Medical Privacy versus Public Safety in Aviation

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Confidentiality, considered a fundamental principle of medical ethics, is potentially at odds with public safety when an airplane pilot is experiencing symptoms of mental illness. Reporting requirements for pilots vary across the world, and pilots can be subject to multiple national regulatory authorities for international flights. Stigma exists about getting treated for depression. If one's livelihood and core sense of identity is placed at risk by seeking treatment, people will naturally avoid assessments and engagement with mental health clinicians, the very treatment that could mitigate risk. Suicide and homicide by aircraft are rare events and are difficult to predict, but the impact can be catastrophic. Variables other than mental illness, such as personality structure, occupational and relationship stressors, and coping mechanisms are also critical in conceptualizing risk in this population. Requirements for those employed in other methods of transportation are contrasted with those for pilots. Finally, legal and ethics concerns regarding reporting requirements for pilots are discussed and suggestions made.

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In the past half-century, air transportation via commercial jet has become one of the staples of both business and leisure travel throughout much of the developed world. In the United States alone, 946,846,490 passengers boarded flights in 2016.[1] The year 2017 was the safest in aviation history, with no crashes involving commercial jet aircraft and only two fatal turbo-prop accidents.[2] This is compared with 2015, when a German pilot deliberately locked his colleague out of the cockpit and then killed all 150 people on GermanWings Flight 9525 by flying into terrain. That incident was responsible for 13 percent of all commercial aviation deaths that year. It was also notable because the pilot had a long history of physical symptoms attributed to psychological causes and had sought opinions from a number of specialists; he was reported in the media to have seen multiple neurologists or ophthalmologists in some weeks, and by one report he saw 41 specialists in the five years before the deliberate crash. At least one neurologist is known to have diagnosed him with hypochondriasis. His family doctor diagnosed him with "emergent psychosis" and urged him to seek psychiatric help, which he declined. None of this was reported to the aviation medical team at Lufthansa, which oversaw GermanWings pilots.[3]

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Confidentiality and Public Safety

Confidentiality is a core value in medical ethics and has been considered one of the fundamental components of the physician–patient relationship since ancient times.[4] In a British Medical Association survey, 93 percent of the public respondents agreed with the statement that "doctors are patients' advocates and should not be expected to release information about a patient to a third party without the patient's properly informed consent."[5] However, the boundaries of confidentiality have been fluid throughout medical history as the fiduciary, dyadic

Table 1 Reporting of Public Hazards

Reporting System	Example
Mandatory: when the threshold is met, providers must report	When specific criteria are met, health professionals must report child abuse.
Permissive/discretionary: providers have latitude regarding reporting	In most states, pharmacists have discretion about reporting errors.[39]
Prohibitive: absolute duty of confidentiality	Lawyers cannot reveal privileged communications.

nature of the relationship sometimes yielded to the public interest.[6] Dangers to the public health and safety have frequently been considered grounds to breach physician–patient confidentiality, and the trend in many (but not all) Western countries since World War II has been toward increased disclosure. (Germany has been a notable exception because health data were used by Nazi authorities to segregate the population and kill individuals with conditions such as mental retardation.) This development is visible in statutes requiring the reporting of child and elder abuse, gunshot wounds, and communicable diseases, as well as so-called *Tarasoff* duties to protect specifically identifiable third parties from potentially dangerous patients. It has been reported that members of the public supported breaching confidentiality when a client reported murder (planned or confessed), suicide plans, child abuse, or treason.[7] The rise of complex systems of transportation (e.g., jet travel, interstate highways, mass transit) has generated its own set of tensions between medical confidentiality and communal welfare. Providers and policymakers face the challenge of safeguarding the physician–patient relationship while addressing a physician's potential duty to protect passengers and the public from impaired pilots, drivers, and others with operating (e.g., train engineers) or administrative (e.g., air traffic controllers) roles in transportation systems.

