Accepting a trip while ill would fly in the face of safety principles.

BY WAYNE ROSENKRANS

Eabin Fever

oncerns about flight attendants and pilots flying while ill deserve attention from aviation safety professionals and regulators, say recent reports to safety reporting systems from crewmembers in the United Kingdom and the United States. Concepts of illness tend to fall along separate lines for crewmembers, airline managers and aeromedical specialists, says Heidi Giles, vice president of global response services for MedAire, a company that provides services such as assistance during emergency in-flight medical events, airline crew support, airline passenger-assistance services, medical evacuations and airport medical fitness assessments.

Medical *fitness to fly* means whether people can be sustained as healthy, viable human beings

in an aircraft at an 8,000-ft cabin pressure altitude. *Fitness to operate* as crewmembers means that they are deemed to be "physically capable, mentally alert and able to complete all the functions required primarily of their safety duties, and secondarily of all their service duties," Giles said. "On the airplane, there is no limited duty."

Illness, like fatigue, is fraught with complexity for airlines and crewmembers because it involves self-assessment, social interactions, labor-management contracts and performance expectations. The airline industry recognizes that crewmembers make more errors when they are fatigued, but a direct correlation between illness and in-flight errors has not been researched as thoroughly. "When people call and say they are 'just fatigued,' our nurse case managers will ask a lot of questions to make sure that that is all it is," Giles said. "Most difficult is that when people are fatigued, they are very emotional and not necessarily able to express themselves the way they might were they well rested."

The U.S. Federal Aviation Administration (FAA) *Aeronautical Information Manual (AIM)* — available at <www.faa.gov/airports_airtraffic/air_traffic/publications/ATpubs/AIM> — is a pilot-oriented reference that some cabin safety specialists also consider informative for flight attendants. The *AIM* says, "Even a minor illness suffered in day-to-day living can seriously degrade performance of many piloting tasks vital to safe flight. Illness can produce fever and



distracting symptoms that can impair judgment, memory, alertness and the ability to make calculations. Although symptoms from an illness may be under adequate control with a medication, the medication itself may decrease pilot performance. The safest rule is not to fly while suffering from any illness. If this rule is considered too stringent for a particular illness, the pilot should contact an aviation medical examiner for advice."

Common Illnesses

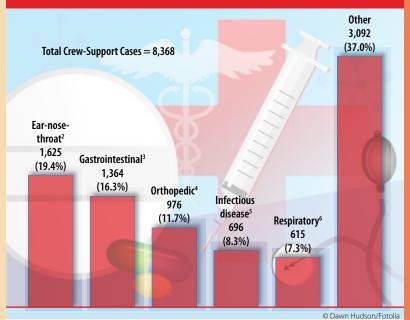
MedAire's MedLink in-flight medical advice — currently provided to 74 airlines worldwide — during the past decade has become known primarily for assisting passengers. The company in 2006 had 17,310 in-flight medical advice cases involving all types of aircraft occupants, but cases involving pilots and flight attendants have not been separated from those involving passengers. Based on 42 months of data from its crew-support program, which generated 15 cases a day among 10 airlines, MedAire has identified in its data the five most common illnesses affecting flight attendants and pilots on layovers (Figure 1), and extrapolated its rate to estimate that worldwide, "nearly 1,000 crewmembers are experiencing a health-related issue on duty every day."1

Among 5,600 crew-support cases handled in 2006, 747 (13.3 percent) were in the gastrointestinal illness category; 648 (11.6 percent) were ear-nose-throat, including barotrauma; 471 (8.4 percent) were orthopedic including muscle sprain/ strain; 357 (6.4 percent) were dental care, including damaged tooth/filling and dental pain; and 281 (5.0 percent) were respiratory, including upper respiratory infections. Generally, the gastrointestinal calls were prompted by diarrhea and incessant vomiting. The ear-nose-throat calls sought to prevent extreme pain from blocked ears. The sprain/strain calls involved concern about ability to operate flight controls, to push a cart or operate a jump seat harness. The dental calls aimed to prevent extraordinary pain from an exposed nerve. And upper respiratory infection calls primarily involved infections that caused pain in the sinuses because of gas expansion and bubble formation.

Illnesses that are not on this list also can be serious. "A good example is any gynecological issue," Giles said. "Usually something can seem to be fairly minor to crewmembers during layover, but they will wait until it becomes bad enough before they call because of heavy bleeding, pain or fever. With minor nausea, they will still fly. But they cannot be actively vomiting and serving meals or flying an airplane. They also cannot get up out of the cockpit to go to the lavatory every two minutes."

