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Reports Show Difficulty of Responding to In-flight Psychiatric Emergencies

Passenger behavior known to involve psychiatric disorders and to threaten aircraft safety appeared infrequently in recent data analyses. Flight attendant training for 'handling of deranged passengers' should include defensive tactics, nonaggressive methods of talking and use of all available resources.

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FSF Editorial Staff

Recent studies indicate that in-flight psychiatric emergencies — in which involuntary passenger behavior caused by a psychiatric disorder affects safety of flight and requires immediate intervention — have not occurred often. Nevertheless, airline passengers represent a cross section of society, in which psychiatric disorders are present, and relevant flight attendant training typically focuses on the following objectives:

- Nondiscriminatory accommodation of passengers who have a psychiatric disorder (including passengers whose appearance, speech or involuntary behavior may be upsetting to others); and,
- “Handling of deranged passengers”¹ (terminology used in some civil aviation regulations), which requires immediate response to passengers with psychiatric disorders that suddenly become incapacitating, acutely progressive or dementing, or involve dangerous behavior or disruptive behavior. Such situations are described in international medical guidelines for air travel published by the Aerospace Medical Association (AsMA), for example.²

In airline operations, tension between these objectives can arise as governments and airlines work to fulfill service responsibilities to individual passengers and safety



responsibilities to all passengers. Moreover, transportation sometimes can be refused on a case-by-case basis for safety reasons because of preflight passenger behavior that airlines consider a threat to self or a threat to others. Decisions by airline medical directors to refuse transportation, however, may be subject to external review, appeal processes and to being overruled by government agencies. During summer 2002, for example, several news reports said that the Japan Ministry of Land, Infrastructure and Transport directed three major domestic airlines to change internal policies that had required all individuals with psychiatric disorders to have an attendant and a medical certificate.³

Two basic principles in AsMA guidelines for physicians are: “Persons with psychiatric disorders whose behavior is unpredictable, aggressive, disorganized, disruptive or unsafe should not travel by air. Patients with psychotic disorders who are stabilized on medication and accompanied by a knowledgeable companion may be able to fly.” Similar guidelines in a 2002 medical textbook said that a prospective passenger who has had psychoses (impaired contact with reality involving delusions, hallucinations, incoherent speech or disorganized/agitated behavior with apparent unawareness that other people cannot comprehend the behavior) typically can fly independently if the associated psychiatric disorder has been stabilized and the person is compliant with psychotropic medications, which reduce psychoses.⁴

Reasons for involuntary behavior that escalates into an in-flight psychiatric emergency may be impossible to understand fully, but some descriptions provide insight. For example, the U.S. National Institute of Mental Health, in describing what a person with schizophrenia may experience when this psychiatric disorder is not stabilized, said, “People with schizophrenia often suffer terrifying symptoms such as hearing internal voices not heard by others, or believing that other people are reading their minds, controlling their thoughts or plotting to harm them. These symptoms may leave them fearful and withdrawn. Their speech and behavior can be so disorganized that they may be incomprehensible or frightening to others.”⁵

The terminology for psychiatric disorders varies among countries, but one definition used widely in the United States is “health conditions characterized by alterations in thinking, mood or behavior (or some combination) associated with distress and/or impaired functioning.” Current estimates show that during the course of a year, about 20 percent of the U.S. population is affected by a diagnosable psychiatric disorder (excluding addictive disorders, in which an individual is not able to reliably control a behavior and the behavior continues despite significant harmful consequences). About 9 percent of U.S. adults have a diagnosed psychiatric disorder and experience some significant functional impairment in their lives. Other data show that 5.4 percent of U.S. adults have “serious mental illness” (in which the psychiatric disorder interferes with social functioning) and 2.6 percent of U.S. adults have “severe and persistent mental illness” (comprising schizophrenia, bipolar disorder [involving manic episodes and/or major depressive episodes], other severe forms of depression, panic disorder and obsessive-compulsive disorder).⁶

The recent studies, international medical guidelines and cabin safety guidelines show that many people who have a psychiatric disorder are able to travel on scheduled airlines as safely and comfortably as other passengers. Some of the passengers with psychiatric disorders may become inordinately upset by change to familiar routines, travel-related stress, crowding with strangers, lack of privacy or confusion about expected behavior.⁷

Recommended practices of the International Civil Aviation Organization (ICAO) in Annex 9, *Facilitation*, said, “In principle, persons with disabilities should be permitted to determine whether or not they need an escort and to travel without the requirement of a medical clearance. ... Airlines should only be permitted to require passengers with disabilities to obtain a medical clearance in cases of medical condition where it is clear that their safety or well-being or that of other passengers cannot be guaranteed. Furthermore, airlines should only be permitted to require an escort when it is clear that a person with disabilities is not self-reliant and, as such, the safety or well-being of that person or that of another passenger cannot be guaranteed.”⁸

As part of its 2001 effort to identify and disseminate effective practices, the Global Aviation Information Network (GAIN) published principles relevant to carriage of passengers with disabilities (including psychiatric disorders) in its *Cabin Safety Compendium*, Issue 1. The GAIN Cabin Safety Team said, in part, that airlines should not “refuse transportation to any person with a disability whose appearance or involuntary behavior may offend, annoy or inconvenience crewmembers or passengers.”

The GAIN recommendations, which listed “behavioral/psychological disorders (substance abuse, panic attacks)” among the most common in-flight medical emergencies, said that if a pilot-in-command (PIC) has reasonable grounds to believe that a person has committed an offense or acts in a manner that jeopardizes aircraft safety, “the PIC might impose upon the person reasonable measures, including restraint, to protect the safety of the airplane, its passengers, crew and cargo.”