Reporting regimes for people who represent possible public hazards fall into three broad categories: mandatory, permissive (or discretionary), and prohibitive (see Table 1).[8] A system of mandatory reporting takes decision-making out of the hands of providers. Once a specific threshold is triggered, physicians are required by law to report certain conditions or conduct. Setting that threshold, however, can itself be a challenge for policymakers. Child abuse reporting, for instance, is triggered in most U.S. jurisdictions when a clinician holds a reasonable suspicion that mistreatment has occurred, although there is evidence for considerable variation among physicians in their interpretation of what constitutes reasonable.[9] In aviation medicine, some countries (e.g., New Zealand and Canada) require all doctors to report any concern or possible diagnosis that could impair aviation safety or flight performance.[10,11] Other countries, including the United States, place this obligation only on the clinicians working directly on the behalf of the regulatory authority.

At the opposite extreme, prohibitive systems impose an absolute duty of confidentiality upon providers, which is analogous to the confidentiality that priests observe regarding confession or journalists regarding their sources. The policy consideration underlying a prohibitive approach with an absolute duty of confidentiality is often the belief that, while lives may be saved in the short term due to a specific disclosure, the overall damage done to patients' confidence in their providers will lead to fewer patients seeking care, less honesty with physicians, and a long-term decline in public welfare. A prohibitive approach can be coupled with a mechanism that identifies or restricts the concerning behavior outside the medical context, such as the alcohol-sensitive breathalyzer ignition locks that are implemented by court order for convicted drunk drivers.

Permissive or discretionary reporting systems give providers wide latitude regarding whether and how to report concerning forms of conduct. Some providers may adopt a case-specific cost-benefit analysis. Others may establish their own formal standards for reporting. Alternatively, even in permissive jurisdictions, individual providers might choose to automatically report all concerns or to never report on the grounds that doing so stands beyond the purview of the medical profession and risks undermining the doctor–patient relationship. Physician decision-making in this area may be closely linked to civil liability or professional sanction. Some jurisdictions grant physicians immunity for good faith reporting, for good faith decisions not to report, or for both, even if either choice proves negligent. Similarly, some mandatory reporting regimes may impose liability or penalties when such reporting occurs negligently.

International Considerations

Aviation medicine is governed by a United Nations group, the International Civil Aviation Organization (ICAO). All countries that engage in international flight over member nations' airspace are required to adhere to their standards. The ICAO Manual of Civil Aviation Medicine is to aviation medicine what the Diagnostic and Statistical Manual is to psychiatry: an agreed-upon set of criteria for diagnosis, discussion, and a starting point for how clinicians approach the health of pilots.[12]

ICAO language uses the following terms for medical certification: Class 1 is required for air transport, multi-crew, and commercial pilots; Class 2 is required for unrestricted operations by private pilots or commercial balloon pilots; and Class 3 is required for air traffic controllers, except in countries where air traffic controllers are directly employed by the regulator, such as the Federal Aviation Administration (FAA) in the United States. ICAO stipulates that all pilots must receive medical certificates issued by a national authority to exercise flight privileges. Although ICAO sets standards for medical fitness, every country has its own legislation that stipulates rules around granting and revoking aeromedical certificates and flight privileges. ICAO standards are more than guidelines because any member nation opting out of an ICAO standard must notify the organization by filing a "difference," which can result in restrictions on international operations. For example, the Australian Civil Aviation Safety Authority requires audiograms at the first renewal after age 25, then every five years, whereas the FAA Class 1 requirement allows a conversational voice test whereby a pilot turns away from the examiner at a distance of 6 feet and further testing is required only if this is failed.

All assessments are performed by an aviation medical examiner (AME), also known as a "designated medical examiner" in ICAO documents. Some AMEs are family doctors or internists with additional training in aviation medicine, and they work as an AME as a sideline; others are occupational health specialists who are full-time employees of commercial airlines. Some airlines allow the pilot to attend an AME of their choice, while others require they see a doctor at the airline's medical office. Some airlines have internally staffed medical offices, and others contract all or part of these services to third-party providers. Some pilots use AMEs or the airline medical office as their primary care clinician, but others have a separate primary care provider. In some cases, the pilot may see a primary care provider, specialists (who could be designated by the pilot, the airline, or the regulator), an independent AME, and a member of the airline corporate medical staff to complete their medical certificate paperwork.

