

# Missing Perspectives

The most frequently reported in-flight medical events typically are not those that present the greatest threat to safety or to piloting careers.

BY QUAY SNYDER, M.D.



The recent *AeroSafety World* article on flight crew illnesses (*ASW*, 8/07, p. 22) provides valuable insight into illnesses and injuries affecting flight crews during flight. The relative frequency of diseases categorized according to organ system — as reported by flight crews to MedAire's MedLink in-flight medical advice program — is important in determining fitness for any single flight. The five largest categories — ear/nose/throat, gastrointestinal, orthopedic, infectious disease and respiratory — make up nearly two-thirds of all reported in-flight medical events.

However, two other perspectives on illness are important to consider when assessing safety and career impact on pilots: the risk of in-flight incapacitation or impairment and the impact on medical certification. Interestingly, medical categories making up the majority of both the safety-compromising and career-threatening medical conditions affecting flight crewmembers do not overlap with the most frequently reported categories of in-flight illnesses.

## Incapacitation and Impairment

A 2004 U.S. Federal Aviation Administration (FAA) report said that 39 cases of pilot incapacitation (inability to perform any in-flight duties) and 11 cases of pilot impairment (some ability to perform limited in-flight duties, although performance may be degraded) were reported among U.S. airline pilots from 1993–1998 (*Flight Safety Digest*, 1/05, p. 1).<sup>1</sup>

Loss of consciousness, which accounted for nine of the 39 impairment reports, was the most frequently cited cause, followed by gastrointestinal and neurological (six cases each), cardiac (five cases) and urological (three cases). Four of the cardiac events resulted in pilot deaths but no passenger fatalities. Of the 11 cases of incapacitation, four involved respiratory causes; there were two reports each for problems associated with fatigue and vision, and one report each for problems involving cardiac and gastrointestinal causes and infectious disease. There were no pilot deaths due to impairment, but three serious injuries occurred as a result of crew fatigue.

These FAA figures reflect a substantially different distribution of diseases than those reported to MedLink crew support services by pilots and flight attendants.

## Pilot Medical Certification

Medical conditions adversely affecting medical certification are routinely reported to the joint Virtual Flight Surgeons (VFS)/Air Line Pilots Association, International (ALPA) Aeromedical Office, which provides aeromedical certification assistance to about 9,000 pilots a year.

Medical conditions potentially affecting pilot medical certification demonstrate a different distribution than in-flight illness and the in-flight incapacitation experience. This difference may reflect pilot concerns regarding medical certification issues that do not directly affect their personal decisions to fly on a particular

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day. The difference may also indicate that medical conditions that affect certification by the FAA are not proportional to the conditions that historically affect in-flight impairment, incapacitation or inquiries regarding illnesses.

Approximately 25 percent of inquiries to the VFS/ALPA Aeromedical Office involve cardiac conditions. This percentage has decreased over the previous 25 years from a high of approximately 35 percent, presumably because of the overall improvement in cardiovascular health of Americans.

Inquiries about psychiatric and psychological conditions are rising steadily in percentage; the current level is about 25 percent. This upward trend may reflect the general population's increasing recognition of mental health conditions and health professionals' increasing willingness to diagnose and treat them.

Psychiatric conditions did not result in in-flight incapacitation or impairment in the FAA study. The *AeroSafety World* article about in-flight medical advice did not individually identify mental health issues as a source of inquiries.

Other major categories of medical conditions resulting in requests to the VFS/ALPA Aeromedical Office for information and assistance with medical certification include neurological, urological, vision, gastrointestinal, ear/nose/throat, endocrine, respiratory, dermatological, reproductive, hematological and other conditions (Table 1). Many inquiries are related to the legality and prudence of using medications for these conditions.

### Medication List

Although the *AeroSafety World* article says that “pilots readily can receive FAA advice on prescription and

non-prescription medications,” the FAA does not publish a list of authorized medications for use by flight crewmembers or air traffic controllers. Flight attendants are not required to hold FAA medical certification/qualification.

The U.S. National Transportation Safety Board (NTSB) has recommended that the FAA publish such a list, but there are drawbacks to doing so, including:

- The primary safety concern related to use of a medication is the underlying condition for which the medication is used. Frequently, relatively safe medications are used for medical conditions that are not compatible with flight safety. Publishing a list might imply that use of the medication is authorized for any purpose. This is not the case; and,
- Maintaining an accurate, up-to-date list would be difficult. Hundreds of new medications and formulations are approved annually by the U.S. Food and Drug Administration (FDA). Many over-the-counter preparations and nutritional supplements are not regulated by the FDA.

As the article mentioned, flight and cabin crewmembers may face supervisory pressures to perform flight duties when they are ill or taking medications. Unfortunately, supervisory personnel rarely have aeromedical expertise or knowledge of current FAA medication policies. Crewmembers who acquiesce to these pressures may be jeopardizing their health, risking their careers or compromising aviation safety.

Individuals seeking information about the safety of flying with a medical condition and the legality of the treatment prescribed for that condition

should consult a trained aerospace medicine professional for both personal health and aviation safety reasons. ●

*Quay Snyder, M.D., is president and CEO of Virtual Flight Surgeons, an aeromedical consulting firm, and an associate aeromedical adviser for the Air Line Pilots Association, International. He also is a commercial pilot with 2,400 flight hours, a flight instructor and a U.S. Federal Aviation Administration designated pilot examiner. He is a member of the Flight Safety Foundation Corporate Advisory Committee and the National Business Aviation Association Safety Committee.*

### Note

1. DeJohn, C.A.; Wolbrink, A.M.; Archer, J.G. *In-Flight Medical Incapacitation and Impairment of U.S. Airline Pilots: 1993 to 1998*, DOT/FAA/AM-04-16. U.S. Federal Aviation Administration Civil Aerospace Medical Institute. October 2004.

### Typical Mix of Inquiries About Medical Certification Issues\*

Category of Disease by Organ System	Approximate Percentage of Case Mix
Cardiac	25
Psychiatric	25
Neurological	8
Urological	8
Vision	8
Gastrointestinal	5
Ear/nose/throat	5
Endocrine	4
Musculoskeletal	4
Hematological	3
Dermatological	1
Reproductive	1
Respiratory	1
Miscellaneous (sleep apnea, AIDS virus, dental, etc.)	3

\*Based on calls received by the joint Virtual Flight Surgeons/Air Line Pilots Association, International Aeromedical Office. Percentages vary by year.

Source: Quay Snyder, M.D.

Table 1

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