The GAIN recommendations mirror U.S. regulations adopted in 1986 to prohibit unnecessary discrimination against disabled people in air transportation. Within limitations prescribed by these regulations, U.S. airlines can refuse to provide transportation to any passenger either on the basis of safety or on the basis that carrying the passenger would violate U.S. Federal Aviation Regulations (FARs). U.S. airlines cannot refuse to provide transportation to a qualified individual with a disability based on the disability; cannot refuse to provide transportation solely because the disability results in “appearance or involuntary behavior that may offend, annoy or inconvenience crewmembers or other passengers”; cannot limit the number of disabled passengers on a flight; cannot refuse to provide transportation by citing safety reasons or by citing violation of FARs if the refusal is inconsistent with nondiscrimination requirements; and, if airlines refuse to provide transportation on a basis related to an individual’s disability, they must provide to the person a written explanation, including “the reasonable and specific basis for the carrier’s opinion that transporting the person would or might be inimical to the safety of the flight.”⁹

Under U.S. regulations, airlines may require an attendant for a person who, “because of a mental disability, is unable to comprehend or to respond appropriately to safety instruction from carrier personnel, including the [required] safety briefing.” These regulations have no requirement, however, for people with psychiatric disorders to notify the airline of intention to travel or to notify the airline about their disability. Airlines are not required to provide extensive special assistance, such as medical services.¹⁰

U.S. regulations authorize special requirements by airlines (such as a medical certificate, signed by a physician, saying that the passenger can fly safely) for a communicable disease or an infection that presents a direct threat to the health or safety of others, or for medical conditions that would require extraordinary medical assistance in flight — but there is no similar language related to psychiatric disorders. Regulations

also require that airline personnel who interact with the public be trained to implement these requirements.¹¹

A number of in-flight events reported by U.S. pilots and flight attendants (see “Airline Crews Describe In-flight Psychiatric Emergencies”) had characteristics of in-flight psychiatric emergencies such as a crewmember’s duties disrupted by

continuing passenger interference, injury or credible threat of injury to a passenger or crewmember, unscheduled landing (diversion of aircraft) and/or use of restraints.

Civil aviation regulations in several countries require flight attendant training to include responding appropriately to in-flight

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Airline Crews Describe In-flight Psychiatric Emergencies

The following behaviors, observed and reported by aircraft crewmembers in the United States, have characteristics similar to events that have been categorized as in-flight psychiatric emergencies by physician-researchers in the United States and the United Kingdom:

- “A flight attendant called and said that a man was acting in a strange manner in the back of the aircraft. As she was speaking, he started to physically attack her. He started screaming obscenities and headed toward the cockpit. When another flight attendant tried to stop him, he either kicked her or pushed her aside. We immediately diverted to Omaha [Nebraska, U.S.]. It took six passengers to restrain him ... and continue to hold him on the aisle floor during the landing. Omaha police removed the passenger from the aircraft. The passenger had boarded the aircraft in Salt Lake City [Utah, U.S.] with another crew. He had acted strangely enough that the passenger agent and a supervisor had talked to him about going from Denver [Colorado, U.S.] to La Guardia Airport [New York, U.S.] with us. I assumed that he had walked off the aircraft in Denver because the supervisor and agent never came to the cockpit to tell me about the passenger. When I asked the first flight attendant about him, she responded that the passenger supervisor had said that he was OK and was going to behave himself. ... I think a lot of ground people (read passenger agents) simply want to shut the door on the problem, have it fly out of town and leave it to the flight crew to handle in the air. This can lead to a very dangerous situation in the air”;¹
- “Due to an unruly passenger, we diverted [the Boeing 737-300] into Abilene [Texas, U.S.]. With passenger assistance, the security kit tie-wraps were used. The passenger had a medical condition and his medicine had worn off, causing a psychotic episode. He was taken to a local hospital. [In a callback conversation, the reporting captain said that] the man was traveling with his 11-year-old son and that (the man) was on some sort of [anti]psychotic medication ... all three medicines were in his luggage in cargo. [The incident passenger] started his bizarre behavior in mid-flight. He was trying to get off the plane and was scratching at the windows in a desperate attempt to get off. The lead flight attendant came up to the cockpit with a terrified ‘wide-eyed look’ and begged for the copilot to come out and assist. The [captain] was very reluctant to let [the copilot] go back because she had just taken her recurrent training and the emphasis was on pilots not leaving a two-man cockpit for passenger disturbances. In the meantime, the man started shoving another flight attendant around. At this point, an off-duty policeman stepped in to help. The copilot came back briefly to hand the policeman the tie-wrap restraining kit, which holds four tie-wraps and a cutter. The man actually broke one tie-wrap; the policeman said that four tie-wraps were not enough and recommended that the airlines carry more than four. It took five men to restrain the [incident passenger] for landing. The paramedics and police met the airplane and said that they legally could not administer the man’s medicine, but his son could [administer the medicine]. ... Abilene is an off-line airport and with all the confusion and ensuing interviews (police, paramedics, U.S. Federal Bureau of Investigation), I gave no thought to whether we needed more tie-wraps to depart Abilene. We eventually went to our destination, San Antonio [Texas, U.S.]. There I talked to maintenance control and the tie-wraps were replaced. Maybe if more than four tie-wraps were in the security kit, we would [have been able] to get to a down-line station before having to address this issue”;²
- “I was no. 3 flight attendant working in first class on a Boeing 757 flight from Los Angeles [California, U.S.] International Airport to Dallas–Fort Worth [Texas, U.S.] International Airport. The first I had heard of [the incident passenger] was when, after takeoff, the flight attendants working in the main cabin complained about a woman who would not stay seated. The seat-belt sign was [illuminated during] the entire flight because of her. Approximately two hours into the flight, she wanted to use the first-class lavatory. She got very upset when she noticed that a few paper towels had fallen into the toilet. She refused to use it. Our no. 1 flight attendant showed me a dollar bill that [the incident passenger] had given to him to give to the captain. It read, ‘Dear [Captain], I love you. [name]’ — something to that effect. The no. 1 flight attendant kept the captain informed on all that was going on while I tried to keep some level of service in first class. [Later during] the flight, with ongoing disruptions in the main cabin, she came up to first class again. (I was in the aisle with a tray; the no. 1 flight attendant was in the cockpit.) [The incident passenger] said to me in a very loud voice, ‘I need to see the captain.’ I told her to take her seat because of the seatbelt sign and that she could speak with the captain when we got to the gate in Dallas–Fort Worth. She then said, ‘They told me to come up here and see the purser.’ She then pushed by me and said, ‘I have to use the bathroom.’ Meanwhile, the no. 1 flight attendant came out of the cockpit to assist me in the aisle. I was just about to tell him that [the incident passenger] was in the lavatory when she came out and immediately