Medical confidentiality in the United States is largely governed by the Health Insurance Portability and Accountability Act (HIPAA). HIPAA prohibits health care providers from disclosing a patient's personal health information without the individual's written authorization, or under limited circumstances specifically allowed or required by HIPAA. HIPAA's protections are outweighed by health care providers' legal obligations to disclose information if the provider has a credible basis for believing the patient poses a serious and imminent threat of harm to the public. This may be particularly relevant where the interface of pilots and mental health is concerned, but there is little precedent in aviation mental health to guide clinicians on this point. HIPAA makes no specific allowance for clinician ethics, only threats or risks. Unless the pilot or controller who is considered by the clinician to be "a serious and imminent threat" is heading from the consultation to an airfield, it could be useful to seek legal advice and consult colleagues.

The FAA requires all airline transport pilots to obtain a Class 1 medical certificate, which must be renewed every year if the airline pilot is less than 40 years old, and every six months if the pilot is age 40 or older. This involves a physical examination and self-reporting in a medical questionnaire, but it does not require specific psychological assessment. Doctors can require further testing or specialist review for concerns regarding "emotional stability and mental state."[13] FAA regulations at this time do not create a general exception to HIPAA's confidentiality protections of a pilot's medical history, but they do require a pilot to allow access to their records if the FAA believes the information is necessary to ascertain whether the medical standards required to hold a medical certificate are being met. If the FAA is not aware of the concerns, however, it can't mandate access to medical information.

The regulatory powers of the FAA allow it to determine if a medication is consistent with safe flying practice. For example, since 2010, the FAA will allow

pilots to fly while being prescribed one of four permitted selective serotonin reuptake inhibitors (i.e., fluoxetine, sertraline, citalopram, and escitalopram). The pilot must also be evaluated by a specifically trained AME. The final determination of the treatment and the pilot's ability to fly is still left with the FAA in these cases.

As mentioned above, Canada and New Zealand each suspend pilots' privacy and require clinicians to report any concern (not even a formal diagnosis) to the regulatory authority. Even in those countries, a doctor does not necessarily have the right to contact the employer; that role belongs to the regulator, who may not routinely inform the airline why the pilot is not fit to fly.

When the German legal system is compared with those in the United States and other European nations, Germany gives more weight to personal privacy than to public safety. Much of this stems from a response to the intrusiveness of the Nazi regime in the 1930s and 1940s,[14] which "justified enormous infiltration into personal privacy with national security reasons."[15] German confidentiality laws were cited as restricting the communications of clinicians who were aware that the pilot of GermanWings flight 9525 had unusual or concerning behavior. In Germany, doctors are reportedly not permitted to breach confidentiality in any circumstance. While there is an expectation that they will do so in situations involving infectious disease or if a patient is planning to commit a serious crime, there is no clear guidance on this matter, and individual clinicians are left to make personal decisions. For example, the Higher Regional Court of Frankfurt ruled in 1999 that a doctor was legally obliged to violate a patient's confidentiality when a patient refused to disclose HIV positivity to family members.[16] Another example is that German employers are restricted in checking the criminal records of the people they are hiring; under German law, the employer must rely on the applicants themselves to volunteer their criminal history.

Germany is part of the European Aviation Safety Agency (the equivalent of the FAA in the United States), which has planned a central database of pilots' medical certification status and the contact details of the AME who conducted the most recent exam. It does not, however, mandate any reporting by clinicians other than AMEs. In the GermanWings incident, the pilot had a notation on his certificate that he required additional monitoring for depression on annual exams after an incident in 2009. This would not appear in the new European database.[17]

This discussion does not apply to military or other flight surgeons for military or quasi-military organizations (such as the National Oceanic and Atmospheric Administration, which maintains its own fleet of aircraft and pilots who operate under the Uniform Code of Military Justice); pilots in such organizations may be under legislative regulations and controls that circumvent normal civilian privacy rules.