Among the in-flight medical advice cases in 2006, 5,955 (34.4 percent) were in the neurological/neurosurgical illness category, including fainting; 3,289 (19.0 percent) were gastrointestinal; 1,800 (10.4 percent) were

Five Leading Categories of Airline Crewmember Illnesses/Injuries Affecting Flight Duty¹



Notes:

 $Crew-support\ cases\ from\ January\ 2003\ through\ June\ 2006\ were\ categorized.$

- Each case involved one or more calls in which MedAire-affiliated physicians and nurse case managers assisted pilots and flight attendants employed by 10 airlines, typically during a layover period.
- 2. The typical diagnosis was barotrauma such as ear block.
- 3. The typical diagnosis was gastroenteritis (inflammation of the stomach and/or intestines).
- 4. The typical diagnosis was musculoskeletal injury such as a muscle strain/sprain.
- $5.\ Diagnoses\ varied, including\ illnesses\ such\ as\ influenza.$
- 6. The typical diagnosis was upper respiratory infection.

Source: MedAire

Figure 1

respiratory, including upper respiratory infections; 1,298 (7.5 percent) were cardiac; and 692 (4.0 percent) were orthopedic, including muscle sprain/strain.

Flight Level Illnesses

A U.K. pilot, describing in 2005 the circumstances of a missed approach and diversion, said, "I had been sick on the previous day, and I had advised operations that I would be unable to fly due to a heavy cold. Despite this, I was awakened by a telephone call from the opera-



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tions officer who persuaded me to report for duty (in five hours time). ... The sixth sector was back into the home base and the weather had deteriorated significantly. ... By this time I was feeling very ill indeed."2

In 2005, the U.S. captain of an Airbus A320 said, "Prior to departure, we were informed that we had an ill flight attendant on board, and incorrectly assumed that this flight attendant was a deadheading flight attendant. About one hour into the flight, the purser called up to inform us that the flight attendant was on oxygen and later reported that she spent a significant amount of time vomiting in the [lavatory]. I inquired, and was told that she had

called crew scheduling the previous night and called in sick. Crew scheduling informed her that she would have to work the flight to Chicago O'Hare International Airport or it would have to be canceled, and she would be replaced at O'Hare. She was either ordered or coerced to work while ill."3

A U.S. A320 captain in 2006 said, "During the flight, it became readily apparent after we departed that the first officer was recovering from an illness. As he used the radio to communicate with air traffic control, he coughed uncontrollably. It was at this point that I realized that he should have taken some time off via the sick list to recover more fully. It was obvious by our discussion that he was intimidated by the flight office and the chief pilot via the absence-management program, which tracks and punishes pilots for [inappropriately] using sick leave. This policy placed me in an uncomfortable situation, as I do not have the expertise to diagnose a person's illness."4

Another U.S. captain in 2006 said, "When I attempted to brief the flight attendants, it was painfully obvious that [the purser, with laryngitis] had almost no voice at all. ... She relayed to me that she really did not want to call in sick because of the sick leave policy. She stated that she did not really feel that bad, but she was also worried about her voice and ability to give commands during an evacuation if necessary. ... The supervisor told her that she should just let someone else do the communications with the cockpit and public address system announcements."5

Precedents for Pilots

In the United States, airline pilots and flight attendants are safety-sensitive employees subject to FAA drug- and alcohol-testing requirements and flight time limitations. To operate, however, only the pilots must have a first-class or secondclass medical certificate that must be renewed every six or 12 months for an airline transport pilot or commercial pilot, respectively, by an FAA-designated aviation medical examiner. The U.S. Federal Aviation Regulations (FARs) concerning medical certification also prohibit

a pilot from operating with a known medical deficiency except as authorized by the FAA.⁶

Pilots readily can receive FAA advice on prescription and nonprescription medications. This guidance in part says, "For example, any airman who is undergoing continuous treatment with anticoagulants, antiviral agents, anxiolytics, barbiturates, chemotherapeutic agents, experimental hypoglycemic, investigational, mood-ameliorating, motion sickness, narcotic, sedating antihistaminic, sedative, steroid drugs, or tranquilizers must be deferred [medical] certification unless the treatment has previously been cleared by FAA medical authority. ... During periods in which the foregoing medications are being used for treatment of acute illnesses, the airman is under obligation to refrain from exercising the privileges of his/her airman medical certificate unless cleared by the FAA."7

In a reminder about fitness to operate, the Air Line Pilots Association, International said in 2007: "Crewmembers will keep themselves physically and psychologically fit for duty. Flight crewmembers will not report for duty when ill, under serious mental stress or while having a known medical deficiency that would render them unable to meet the requirements for a current medical certificate."

In some countries, fitness to operate for flight attendants is not so explicit, however. Since Dec. 10, 2004, U.S. flight attendants have been required to hold a flight attendant certificate of demonstrated proficiency, but this does not require medical certification.

Cabin Crew Perspectives

One U.S. cabin safety specialist, with 20 years of experience as a flight attendant, believes that industry perceptions of flight attendants have led some airlines to see this aspect of cabin safety as a malleable commodity. "Although we are required on board the aircraft for safety purposes, a manager asking 'How sick are you?' or saying 'If you report sick, we are going to have to cancel a flight, and all these people are going to be stranded' sometimes conveys to the flight attendants who report sick to 'take the trip, you

are not operating the aircraft' or 'if push comes to shove, a passenger will open those doors if you cannot," said Candace Kolander, coordinator, Air Safety, Health and Security Department of the Association of Flight Attendants–Communications Workers of America.