turned and jerked open the cockpit door. The no. 1 flight attendant was approximately five feet to six feet [1.5 meters to 1.8 meters] away with ceramic nut cups in his hands. He ran and pulled [the passenger] out by the shoulder and pinned her against the lavatory door while he slammed the cockpit door [closed] with his fist — still filled with nut cups. He made [the incident passenger] take her seat and told her that she was not to get up again. We both went to the cockpit, and the captain wanted to know if we were OK. We were just shaking from the adrenaline. The [hand of] the no. 1 flight attendant was sore but OK. We tested the [cockpit] door and found that it was not locking. The captain said he had called for the police to meet us at the gate and remove the [incident passenger] before anyone deplaned. Comments: The cockpit door should lock properly and/or be reinforced to be stronger; [I] hold the family responsible [because] my understanding was that [the incident passenger] had been refusing medication and her family put her on the aircraft for mental [health] treatment in Dallas. She should not have been unaccompanied or not allowed to fly”;³

- “Just before the landing [of a McDonnell Douglas DC-10 arriving at [Dallas–Fort Worth from Honolulu, Hawaii, U.S., the female incident passenger], who was elderly, approached me in the first-class galley. I asked her to return to her seat. She refused. Her niece tried to coax her back to her seat. [The incident passenger] became violent and verbally abusive. Along with another flight attendant, we were able to walk her back toward her seat. While the other flight attendant sat her down, I fastened her seat belt. [The niece] restrained her [and] had to restrain her until we reached the gate. [The incident passenger] yelled and fought [striking and kicking her niece] the entire time. [The incident passenger] did not seem to know where she was. She asked, ‘Who are all these people? Why are they in my home?’ On arrival, passenger service and the police met the flight. [The incident passenger earlier had been] calm throughout the flight. After the meal service, she fell asleep. Upon awakening, she appeared to be disoriented, and this is when the event occurred. ... The niece said that the [incident passenger] was not taking medication”;⁴
- “[During a flight from Dallas–Fort Worth to Chicago (Illinois, U.S.) O’Hare International Airport in a McDonnell Douglas MD-80 Super 80], a male passenger, about 40 years old, became hysterical [and] seemed to be having a seizure, but then would yell irrational demands to land and [yell that] he was ‘the prince of darkness.’ The passenger’s food and drinks were thrown about and call lights [illuminated]. I was the first flight attendant there and assumed that the passenger was having a seizure. Afterwards, he seemed confused and demanded to land. The captain was notified of his condition. The passenger was offered oxygen and water and was reseated toward the rear of the plane, in case of a further incident. It was then determined by myself that he had a medical problem other than seizures. He had not taken his medicine (lithium) for his mental disorder. We made an emergency landing [at Tulsa, Oklahoma, U.S.] and were met by the fire department and [emergency medical service]. The passenger was bound and taken off [the aircraft] by

wheelchair and placed on a stretcher for hospital treatment. ... All passengers, including deadheading crewmembers, were very helpful in [providing] witness reports. It would be helpful in the future for some training class to talk a little on passengers who need such medication and the side effects of mood-altering drugs. The flight crew was very quick to respond to our request to land without question and was trusting of the flight attendant’s decisions. All crewmembers worked well as a team. Callback conversation with [the flight attendant] revealed [that the cabin crew] had just served meals when passenger call lights started illuminating all around [the incident passenger], who was strapped in his seat and was flailing his arms and legs all over. The food on the food tray went flying everywhere. The [flight attendant] restrained his arms so that he would not keep hitting the person sitting next to him. [The flight attendant said that] the man had lucid moments, read her name on her name tag, and then, calling her by her name, asked for help [and told her] that he needed to land immediately. He said that he wanted to burn down his grandmother’s house because she had just died in a small town in Illinois, and he wanted to land there. The [flight attendant] told him that [the aircraft crew] could not do that, but they could land in Tulsa. She had [the incident passenger] sit across from her jump seat for landing so that she could keep a dialogue going with him, which seemed to have a calming effect. The flight attendant said that she [had noticed this passenger] as he boarded [because] he had his shirt on inside out”;⁵

