincerely,

A handwritten signature in black ink that reads "Kris M. Belland". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kris M. Belland, DO, MPH, MBA, MSS
President

ATTACHMENTS:

1. AsMA Pilot Mental Health Working Group Recommendations Letter - September 4, 2012
2. Aerospace Medical Association ad hoc Working Group on Pilot Mental Health, *Pilot Mental Health: Expert Working Group Recommendations*. Aviat Space Environ Med 2012; 83:1184-5.
3. AsMA Pilot Mental Health Working Group Recommendations - Updated September 2015

Aerospace Medical Association



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September 4, 2012

Michael Huerta, Acting Administrator
FAA Headquarters
Federal Aviation Administration
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Subject: Pilot Mental Health - Expert Working Group Recommendations

The Aerospace Medical Association is a professional organization of 2,500 physicians, nurses and scientists engaged in the clinical practice of aerospace medicine and related research and education activities.

Recent events involving a potential disturbance of mental health in pilots (ref 1,2) prompted the formation of a working group of experienced clinical aerospace medicine and mental health experts (psychiatrists and psychologists) to discuss mental health issues in pilots. We are providing you with a synopsis of our deliberations and recommendations based on expert opinion.

Serious mental health illnesses involving sudden psychosis are relatively rare, and their onset is impossible to predict. In this context, 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.

However, the working group believes that 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.

Quick and effective methods to assess pilot mental health exist that could easily be performed during the aeromedical assessment (ref 3-8). 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. Such methods can be approached in a way that helps promote a non-threatening environment and builds rapport with the pilot. Asking the pilot about work (including fatigue), home and family may reveal situations and stressors faced by the applicant which could be ameliorated.

The working group recognizes that there may be barriers affecting a frank discussion of mental health issues between an aeromedical examiner and a pilot. Successful approaches that improve reporting and discussion aim to provide a “safe zone” for such activities (ref 3,9). Experience has shown that these approaches have been very successful at increasing the rates of reporting and providing needed assistance.

The working group recommends that physicians performing aeromedical assessments receive additional periodic training in aviation mental health issues. Similarly, we recommend that 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 pilots to improve management of impairment or incapacitation due to mental health problems could be included during CRM (Crew Resource Management) training, when this does not already occur. While awareness training needs to be sensitive to regional differences it should be standardized across the global community as much as possible.

In summary, the Aerospace Medical Association does not recommend an extensive psychiatric evaluation as part of the routine pilot aeromedical assessment. However, the Association does recommend greater attention be given to mental health issues by aeromedical examiners and by the aviation community in general, especially to the more common and detectable mental health conditions and life stressors that can affect pilots and flight performance. We encourage this through increased education and global recognition of the importance of mental health in aviation safety.

The Aerospace Medical Association stands ready to assist you.



P. Glenn Merchant, Jr, MD, MPH
President

Ad Hoc Working Group

Chair: Philip Scarpa, MD, MS (aerospace medicine); Thomas Bettles, MD, MPH (occupational medicine); Gary Beven, MD (psychiatry); Robert Bor, PhD (clinical psychology); Christopher Flynn, MD (psychiatry); John Hastings, MD (aerospace medicine); Marvin Lange, MD (psychiatry); Roy Marsh, MD (psychiatry); Joseph McKeon, MD, MPH (aerospace medicine); Kent McDonald, MD (psychiatry); Russell Rayman, MD, MPH (aerospace medicine); Warren Silberman, DO, MPH (aerospace medicine); Jarnail Singh, MD (aerospace medicine).

References

1. Farley, G. After JetBlue pilot incident, is mental health screening required? KING 5 News, March 28, 2012. <http://www.king5.com/news/local/After-JetBlue-pilot-incident-what-is-the-mental-screening-process-144741175.html>.
2. Air Canada flight attendant helped land plane after co-pilot breakdown: report. CBC News, November 19, 2008. <http://www.cbc.ca/news/world/story/2008/11/19/aircanada-report.html>

3. Manual of Civil Aviation Medicine, International Civil Aviation Organization, 3rd ed, 2012
http://www.icao.int/publications/Documents/8984_cons_en.pdf
4. Ewing JA. Detecting Alcoholism: The CAGE Questionnaire. J American Medical Assoc 1984; 252:1905-07.
5. Helping Patients Who Drink Too Much: A Clinician's Guide, Updated 2005 Edition, National Institutes of Health Publication No. 07-3769. Bethesda, MD; National Institute on Alcohol Abuse and Alcoholism; 2007.
<http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/guide.pdf>
6. Kroenke K, Spitzer RL, Williams JBW, Lowe B. An Ultra-Brief Screening Scale for Anxiety and Depression: the PHQ-4. Psychosomatics 2009; 50: 613-21.
7. Altman EG, Hedeker D, Peterson JL, Davis JM. The Altman self-rating mania scale. Society of Biological Psychiatry 1997; 42:948-955.
8. The NIDA Quick Screen; National Institute on Drug Abuse.
<http://www.nida.nih.gov/nidamed/screening/nmassist.pdf>
9. Project Wingman advertisement, Flightline, Allied Pilots Association, August 2011, page 6.
<https://public.alliedpilots.org/APA/LinkClick.aspx?fileticket=hcodg5bSoEM%3D&tabid=59>