Suicide and Homicide by Aircraft

Aviation accidents may occur due to psychiatric symptoms (e.g., impaired concentration from depression or a developing dementia). But "aviation safety is rarely impacted by the intentional destruction of aircraft by pilots" (Ref. 18, p 388). Confusion persists in the literature regarding accidents, suicide, and homicide-suicide, and caution must be taken in interpreting research. Suicide, homicide, and homicide-suicide are very rare risks in flying, but they are of high lethality when they occur.

A recent review of pilot suicides in the five years before and the two years after the GermanWings homicide-suicide found that six of nine pilots who committed suicide using aircraft had communicated their suicidal thinking to others prior to the suicide, five of them within days of killing themselves.[19] All but one had a valid flying certificate; the one pilot had the certificate suspended due to alcohol abuse.[19]

A systematic review of suicide and homicide events found 65 cases of aircraft-assisted pilot suicide, 18 cases of aircraft homicide-suicide leading to 732 deaths, and 6 passengers who committed suicide by jumping from an aircraft.[18] In comparison to the general population, a relatively large percentage of pilot suicides were, in actuality, homicide-suicides (17%).[18] Findings associated with both suicides and homicides included legal or financial crises, occupational conflicts, relationship stress, and mental illness. Alcohol and drugs were noted in approximately half of the suicides but not the homicide-suicides.[18] Kenedi and colleagues concluded "there is not enough data to suggest that mental illness plays a significant role in either suicide or homicide-suicide by pilots. Rather perpetrators were often noted to have other stressors, such as relationship or financial problems" (Ref. 18, p 395). Five of the six pilots of

large aircraft who were engaged in homicide-suicide acts waited for the co-pilot to leave the flight deck. In the case of attempted homicide-suicide in which other pilots were on the flight deck, it required two (first officer and flight engineer) male crew members to partially thwart the homicide-suicide event.[18]

Ground Rules for Cars, Trains, and Boats

Air safety policy-makers may wish to draw upon approaches of policies applicable to other modes of transportation. The comparable area in which the most extensive legal guidance exists is the role of physicians in reporting impaired motor vehicle travel. In the United States, no formal medical exam (other than a vision test in many states) is required to obtain a driver's license, so efforts to identify potentially impaired drivers usually occur after these drivers are already on the roads. Yet jurisdictions vary widely in their approach to the subject. Six states (California, Delaware, New Jersey, Nevada, Pennsylvania, and Oregon) mandate the reporting of certain impairing medical conditions.[20] These statutes generally refer to losses of consciousness and epilepsy, although California and Pennsylvania laws also specify Alzheimer's dementia.[20]

Failure to protect the public from impaired drivers can entail significant liability for physicians in some of these jurisdictions. For example, the Supreme Court of Delaware in *Naidu v. Laird* (1988) upheld a $1.4 million gross negligence verdict against a state hospital psychiatrist whose former patient deliberately caused a fatal automobile crash.[21] In other states, reporting is generally permissive, but there is considerable variability regarding whether physicians receive legal immunity for good faith reports.[20] Reporting to motor vehicle authorities (rather than to police) appears to be a relatively popular approach among providers, with two thirds of them favoring the reporting of alcohol-induced clinical impairment to the pertinent motor vehicle authority.[22] It has been reported that 78 percent of 1,041 surveyed emergency physicians agreed that "patients [i.e., drivers] treated for injuries sustained as a consequence of alcohol-impaired driving should be reported to the authorities" (Ref. 23, p 284).