- “Approximately three hours into a [Boeing 767-300] flight from [Chicago to Dusseldorf, Germany,] the flight purser expressed concern about the behavior of a male flight attendant. He was bothering passengers and appeared to be hallucinating. He then became totally unresponsive and, shortly thereafter, he lost mental [control] and physical control. He attacked the captain and another male flight attendant. He was then physically restrained and confined to a cabin seat for the duration of the flight. He was met [by] medical and security services at the end of the flight and was taken to a medical facility. [In a callback conversation, the reporter said that] the [incident flight attendant] was working in business class when he started hallucinating. Most of the ensuing commotion was confined to business class, with coach passengers unaware of what was happening, but the business class passengers were both frightened and [upset] for having their sleep disturbed. [The incident flight attendant had] started shaking awake the passengers to tell them that he loved them and that they could have his heart. Then when confronted by other flight attendants, he started swinging [his arms] wildly and started to punch a passenger when the captain came out of the cockpit, stood between the flight attendant and passengers, and then got hit. The captain wrestled him to the ground, and the first officer handcuffed him. ... The flight attendant was either bipolar or paranoid/schizophrenic and had not taken his medication for a week. He had in his possession antidepressants and antipsychotic drugs. The company knew about his condition and still allowed him to fly, even though he had a less severe episode three months before. [A physician] on board thought that [the incident flight

attendant] should not be handcuffed, so [the crew cut off the flexicuffs] only to have to put them back on later”;⁶

- “A passenger came to the back of the [McDonnell Douglas MD-80 Super 80] to tell us ‘the man seated in [seat number] took all of his clothes off and is just sitting there.’ The no. 1 flight attendant went to check out the situation. He then went to the cockpit to advise [the flight crew]. While the passenger was seated naked, he was reading a Bible and listening to music. When the aircraft [was] landed, the police came on and made the passenger put his pants on, took him onto the jet bridge and handcuffed him. [In a callback conversation, the reporter said] that the [incident passenger] never got out of his seat ... until the police forced him to get up on arrival in Dallas [Texas, U.S.] ... When the purser asked him if he had the [correct] seat and asked what his name was, he sang his name back, instead of [speaking] it. A woman sitting in the window seat of the same row [as the incident passenger] crawled over the back of the seats to [join] her friends, who were sitting behind her”;⁷
- “We had a group of passengers [aboard a McDonnell Douglas MD-11 en route from Dallas–Fort Worth to Sao Paulo, Brazil] and one of them started behaving strangely. He said that he wanted to die and he requested that another flight attendant bring him poison. His friends tried to keep him quiet, but during breakfast, he started to hit his face with an open magazine, and then on arrival, he moved toward the exit door and acted crazy. I just think that if a passenger is mentally ill, we should not transport him because it was stressful. [In a callback conversation, the reporter said that the incident passenger’s companions had been aware of his psychiatric disorder preceding the flight.] The man completely terrorized the passengers sitting around him. He was trying to escape out the doors. The cabin attendants had to keep a constant watch on him. When the flight was approaching the Amazon [jungle region], the purser and the reporter conferred with the captain about whether to divert ... the reporter strongly believes that this man’s friends should never have put him on a commercial flight”;⁸
- “I was the no. 2 flight attendant [aboard a McDonnell Douglas MD-80 Super 80 en route from Miami (Florida, U.S.) International Airport to Denver International Airport] and was busy doing the normal galley duties. The no. 3 and no. 4 flight attendants came to the rear of the aircraft where there were some empty seats. They moved two teenaged passengers to the open seats and explained that they had moved them because they were seated next to a really weird male passenger in row X. I went up to check it out and observed a male, [age] about mid-20s, who was very dirty and unkempt-looking. He was rubbing lettuce on his face and cornbread through his hair. He had his head down, but when he raised his head to look up, his eyes were rolled back to the back of his head, so all you could see were the whites of his eyes. We notified the captain at once. There was another pilot from another airline seated near row X and the captain advised us to ask him, should it become necessary, if he would be willing to help the captain restrain the passenger. The other pilot

agreed to help. When I walked back through the cabin, the passenger had his legs spread out across the rows and was picking at his legs to the point that he was breaking the skin and was bleeding slightly. At that point, the captain came to the back to observe the passenger for himself. We all came to the conclusion that [the incident passenger] was keeping to himself and was not bothering anyone around him, so we decided to keep a close eye on him, but not to provoke him. About 1.5 hours later, we landed without incident. My jump seat was in the back, so I was the last flight attendant to come forward. He was still seated [when] all the other passengers were off. I told him that we were in Denver, and he got up. He was met by authorities and questioned.”⁹♦

— FSF Editorial Staff

Notes

1. U.S. National Aeronautics and Space Administration (NASA) Aviation Safety Reporting System (ASRS) Report no. 204390, March 1992. NASA ASRS is a confidential incident-reporting system. The ASRS Program Overview said, “Pilots, air traffic controllers, flight attendants, mechanics, ground personnel and others involved in aviation operations submit reports to the ASRS when they are involved in, or observe, an incident or situation in which aviation safety was compromised. ... ASRS de-identifies reports before entering them into the incident database. All personal and organizational names are removed. Dates, times, and related information, which could be used to infer an identity, are either generalized or eliminated.” ASRS acknowledges that its data have certain limitations. ASRS *Directline* (December 1998) said, “Reporters to ASRS may introduce biases that result from a greater tendency to report serious events than minor ones; from organizational and geographic influences; and from many other factors. All of these potential influences reduce the confidence that can be attached to statistical findings based on ASRS data. However, the proportions of consistently reported incidents to ASRS, such as altitude deviations, have been remarkably stable over many years. Therefore, users of ASRS may presume that incident reports drawn from a time interval of several or more years will reflect patterns that are broadly representative of the total universe of aviation-safety incidents of that type.”
2. NASA ASRS report no. 476494, June 2000.
3. NASA ASRS report no. 499435, January 2001.
4. NASA ASRS report no. 485215, September 2000.
5. NASA ASRS report no. 477432, May 2000.
6. NASA ASRS report no. 471026, April 2000.
7. NASA ASRS report no. 464598, February 2000.
8. NASA ASRS report no. 490834, January 2000.
9. NASA ASRS report no. 484024, August 2000.