Pilot Mental Health: Expert Working Group Recommendations

AEROSPACE MEDICAL ASSOCIATION AD HOC WORKING GROUP ON PILOT MENTAL HEALTH

AEROSPACE MEDICAL ASSOCIATION AD HOC WORKING GROUP ON PILOT MENTAL HEALTH. *Pilot mental health: expert working group recommendations*. *Aviat Space Environ Med* 2012; 83:1184-5.

Following a March 27, 2012, incident in which a pilot of a major commercial airline experienced a serious disturbance in his mental health, the Aerospace Medical Association formed an Ad Hoc Working Group on Pilot Mental Health. The working group met several times and analyzed current medical standards for evaluating pilot mental health. The result of the working group was a letter sent to the FAA and other organizations worldwide interested in medical standards. The Committee found that it is neither productive nor cost effective to perform extensive psychiatric evaluations as part of the routine pilot aeromedical assessment. However it did recommend greater attention be given to mental health issues by aeromedical examiners, especially to the more common and detectable mental health conditions and life stressors that can affect pilots and flight performance. They encouraged this through increased education and global recognition of the importance of mental health in aviation safety.

Keywords: pilot health, psychiatry, stress.

RECENT EVENTS involving a potential disturbance of mental health in pilots (2,4) prompted the formation of a working group of experienced clinical aerospace medicine and mental health experts (psychiatrists and psychologists) to discuss mental health issues in pilots. We are providing you with a synopsis of our deliberations and recommendations based on expert opinion.

Serious mental health illnesses involving sudden psychosis are relatively rare, and their onset is impossible to predict. In this context, 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.

However, the working group believes 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.

Quick and effective methods to assess pilot mental health exist that could easily be performed during the aeromedical assessment (1,3,5-8). These methods, which consist of questions and interview techniques, will have minor impact on the current examination and should not prove burdensome for the pilot or examining physician. Such methods can be approached in a way that helps promote a nonthreatening environment and builds rapport with the pilot. Asking the pilot about work (including

fatigue), home, and family may reveal situations and stressors faced by the applicant which could be ameliorated.

The working group recognizes that there may be barriers affecting a frank discussion of mental health issues between an aeromedical examiner and a pilot. Successful approaches that improve reporting and discussion aim to provide a "safe zone" for such activities (3,9). Experience has shown that these approaches have been very successful at increasing the rates of reporting and providing needed assistance.

The working group recommends that physicians performing aeromedical assessments receive additional periodic training in aviation mental health issues. Similarly, we recommend that 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 pilots to improve management of impairment or incapacitation due to mental health problems could be included during CRM (Crew Resource Management) training when this does not already occur. While awareness training needs to be sensitive to regional differences it should be standardized across the global community as much as possible.

In summary, the Aerospace Medical Association does not recommend an extensive psychiatric evaluation as part of the routine pilot aeromedical assessment. However, the Association does recommend greater attention be given to mental health issues by aeromedical examiners and by the aviation community in general, especially to the more common and detectable mental

This Commentary was sent as a letter to the Acting Administrator of the Federal Aviation Administration, Michael Huerta, on September 4, 2012, and to other organizations worldwide interested in medical standards. The following members of the Aerospace Medical Association were part of the Ad Hoc Working Group: Philip Scarpa, M.D., M.S. (Chair, aerospace medicine); Thomas Bettes, M.D., M.P.H. (occupational medicine); Gary Beven, M.D. (psychiatry); Robert Bor, Ph.D. (clinical psychology); Christopher Flynn, M.D. (psychiatry); John Hastings, M.D. (aerospace medicine); Marvin Lange, M.D. (psychiatry); Roy Marsh, M.D. (psychiatry); Joseph McKeon, M.D., M.P.H. (aerospace medicine); Kent McDonald, M.D. (psychiatry); Russell Rayman, M.D., M.P.H. (aerospace medicine); Warren Silberman, D.O., M.P.H. (aerospace medicine); and Jarnail Singh, M.D. (aerospace medicine).

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health conditions and life stressors that can affect pilots and flight performance. We encourage this through increased education and global recognition of the importance of mental health in aviation safety.