Most Canadian provinces take a more stringent approach to impaired automobile drivers. A majority of jurisdictions require medical exams for older drivers. Seven provinces and three territories mandate physician reporting of potentially impaired drivers; in Alberta, Nova Scotia, and Quebec, reporting is discretionary. According to Johnson, "physicians' failure to report these patients is considered more than an oversight; it is deemed to involve negligence and the result can be civil charges, lengthy trials and major financial judgments for damages" (Ref. 24, p 322). In Great Britain, physicians are strongly encouraged, but generally not legally required, to report impaired drivers to the Driver Vehicle and Licensing Agency. Guidelines issued by the British General Medical Council in 2015 stated that physicians should breach confidentiality when a "patient's refusal to stop driving leaves others exposed to a risk of death or serious harm" (Ref. 25, p 11). The Road Traffic Act of 1972 does require physicians to breach confidentiality when requested by authorities, following certain road collisions and incidents.[26]

The United States adopts a distinctly different approach toward drivers of commercial vehicles. Most commercial truck drivers are required under Federal Motor Carriers Safety Regulations, administered by the Department of Transportation, to obtain formal medical clearance.[27] Those with certain diagnoses such as epilepsy are automatically disqualified, even if the illness is well controlled.[27] Physicians can be held liable for negligent evaluations that lead to collision.[28] In the case of *Wharton Transport Corp v. Bridges* (1980), for instance, an examining physician was held liable for the death of a child injured by a trucker later found to have multiple impairing diagnoses.[28] In practice, however, examinations have historically tended to be particularly lax; Pommerenke *et al.* reported that "many drivers are surprised when they receive a more than cursory certification examination" (Ref. 29, p 415). The Commercial Motor Vehicle Safety Act of 1986 in the United States required states to regulate drivers of large buses and trucks and to remove unfit drivers from the roads, but its standards were often criticized as inadequate, especially in the aftermath of several high-profile bus crashes.[30] The Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005 created a medical review board to advise the Federal Motor Carrier Safety Administration on guidelines and testing for both commercial truck and bus drivers.[30] Currently, commercial truck drivers are required to be examined by a certified medical examiner at least every two years. In many states, school bus drivers have more stringent requirements; they are required to pass a

physical examination every one to two years, and they are asked if they have a history of psychiatric problems or mental illness.

Recreational boating remains among the least regulated of motorized transportation methods. In the United States, for instance, only one state requires a formal boating license, although 41 states require some form of a boater education course.[31] At present, impaired boating is largely addressed after the fact through the criminal justice and tort systems (similar to private land transport), although some jurisdictions have begun public awareness campaigns.

Maritime sailors, officers, and pilots who will be responsible for commercial vessels are required to obtain a Coast Guard Medical Certificate that states, somewhat ambiguously for clinicians, that

> there are no conditions that pose significant risk of sudden incapacitation or debilitating complication. All medical evaluations are reviewed by the U.S. Coast Guard in the wake of the Exxon Valdez and Cosco Busan oil spill incidents. This exam must also document any condition requiring medication that impairs cognitive ability, judgment, or reaction time [Ref. 32, §10.304].

The American Medical Association (AMA) Code of Medical Ethics directly addresses the question of impaired transportation, offering broad guidelines that apply to "personal car or boat or a commercial vehicle, such as a bus, train, plane, or commercial vessel."[33] These guidelines admonish physicians to recognize that "safety standards for those who operate commercial transportation are subject to governmental medical standards and may differ from standards for private licenses" (Ref. 33, subsection c). Beyond this, the AMA's specific guidance is somewhat limited. While stating that "physicians have unique opportunities to assess the impact of physical and mental conditions on patients' ability to drive safely and have a responsibility to do so in light of their professional obligation to protect public health and safety,"[33] the opinion goes on to state that "physicians must balance dual responsibilities to promote the welfare and confidentiality of the individual patient, and to protect public safety."[33]

Ethics and Reporting

The vast majority of pilots and flights are safe. Pilots are at lower risk of negative outcomes in general due to careful screening prior to becoming a pilot and the rigorous training and evaluation process. Risk factors for suicide in the general population appear to occur at lower rates among pilots. Life and relationship stressors happen to pilots as they do to the rest of us, however, and they may demonstrate inadequate coping skills. Alcohol misuse is not rare. Pilots often have a feeling of belonging to a community, which is a protective factor. When this is threatened, however, such as by loss of their role, there may be a delay or refusal to ask for help and risks may be elevated.