psychiatric emergencies — categorized separately from intentional passenger behavior and from passenger behavior that primarily involves alcohol/substance abuse. Among the principal psychiatric disorders that may cause disruptive behavior in the aircraft cabin when unstabilized are acute anxiety, panic disorder, dementia and psychoses.¹²

Acute anxiety is characterized by severe, overwhelming apprehension/uneasiness and fear, often accompanied by physiological changes (such as sweating, trembling, increased pulse rate or sensation of being smothered) and a sense of hopelessness and doubt. This disorder can become a cabin safety risk if people irrationally believe that their own lives are in danger so that, for example, they try to open doors/exits or break windows during flight to leave the aircraft.

Panic disorder is characterized by recurrent unexpected panic attacks and can become a cabin safety risk if people change their behavior out of deep fear about further panic attacks (for example, irrationally interfering with crewmembers performing their duties).

Dementia is characterized by deteriorated intellectual ability relative to a former intellectual level; the disorder interferes with judgment and social functioning, and can become a cabin safety risk when, for example, a passenger is uncomprehending, confused, unable to remember crewmember instructions or too disoriented to follow crewmember instructions.

Psychoses (primarily schizophrenia and bipolar disorder in the manic state) are characterized by extremes of bizarre behavior outside of the person's control — involving loss of some contact or all contact with reality, hallucinations, delusions, incoherent speech and agitation that can become a safety issue because the person is unaware that his/her behavior is incomprehensible to the cabin crew and the person may engage in violent behavior against bystanders.

A primary defense against in-flight psychiatric emergencies is for patients with psychiatric disorders to have a preflight discussion with their physician to assess their status, said Russell Rayman, M.D., executive director of AsMA.¹³ In some cases, the physician may want to consult with a family member or a friend about the patient's ability to travel by air.

"It may be advisable for some individuals with significant, unstabilized psychiatric disorders not to fly," Rayman said. "However, if a patient with a significant psychiatric disorder intends to travel by air, the physician's alternatives are recommending that a companion accompany the patient and, in some cases, prescribing medication before the flight. One precaution is that physicians should not give medication just before the flight to a patient who has never taken it before; some patients react very adversely to some medications — generally in the category of psychotropic medications — so there is the possibility of an adverse in-flight reaction. Physicians should 'ground test' the medication a few days

before the flight to be sure that the patient does not become agitated or possibly belligerent, for example." (Physicians recommend that passengers keep essential medications in carry-on bags rather than in checked luggage.)

AsMA recommends that physicians obtain a careful medical history, including details of how severely disoriented or disturbed the patient has been in the past, and plan for care based on those circumstances. Generally, some of the physical characteristics of the cabin environment (such as pressurization) are not believed to affect passengers whose psychiatric disorder has stabilized, Rayman said.

"Remember that some persons who function reasonably well during the daylight hours in familiar surroundings (e.g., with early to moderate Alzheimer's disease) may become progressively upset or disoriented and agitated in strange [surroundings] or over-stimulating surroundings, or during the hours of darkness," AsMA guidelines said. Rayman said that health care professionals sometimes may allay a patient's anxiety by calmly, clearly explaining the flight process or by the use of previously learned relaxation techniques.

In daily operations, flight attendants might encounter passengers with psychiatric disorders that have not been diagnosed, passengers with a psychiatric disorder who are able to function normally in part because of medications and/or other treatment, and passengers who have diagnosed psychiatric disorders and are not complying with prescribed medications/treatment while flying. Occasionally, a psychotic passenger (receiving treatment to stabilize the psychiatric disorder) is accompanied by a professional attendant (typically a psychiatric nurse) and transported by arrangement with the airline's medical service. In the United States, for example, the U.S. Federal Aviation Administration (FAA) has published an advisory circular about preventive measures for cabin safety during this type of transportation.¹⁴

Although a few studies have documented some in-flight psychiatric emergencies, the international medical community does not know how many in-flight medical emergencies worldwide are caused by psychiatric disorders, Rayman said. Major reasons are lack of a comprehensive database and absence of reports on many such events, he said.

The following studies have influenced current understanding about the incidence/types of in-flight psychiatric emergencies:

- A study — analyzing 1,375 in-flight calls from commercial airline crews to MedAire's MedLink service for physician consultation during 1997 — showed that 48 (3.5 percent) were categorized by emergency department nursing staff as "psychiatric/psychological" in-flight medical emergencies. During the study period, nine U.S. airlines and non-U.S. airlines (including several major airlines) contracted for the MedLink service, the report said. Passengers in 43 of the 48 calls (90 percent) were diagnosed

by MedLink physicians as having acute anxiety. Two of the 48 calls (4 percent) involved psychosis, and two calls (4 percent) involved disruptive passengers who displayed signs/symptoms of psychiatric disorders other than psychosis. In 69 percent of calls that involved psychiatric disorders, arrangements were made for the passenger to be evaluated on arrival; three calls required flight diversions. Demographic data showed that 35 psychiatric emergency calls (73 percent) were initiated for female passengers, nearly half of psychiatric emergency calls involved passengers 20 years old to 39 years old (the overall age range was 10 years old to 80 years old). Psychiatric histories showed, in part, that in seven calls (15 percent) passengers said that they were anxious fliers or first-time fliers and in five calls (10 percent), passengers said that they had experienced previous panic attacks or generalized anxiety. The report said that an on-board physician volunteered to assist in 17 calls (35 percent) and that other health care professionals volunteered to assist in 12 calls (25 percent);¹⁵