REFERENCES

1. Air Canada flight attendant helped land plane after co-pilot breakdown: report. CBC News, November 19, 2008. Accessed on May 24, 2012, from: <http://www.cbc.ca/news/world/story/2008/11/19/aircanada-report.html>
2. Altman EG, Hedeker D, Peterson JL, Davis JM. The Altman self-rating mania scale. *Biol Psychiatry* 1997; 42:948–55.
3. Ewing JA. Detecting Alcoholism: The CAGE Questionnaire. *JAMA* 1984; 252:1905–7.
4. Farley G. After JetBlue pilot incident, is mental health screening required? KING 5 News, March 28, 2012. Accessed on April 26, 2012, from: <http://www.king5.com/news/local/After-JetBlue-pilot-incident-what-is-the-mental-screening-process-144741175.html>.
5. Helping Patients Who Drink Too Much. A Clinician's Guide, Updated 2005 Edition, National Institutes of Health Publication No. 07–3769. Bethesda, MD; National Institute on Alcohol Abuse and Alcoholism; 2007. Accessed on June 2, 2012, from: <http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/guide.pdf>
6. International Civil Aviation Organization. Manual of Civil Aviation Medicine, International Civil Aviation Organization, 3rd ed. Montreal: ICAO; 2012 Accessed on May 9, 2012, from: http://www.icao.int/publications/Documents/8984_cons_en.pdf
7. Kroenke K, Spitzer RL, Williams JBW, Lowe B. An Ultra-Brief Screening Scale for Anxiety and Depression: the PHQ-4. *Psychosomatics* 2009; 50:613–21.
8. National Institute on Drug Abuse. The NIDA Quick Screen; National Institute on Drug Abuse. Bethesda, MD: NIDA; Accessed on June 2, 2012, from: <http://www.nida.nih.gov/nidamed/screening/nmassist.pdf>.
9. Project Wingman, advertisement. Flightline August 2011:6. Accessed on May 23, 2012, from: <https://public.alliedpilots.org/APA/LinkClick.aspx?fileticket=hcodg5bSoEM%3D&tabid=59>

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Aerospace Medical Association (AsMA) Pilot Mental Health: Expert Working Group
Recommendations – Revised 2015

(These recommendations will be reviewed regularly and revised as needed by AsMA).

- **“Mental well-being and absence of mental illness are essential to the safe performance of pilot and aviation safety-sensitive duties”**
- **“Mental health should be evaluated as part of the aeromedical assessment of pilots”**
- **“Serious mental illness such as acute psychosis is relatively rare, and its onset is difficult to predict”**
 - AsMA believes that in-depth psychological testing for detecting serious mental illness as part of the routine periodic pilot aeromedical assessment is neither productive nor cost effective and therefore not warranted.
 - An initial appropriate psychological evaluation established by subject matter experts is recommended for pilots entering airline employment and recurrently for pilots with a history of mental illness.
- **“However, more attention should be given to less serious and more common mental health issues and conditions during the aeromedical assessment of pilots”**
 - There are many other mental health conditions, such as grief, psychosocial stress, depression, anxiety, panic disorders, personality disorders, and substance misuse/abuse, which are far more common, show patterns that facilitate early detection, and have proven effective treatment strategies.
- **“Methods should be utilized to build rapport and trust with the pilot in a nonthreatening environment”**
 - Questions and interview techniques can be used to assess mental health that will have a minor impact on the current examination and should not prove burdensome for the pilot or examining physician (see references). Asking questions regarding mood, quality of sleep, current sources of stress (such as work, fatigue, financial, home and family), alcohol and/or substance use are recommended. These questions should be woven into the conversation with the pilot during the aeromedical examination as part of a general health promotion discussion that addresses a variety of health issues, both mental and physical. Training demonstrations or videos may be helpful.
- **“It is recognized that there may be barriers affecting a frank discussion of mental health issues between an aeromedical examiner and a pilot”**
 - Cultural barriers exist – Pilots are highly independent, value control, and fear losing their medical certification.
 - Successful approaches that improve rates of reporting, discussion, and participation aim to provide a “safe zone” for such activities. These approaches enhance aviation safety

and optimize pilot mental health while minimizing career jeopardy and the stigma of seeking mental health assistance. Examples include:

1. Project Wingman

- Allied Pilots Association (APA - American Airlines pilots union)
- Provides confidential “safe zone” of peer employee assistance program (EAP) personnel
- Provides counselling, referral to competent health professional authority, public outreach to increase awareness, and de-stigmatization of mental health care
- Resulted in an increase reporting and counseling

2. ALPA (Air Line Pilots Association, International) HIMS (Human Intervention Motivation Study) program

- Collaboration between aviation employers, pilot unions, aviation psychiatrists and psychologists, senior aeromedical examiners and regulator preserving careers and increasing aviation safety
- Confidential self-referral option and peer/management intervention options with career preservation
- Return to flying monitored carefully by peers, management, psychiatric and psychological specialists, and aeromedical examiners with periodic reports to regulator
- Trust and Just Culture environment for reporting well established and accepted among pilots