Depression and mental illness are common in the general population. The stigma related to seeking help for mental health concerns can lead to missed opportunities for treatment. Regarding this concern for pilots, Kenedi and colleagues noted that "it is critical that stigma and fear of loss of livelihood do not prevent treatment, as help-seeking mitigates the risk of suicide and homicide" (Ref. 18, p 395). Individuals who are not getting needed treatment are those who are likely to be at highest risk because treatment mitigates risk. Psychotherapy or psychiatric medications that cause no impairing side effects should not automatically disqualify someone from flying because they are prescribed to improve conditions and thus help alleviate risks associated with mental illness.

Internationally, ICAO regulations stipulate the requirement for a medical certificate that the pilot is safe to fly. But the mental health assessment is limited to the observations of the AME and the pilot's self-report on their medical questionnaire. If the FAA is not aware of concerns about a U.S. pilot's safety to fly, then they cannot mandate access to information. One mechanism to make the FAA aware of concerns is the FAA anonymous hotline for reporting concerns about pilot safety risks.

A determination of the threshold to intervene appears critical. One might set the bar extremely low (e.g., any suspicion) in cases of a large-scale threat, such as a possibility of anthrax or smallpox exposure, or as high as a probable suspicion or even convincing knowledge (i.e., a clear diagnosis). A low threshold would lead to false positives, whereas a high threshold would lead to false negatives. A consideration of the acceptability of each type of error is critical. This balancing is also true in child protection, e.g., a low threshold minimizes not identifying assaulted children. Any political or public pressure to avoid false negatives will lead to an increase in false positives.

A low-threshold approach might require extensive, regular assessment of pilots (e.g., a Minnesota

Multiphasic Personality Inventory at the time of training and regular psychological evaluations thereafter); however, there is no evidence available to suggest that this approach would be cost-effective or contribute to increased safety. The cost is not only a question of financial resources, but also of the limited availability of suitable mental health professional resources to provide this service. Further, there is the cost of false-positives (i.e., pilots inappropriately removed from flight operations), which would be a critical transportation concern because there is currently a shortage of qualified commercial pilots in many areas. It could also impact the safety culture of aviation, eroding the autonomy of pilots and the fundamental reliance on the idea that they are responsible for their safety and good judgment.

Dual obligations exist with regard to pilots' medical confidentiality and consideration of public safety. While confidentiality is critical, there are required breaches in other areas of medicine, such as child abuse or driving with epilepsy. Germany has fallen strictly on the side of confidentiality since the end of World War II. But many of the consulted physicians in the GermanWings incident would likely have had concerns about the pilot's fitness to fly based on his psychosis or hypochondriasis diagnoses. Different reporting laws may have led to the pilot being removed from his duties, and lives saved.

Another major concern, then, is mandatory versus discretionary reporting. Kenedi and colleagues noted that, regarding homicide-suicide cases, "mandatory reporting would not impact the majority of cases in which financial, occupational, or legal factors appeared to be in the background" (Ref. 18, p 395). Rules stipulating mandatory reporting are not always followed by clinicians (i.e., in potential child abuse cases).

Mandatory evaluations and mandatory reporting also can affect the safety culture of pilots and aviation. In the United States, AME reviews are required every 6–12 months, and stressors may certainly happen in between, as can the onset of depressive disorders and cognitive impairment. Therefore, a mandatory evaluation or reporting system cannot replace individual pilots, peer networks, and airlines in identifying and reporting unsafe or inappropriate behavior or operational performance concerns.