- A study analyzed the frequency, presentation (signs/symptoms such as psychotic/violent/aggressive behavior, wandering, actual/threatened self-harm, disruption of air travel, self-neglect and repetitive presentation) and safety implications in a study group of adults. The patients were admitted to Hillingdon Hospital from nearby London Heathrow Airport, U.K., under laws applicable to all people detained by Heathrow police for apparent psychiatric disorders that involved immediate need for care and control by police. Of 290 people taken to the hospital by police, 220 were admitted; incomplete data limited researchers to analyzing records of 190. Sixty-eight of those taken to the hospital by police had been detained upon arrival by airplane, including 14 (21 percent) involved in in-flight disturbances (an in-flight disturbance rate of 1.4 per 10 million arriving passengers), the report said. Nine of the 14 had a diagnosis of schizophrenia or schizotypal disorder (a pattern of social/interpersonal deficits including cognitive/perceptual distortions and eccentricities of behavior), and five patients had a diagnosis of manic episode. Analysis of the in-flight disturbances showed that seven passengers (10 percent) had aggressive behavior. The report said that in-flight disturbances included passengers trying to open an aircraft door during flight, pouring water over another passenger, screaming and undressing in the aircraft lavatory. The report said that 55 of the 190 patients required transportation with hospital escorts to destinations outside the United Kingdom;¹⁶
- A study of 744 in-flight medical emergencies involving passengers or crewmembers arriving at Chicago (Illinois, U.S.) O'Hare International Airport during 1996, and activating the emergency medical service, showed that 70 (9.4 percent) were classified as "behavioral/miscellaneous" based on their in-flight

symptoms. All were offered transportation to the emergency department of Resurrection Medical Center (two were transported to a different hospital). Of 487 people evaluated in this emergency department, 24 (4.9 percent) received a psychiatric discharge diagnosis and 10 (2 percent) were admitted to the hospital;¹⁷

- A study of 454 significant in-flight medical incidents, based on data from Qantas Airways international flights in 1993, showed that 23 (5 percent) were categorized as "anxiety and panic reactions warranting medical interventions;"¹⁸ and,
- A study of 95 hospital patients transported from other countries to Germany by scheduled airlines in 1995 and 1996 found that 8 percent of these 95 passengers had psychiatric disorders.¹⁹

David Streitwieser, M.D., an emergency medicine physician and MedLink medical director for MedAire of Tempe, Arizona, U.S., said that when a physician sees a patient with abnormally agitated and potentially aggressive behavior in a hospital emergency department, one of the physician's initial interests is the possibility that an illness other than a psychiatric disorder may be affecting the patient's thinking.²⁰

"The first issues are, 'Do we have something medically treatable, and what will reverse the condition?'" Streitwieser said. "The classic situation is someone who has hypoglycemia — low blood sugar — which may cause a person to exhibit many bizarre behaviors. Or the person may be having a seizure that produces only alterations in consciousness, including many aggressive behaviors, rather than major motor seizures [jerking body movements]. If the physician is satisfied that a psychiatric disorder is involved, however, the second issue would be, 'Is the patient a danger to self or others?' If so, the person most likely needs immediate attention — possibly including restraint and/or treatment against their will. In flight, the crew will be able to make a judgment about the need for restraint based on common sense and training; the need usually is obvious. Medical professionals later would have to determine the need for involuntary treatment."

Flight attendants should recognize the significant limitations in identifying a psychiatric disorder aboard an aircraft, he said. Unless the passenger can communicate accurately about the diagnosis, flight attendants for the most part must rely on any information related to medical history that can be obtained or observed. If time and circumstances permit, a flight attendant may be able to discover discreetly from a traveling companion useful medical history, he said. Other information sources may be a medic-alert bracelet, prescriptions or containers of medications.

"Even for a physician aboard the aircraft, ruling out a medical condition is difficult, and for all practical purposes, we are not trying to effect a diagnosis," Streitwieser said. "We would be

trying to find a temporary solution for the remainder of the flight. The type of medications the passenger takes can provide great clues to medical personnel aboard the aircraft or to telemedicine physicians.”

MedLink physicians have recognized, in their communication with airline crews, crewmembers’ heightened awareness of abnormal behavior among passengers in the first 12 months since the adoption of enhanced security measures following Sept. 11, 2001, when four transport aircraft were used for terrorist attacks in the United States. This heightened awareness has not generated excess calls or prompted changes in MedLink physicians’ advice about psychiatric disorders, he said. Because of restricted access, MedLink physicians are communicating directly with pilots more often and communicating directly with flight attendants less often for some airlines.

Training about psychiatric disorders should help prepare flight attendants to consider carefully their initial response — and to avoid responding based on their own emotions, he said.

Streitwieser said, “I believe that techniques that encourage assessment before reaction should be encouraged as part of training. Without this training, the first reaction might be aggression in response to aggression, but that reaction can escalate the situation. Many flight attendants have become very sensitive about being touched by passengers and will not tolerate any abusive behavior. On the other hand, some passengers really are not in control of themselves, and problems could escalate if a flight attendant becomes verbally aggressive to a passenger with an unstabilized psychiatric disorder. Techniques for defusing aggressive behavior absolutely apply — whether used in a hospital emergency department or in an aircraft cabin. Initial methods of talking to the person are important; for example, nonthreatening, nonaggressive methods of talking to someone with paranoid schizophrenia — while still showing that you are in control — can have great effect in defusing a situation. You also want to convey that violence is not an option.”

Careful observation of behavior should be adequate to alert flight attendants and other passengers to a situation that may develop into an in-flight psychiatric emergency, he said.