3. Delta Airlines “Pilot Assistance Network” (PAN)

- Similar to APA Project Wingman with broader pilot union involvement
- Pilots self-refer to peers – given full spectrum of resources for assistance (peers, EAP, and union aeromedical services)
- Training department and chief pilots can alert PAN committee members to pilot with potential problems if difficulties are identified. Then situation is handled peer-to-peer with company agreement to restrict pilot from flying duties if appropriate until situation resolved safely
- 24/7 confidential hotline manned by peer volunteers on pilot union telephone tree
- Destigmatizes mental health issues, encourages reporting and treatment with financial protection and career preservation

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

- This should be emphasized as part of the initial and periodic aeromedical examiner training programs.
- This training would also include guidance for when an aeromedical examiner should consult/refer to a mental health specialist provider or other aeromedical resource.

- **“Clinicians not trained in aeromedical assessment should be provided guidance for when to seek aeromedical expertise”**
 - Aerospace medicine is a unique area of expertise related to optimizing the health, safety and performance of aircrews.
- **“Similarly, aircrew, their families and flight organizations (civil and military) should be made more aware of mental health issues in aviation”**
 - Extended awareness beyond the physician should facilitate greater recognition, reporting and discussion.
 - Pilot training to improve management of impairment or incapacitation due to mental health conditions can be emphasized and incorporated into Crew Resource Management (CRM) education.
 - To the extent possible, such training should be standardized throughout the global aviation community.
- **“All aviation regulatory authorities and aviation employers should establish a policy and strategy on substance misuse and abuse”**
 - Consult the International Civil Aviation Organization (ICAO) guidance on this topic (see reference).
- **“There should be clear and universally accepted guidelines provided to health care providers on when their obligation to report aeromedical concerns to authorities supersedes their responsibility to patient confidentiality”**
 - This reporting should be similar to other mandatory medical reporting such as for infectious diseases in public health laws.
 - The risk to public safety should be clearly evident.
 - The reporting should be anonymous where this approach is acceptable.
 - The reporting should be without legal risk to the health care provider.

Conclusions

The Aerospace Medical Association is committed to the safety of the flying public and supports the current medical standards agreed upon internationally that aviators suffering from any medical condition that jeopardizes flight safety (including mental illness) should be restricted from flying duties. We offer the above recommendations and measures and encourage data collection to validate their effectiveness. Success of these recommendations to promote mental health awareness and improve mental health screening will require involvement of the entire aviation community of air crew, employers, regulators, and health care providers. We recognize that there are no simple solutions, that testing for mental illness is not infallible, that some measures will take time without showing immediate effect, and that the risk of hazards in flying will never be zero, but we believe these implemented recommendations should help reduce the already low flight safety risk due to mental illness.

References:

- Pilot Mental Health: Expert Working Group Recommendations
Aerospace Medical Association Ad Hoc Working Group on Pilot Mental Health. Aviation, Space, and Environmental Medicine, 2012; 83:1184-5.
- The Altman Self-Rating Mania Scale
Altman EG, Hedeker D, Peterson, JL, Davis JM. Biol Psychiatry 1997; 42:948-55.
- The CAGE Questionnaire
Ewing, JA. JAMA 1984; 252:1905-7.
- 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, www.nida.nih.gov/nidamed/screening/nmassist.pdf.
- ICAO guidance on Mental and Behavioral Health questions and Health Promotion at periodic medical examinations
The International Civil Aviation Organization (ICAO) Manual of Civil Aviation Medicine (Doc 8984-AN/895, Part I, Chapter 2), www.icao.int/publications/pages/publication.aspx?docnum=8984.
- ICAO guidance on competency based training for medical examiners, including building rapport with applicants and the evaluation of psychiatric and psychosocial factors
The International Civil Aviation Organization (ICAO) Manual of Civil Aviation Medicine (Doc 8984-AN/895, Part V, Chapter 1), www.icao.int/publications/pages/publication.aspx?docnum=8984.
- Information on Aerospace Medicine can be found at the Aerospace Medical Association website, www.asma.org.
- ICAO guidance on Substance Misuse/Abuse
The International Civil Aviation Organization (ICAO) Manual on Prevention of Problematic Use of Substances in the Aviation Workplace (Doc 9654-AN/945).

The Altman Self-Rating Mania Scale

0-4 scoring (0 = no change from usual, 1 = occasionally more than usual, 2 = often more than usual, 3 = most, more or frequently more than usual, 4 = extremely or all of the time).

Question 1 – happier than usual level

Question 2 – more self-confident than usual level

Question 3 – need for less sleep than usual level

Question 4 – talking more than usual level

Question 5 – more active than usual level

≥ 6 = high probability of mania/hypomania

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

Ultra-Brief Screening Scale for Anxiety and Depression: 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

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

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