Mandatory reporting could also reduce the willingness of pilots to discuss symptoms or concerns, or spur them to seek surreptitious treatment in which the pilots do not disclose their profession. To avoid this, regulators, airlines, and pilots (presumably through pilot unions) would need to ensure that there was community education about mental illness, and that established pathways existed for support of pilots while under diagnosis and treatment. While disqualifying conditions such as mania, psychosis, and cognitive impairment will always lead to loss of the ability to fly, other conditions such as anxiety or depression should have established protocols that allow for a return to work after effective treatment and engagement.[34] Mandatory reporting of concerns regarding episodes of unconsciousness in drivers, required in some areas, has not been shown to reduce accident rates.[35] Other studies have suggested that education is more effective than mandatory clinician reporting in reducing land transport accident rates.[36]

Peer support networks increasingly play an important role in aviation mental health. Most major carriers now support and fund these networks, which include aviation professionals who voluntarily receive some degree of training and psychological supervision in recognizing and supporting pilots in distress. They are taught to engage with pilots and when and how to assist them in accessing employee-assistance programs or crisis mental health services. Their operations are completely outside of structured medical reporting requirements, and no regulator requires them to report concerns. Because pilots will often talk to other pilots more freely, however, it is generally seen that they provide a gateway for pilots to discuss common problems such as workplace conflict, bereavement, relationship conflict, and professional stressors with peers. Pilots have a strong sense of community, and there is a perceived sense among such support networks that their focus is on the welfare of their peers and aviation safety as a whole.[37,38]

Guidance for psychiatrists performing evaluations addressing FAA and ICAO questions is beyond the scope of this article, and it is currently the topic of an international collaboration. Available resources are listed in Table 2.

Conclusions

Rare events such as pilot homicide-suicide and suicide involving aircraft are difficult to predict and therefore to prevent, but they have catastrophic con-

Table 2 Useful Resources for Evaluations

Bor R, Hubbard T (editors): Aviation Mental Health: Psychological Implications for Air Transport. Surrey, United Kingdom: Ashgate Publishing, 2006
Bor R, Eriksen C (editors): Pilot Mental Health Assessment and Support: A Practitioner's Guide. Oxford, United Kingdom: Routledge Publishers, 2017
Position Statement on the Role of Psychiatrists in Assessing Driving Ability. Washington, DC: American Psychiatric Association, 2016
Federal Motor Carrier Safety Administration: Report of Conference on Psychiatric Disorders and Commercial Drivers. Washington, DC: US Department of Transportation, 1991

sequences. Signs of mental illness or symptoms suggestive of poor coping structures may be noticed by clinicians who are treating pilots but who do not have a direct operational role with the air carrier or aviation regulator. These clinicians will have to balance the local rules around the privacy of health information with public safety, if they become aware of signs or symptoms that may indicate a risk for dangerous or destructive behavior on the part of the pilot.

Another item to consider is the impact of reporting mental health concerns on the pilots' ability to support themselves and their family. In many cases, the company will continue to employ the pilot even if they are on non-flying status, just as they would with any medical condition. In some cases, the pilots are required to take unpaid leave for a period of time, but they can activate assistance programs from the pilot union or from disability and income-protection schemes.

The option of mandated reporting may lead to less help-seeking behavior among pilots suffering symptoms of mental illness, due to the fear of losing their livelihood by pursuing needed treatment. It could also erode the culture of pilot-centered safety where pilots are expected to be responsible for, and engaged in, their own wellness. Mandatory reporting in the United States (such as is required in Canada and New Zealand) would allow the appropriate agency to investigate concerns and to ascertain fitness to fly. Mandatory reporting allows the casting of a wider net to minimize false negatives for a high-lethality event, but caution must be used so that, once reporting occurs, appropriate risk assessments are undertaken. There is a lack of evidence however, that mandatory reporting improves safety in drivers. Reporting systems, whether mandatory reporting by clinicians or self-reporting by pilots, must be accompanied by treatment pathways that allow for pilots with symptoms of concern to receive appropriate care. Peer support networks may assist in recognizing and assisting pilots with distress and guiding them to treatment within established channels.

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