“While initiating a conversation with the passenger, flight attendants should be asking themselves, ‘Does this passenger seem to be making sense? Can the passenger answer questions appropriately?’” Streitwieser said. “If the flight attendant is talking to a passenger who is on the verge of a psychotic break [loss of contact with reality], the passenger typically will not respond appropriately, may give rambling incoherent responses or may not make sense to any degree. Then the flight attendant will have a clue that they are not dealing just with some mild form of anxiety but perhaps with an underlying psychiatric disorder where the passenger is about to lose touch with reality. Nevertheless, acute anxiety can escalate from discomfort to a full-blown panic episode in

which the passenger believes that his/her life is in imminent danger. A person in that condition potentially could jeopardize the safety of the aircraft — for example, if they believe that they have to get out of the aircraft. Clues also may come from other nearby passengers who may have some concerns and report what the person has been doing and saying.”

Determining the appropriate response to a passenger whose behavior is flagrantly aggressive — a situation requiring immediate action — can be relatively simpler for the cabin crew than a situation in which the strange behaviors are difficult to identify, behavior is bizarre but nonthreatening or changes in behavior are accelerating.

Streitwieser said that MedLink rarely receives a call asking for medical advice about a dangerous in-flight psychiatric emergency until after action — such as restraint of the passenger — has been taken by crewmembers, sometimes with assistance from other passengers (who have more opportunity than flight attendants to continuously monitor a person’s behavior changes).

“We receive very few calls where someone is presenting an active threat,” he said. “The captain has to do whatever is appropriate in any situation. Crewmembers typically are too involved in handling the acute emergency to ask a medical-advice physician what to do initially. Some calls concern injuries received while crewmembers were trying to restrain the passenger. The majority of calls, however, are about acute anxiety that does not involve threat to self or threat to others. The physician will make a recommendation to the captain based on medical knowledge, but what action finally is determined will be for the captain to decide. If there is a physician on board, the physician often can assess whether the anxious passenger is physically stable and then verbally reassure the passenger. On some non-U.S. airlines, an anxiolytic [antianxiety] medication is carried in the emergency medical kit and its use may be authorized by a physician. Other typical calls involve questions about whether it is safe for the passenger to take more of a medication that the passenger is carrying.”

Passengers can take their own medications as they see fit, or a physician can provide medical advice about taking the medications that are available, he said.

“For example, I was flying as an airline passenger and was asked to interact with another passenger who was acting bizarrely,” Streitwieser said. “As a physician, I was able to advise this person to take more of a medication that the person was carrying. More difficult is a passenger who no one knows, for whom there is no medical history available and who is not carrying medications.”

If a passenger shows confusion, anxiety, wandering or other behavioral health problems, the flight attendant may want to

identify a medical professional using a passenger announcement. Calming measures and reassurance with the authority of a medical professional may be effective.

Although physical restraint of a passenger may be required during an in-flight psychiatric emergency, this temporary response to the immediate problem may not stop other disturbing behavior — even when conducted correctly according to airline policies and training protocols. Flight attendants should know if sedation (a type of chemical restraint) by a physician also is possible and allowable, and should know how any restraint protocol supersedes the normal safety procedures for preparing the individual passenger for landing and possible evacuation.

“Typically, it would be very difficult to administer enough sedation to effect true restraint of a patient in an aircraft cabin,” Streitwieser said. “True chemical restraint in a hospital emergency department involves administering potent intravenous medications or intramuscular medications. A medical professional trained to accomplish that with an agitated patient would be required; this skill requires practice. Medications required for chemical restraint usually are not available to physicians in the emergency medical kit, however.

“Physical restraint remains the only tool to protect the passenger, other passengers, crewmembers and the aircraft. There is really little that can be done about a passenger’s disturbing involuntary behaviors other than isolating the passenger as much as possible.”

Just as physicians in a hospital emergency department rely on trained security officers to conduct patient restraint, aircraft crewmembers need to be aware of who has proper training and authority to restrain a passenger; crewmembers also need to know how to retrieve the devices or supplies carried for restraint.

Pilots and flight attendants also must follow aviation regulations designed to prohibit any passenger from boarding an aircraft while intoxicated or from becoming intoxicated during a flight. If a passenger who has a psychiatric disorder consumes alcohol or other substances and becomes intoxicated during the flight, aircraft crewmembers probably will be able to focus only on controlling the person’s behavior, he said.

Streitwieser said that physicians, including psychiatrists, usually cannot assess the thinking processes of a patient showing bizarre behavior (including suicidal behavior) until the patient’s blood alcohol, for example, is down to a sober level and the influence of the alcohol has gone.

“If psychiatrists typically are unwilling to assess a patient under the influence, the situation clearly is difficult for flight attendants, who have to deal with the behavior without knowing if the behavior involves a psychiatric disorder,” he said.

A study of MedLink medical advice during 48 in-flight medical emergency calls involving psychiatric diagnoses in 1997 showed that the following treatments most commonly were recommended:²¹

- Administering supplemental oxygen to the passenger (30 calls);
- Offering reassurance to the passenger (nine calls); and,
- Asking a hyperventilating passenger to rebreathe into a paper bag (seven calls).

Typically, in-flight situations requiring intervention by a physician or flight attendant will differ from previous situations, Streitwieser said. This precludes recommending universal responses for flight attendants to specific behaviors that may be related to psychiatric disorders.

“Flight attendants must decide intuitively how to deal with each situation based on their training and experience,” he said.