"I hear those stories more often than stories of a manager being supportive and saying 'You really should *not* get back on that flight' — especially if the crewmembers are on the fence — they are not bedridden, they don't have uncontrollable heaving, but they are also not 100 percent — they've got an illness that is questionable," Kolander said. Except for crew resource management training about pilot in-flight incapacitation, discussions of the safety aspects of crewmember illness often are absent in recurrent training, she said.

Some sickness-absence management programs also neglect to mention the links among illness, fitness to operate and safety. "Very rarely have I seen stand-alone memos that say 'Do not fly when you are sick," she said. Instead of being inserted at the bottom of reminders about investigation procedures for suspected sick leave abuse, they could say, "Your job as a safety professional is really important, and in order to do your job well, you need to be 100 percent," Kolander said.

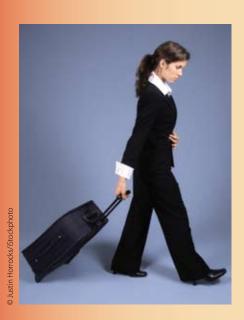
Nurse case managers handle airline crew-support calls at the MedAire Global Response Center in Tempe, Arizona, U.S.



Feel-Good Solutions

Calls for medical advice from crewmembers ill on layover typically have one recurrent theme. Essentially, the callers to MedAire want to stem their rising tide of symptoms if possible. "They ask, 'What can I get over the counter at a pharmacy in Frankfurt that is going to make me feel better enough to get on the airplane, go home and take care of this?" Giles said.

Neither Kolander nor Giles has been able to gauge accurately whether the percentage of crewmembers reporting for duty while ill has been



increasing, except from their respective anecdotal vantage points. "If crewmembers have an illness or an injury that might compromise safety, the majority of them would not come to work," Giles says. "They take it very, very seriously. They do not want that reputation on the line either — of showing up ill or slacking."

For an individual, getting a grip on illness status without medical expertise also may be tricky. "Sometimes, even though someone may have the ability to assess their own illness, their ability

to reason decreases in certain circumstances," Giles said. To a crewmember, an illness could be happening for the first time, but that contrasts sharply with the perspective of a nurse case manager involved in basically the same scenario 200 times a year.

The initial phone call to a nurse case manager generates preliminary information — expressed on a scale of low, medium or high probability of fitness to operate on a specific flight — for the airline to project ability to operate and to identify potential scheduling problems, and a decision on whether the crewmember is assessed/treated by a health care professional.

Complicating some scenarios can be a crewmember's refusal to acknowledge an illness. One flight attendant in July 2007 claimed that she was feeling well, Giles said. "She was not, she was in an altered state, either as a result of a substance that she was taking or some emotional situation, but her ability to judge the situation was impaired as well," she said. "So the entire crew stood up and said, 'We refuse to fly with this person' - and good for them. Neutral care givers with experience as critical care nurses or emergency room nurses know how to hold hands over the phone. So they were able to reason with her and get her to a point where she was willing to see a medical professional who would put illness in the context of personal medical condition, as opposed to work, reputation, all those things that get entwined."

Some crewmembers feel relieved to experience third-party input rather than have an argument about the seriousness of their illness. "We have had situations where the airline station manager was pressuring the crewmember, saying, 'Come on, you need to fly, we've got to leave on time. Come on, this is our last leg," Giles said. "The crewmember was really torn until we stepped in and said, 'No, you can't operate.' Then the crewmember could say, 'MedAire says I can't fly."

The company primarily uses its data about crewmember illness to produce a regular report to each airline, pointing out trends involving specific geographic areas or illnesses. This has included epidemiological studies of problems such as environmental contamination at a crew hotel. The data also have prompted development of educational materials for crews such as guidance on proper hand washing techniques, Giles said. •

Notes

- Garr, Jennifer. "Managing Crew Illness and Injury." A presentation to the 24th annual International Aircraft Cabin Safety Symposium, Feb. 12–15, 2007.
- U.K. Confidential Human Factors Reporting Programme (CHIRP) report no. 325227, October 2005.
- U.S. National Aeronautics and Space Administration (NASA) Aviation Safety Reporting System (ASRS) report no. 658580, May 2005.
- 4. NASA ASRS report no. 688279, February 2006.
- 5. NASA ASRS report no. 696801, May 2006.
- U.S. Federal Aviation Regulations Part 61.53, "Prohibition on Operations During Medical Deficiency," prohibits pilots from operating in circumstances when they would not meet the requirements of the medical certificate held.
- 7. FAA. Version V of The Guide For Aviation Medical Examiners. April 25, 2007.
- Air Line Pilots Association, International. "Master Executive Council Code-A-Phone Update." May 14, 2007. <crewroom.alpa. org>.