Nevertheless, physicians who see agitated patients with unstabilized psychiatric disorders in hospital emergency departments have been advised to consider the following:²²

- Self-defense tactics — Relocate the person to a private area separate from others if possible. Remove from the environment objects that could cause injury if the situation were to become violent. Maintain a distance that does not crowd the person and enables a retreat if necessary. Monitor verbal cues and actions as indicators of the level of agitation and change in mood. Ensure that others are ready to follow protocols for the use of physical restraint if verbal interventions fail and safety is threatened;
- Attitude — Begin the first interaction with a combination of respectful authority and emotional sensitivity. Respond calmly with a supportive/nonthreatening attitude. Show respect and avoid being judgmental. Show empathy and develop trust if possible;
- Body language — Avoid extended periods of direct eye contact. Maintain a calm facial expression, which may be observed closely by the person;
- Manner of speaking — Speak clearly in a nonconfrontational tone of voice. Be aware that verbal communication may be impaired or ineffective, however; and,
- Initial interview — Identify yourself and briefly remind the person of your role. Ask simple questions that require only short answers about why the person is upset and what can be done.

Similar to FARs, an Australian Civil Aviation Order requires cabin crews to be trained and proficient in both “handling of disabled

passengers” and “handling of deranged passengers and others whose conduct might jeopardize the safety of the aircraft.”²³

Julie Martin, a cabin safety specialist with Civil Aviation Safety Authority Australia (CASA), said that no further guidance has been provided about how airlines should ensure crew proficiency in these areas. Additional education about psychiatric disorders sometimes has been provided as part of the heightened security awareness following the terrorist attacks on Sept. 11, 2001, she said.

“Following Sept. 11, more emphasis has been put on handling disruptive passengers generally, but I have not seen a lot of work done specifically in the area of passengers with psychiatric disorders,” she said. “The current environment has really emphasized that flight attendants should ‘act first, look for causal reasons second’ — which may lead to incorrect judgment of medical conditions on which they receive little specialist training. CASA recently had a report from a flight attendant who was not happy with the way the company had handled what he perceived to be a ‘threatening’ passenger. From the reports received, however, it appeared that the behavior exhibited by the passenger was indicative of someone who suffered acute anxiety when flying, but the flight attendant immediately believed that the passenger was a potential ‘security problem’ and wanted him offloaded.”

Sheryl Gallagher, a cabin safety specialist in the Airline Operations Branch of CASA, said that many flight attendants have been trained to operate in two distinct modes: either responding to in-flight medical emergencies requiring immediate first aid, or responding to a disruptive/unruly passenger requiring physical restraint when mediation fails. In this training framework, making any assumptions about the frame of mind of a passenger — and then acting according to those assumptions — may be difficult, dangerous and/or vulnerable to civil litigation, she said.²⁴

“I have experienced several occasions, as a crewmember, when incorrect assumptions about passenger behavior were made,” Gallagher said. “On one occasion, I was called upon to deal with an apparent alcohol-induced disruptive-behavior situation. The passenger was loud and had slurred speech, was argumentative and refused disembarkation during a transit stop. The passenger was observed and reported to airport security as ‘not fit’ to continue; however, during an interview with the airport manager, the passenger presented medical certificates indicating a medical problem influenced by stress (her fear of flying).”

How well a crewmember deals with psychotic behavior — as well as acute anxiety, panic disorder or dementia — will depend not only on the mediation skills taught by airlines to deal with disruptive passengers, but on the life skills and experiences that a person brings to the professional role, she said.

“Flight attendants who have been in the role for some time will have a greater awareness of a passenger’s acute anxiety,”

Gallagher said. “Acute anxiety becomes an in-flight medical emergency when it interferes with a person’s ability to function, or when it triggers other conditions that threaten the life of the passenger — asthma [attacks], heart conditions or milder conditions such as hyperventilation — or other passengers or crewmembers are threatened because of the person’s overconsumption of alcohol and/or prescription drugs. This common problem probably would not be reported as acute anxiety, however, as flight attendants would only report on the irrational behavior manifested, rather than the cause.”

As airlines consider training subjects to cover in more depth, a lack of data about in-flight psychiatric emergencies has made it difficult to know, for example, how often flight attendants misinterpret involuntary behavior caused by psychiatric disorders as intentionally “difficult” passengers, Martin said. Until more information becomes available, shifting resources to provide more background about psychiatric disorders may not be feasible, she said.♦

Notes

1. Civil Aviation Safety Authority Australia. Civil Aviation Order 20.11, Appendix IV, 2.4, “Control of Passengers During Emergencies Including Emergency Evacuation.” U.S. Federal Aviation Administration (FAA). Order 8400.10 Chapter 14, paragraph 1951 said that flight attendant training will include carriage and briefing of passengers who require special assistance; policies on acceptance of passengers and refusal of transportation to passengers; apprehensive passengers; serious illness or injury during flight; and problem passengers, including “passengers who appear to be emotionally disturbed” and “passengers who appear to be under the influence of alcoholic beverages and narcotic drugs.”
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8. International Civil Aviation Organization (ICAO). Annex 9, *Facilitation*. Chapter 1. Chapter 8, paragraph 8.37. The recommended practice in paragraph 8.22 says, “When traveling, persons with disabilities should be provided with special assistance in order to ensure that they receive services customarily available to the general public. Such assistance includes the offering of information and directions in media which can be understood by travelers with cognitive or sensory disabilities.”
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10. DOT. Federal Regulations Part 382, *Nondiscrimination on the Basis of Disability in Air Travel*. Section 382.35, “Attendants.”
11. DOT. Federal Regulations Part 382, *Nondiscrimination on the Basis of Disability in Air Travel*. Section 382.51, “Communicable Diseases.” Section 382.53, “Medical Certificates.” Section 382.61, “Training.”
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