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A Qualitative Descriptive Study on Re-assessing the Mental Certification

by FAA for Future Pilots

by

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Abstract

Mental illness becomes one of the main problems that most pilots do not usually address. It is not because pilots do not have the courage or are open enough to talk with someone, but because the Federal Aviation Administration (FAA) forces them to hide from mental depression. Most of the time, the pilots are not willing to declare such illnesses as they fear losing their job; simultaneously, the Federal Aviation Agencies across the world require pilots to be in peak health, including their mental condition, to operate the aircraft. While it can be said that the passengers' and crews' safety are in pilots' hands, mental illness should not be viewed as a disease that cannot be cured. It can be treated with proper medical guidelines; however, the recovery journey can be long and exhausting. With the rising generation of younger pilots who have been dealing with 21st-century problems such as financial issues, family issues, and so on, depression rates among Generation Z have been drastically increased. The paper will analyze the FAA medical certification and whether it should be re-assessed and allowed pilots with long-term mental illness while giving them options for treatment. The paper will also discuss the new mental certification guidelines to a certain extent aligned with regulatory requirements for upcoming pilots to fly under certain circumstances. The Federal Aviation Administration (FAA) must be reassessed its mental requirement in medical certification for future pilots.

Keywords: pilots, FAA, mental illness, depression, medical certificate, re-assessment

A Qualitative Descriptive Study on Re-assessing the Mental Certification by FAA for Future Pilots

Mental illness becomes one of the main problems that most pilots do not usually address. A survey from the 2016 Harvard University found out that only 12% of more than 1,800 pilots were diagnosed with depression and mental anxiety, and among them, 4% reported having suicidal thoughts within the last two weeks from the survey date (Bayern 2021). While there are many external factors to consider, such as family and financial issues, Smith (2016) pointed out that masculinity hurts mental health or the individual's well-being, particularly in men. Furthermore, it can be related that such agony starts affecting pilots' mental health; the supremacy of being an alpha male or the family's breadwinner creates the talent that makes pilots hide their emotional status within the society.

However, DeHoff & Cusick (2018) contradicted that females are twice as highly likely to suffer from mental distress as males. While the cause of the distress could not be able to find out, it had been identified that problems are similar to that of male pilots. DeHoff & Cusick (2018) pointed out the Germanwings Flight 9525 in 2015 that the First Officer did not report to the airline or the designated aviation medical examiner (AME) for his depression led to the casualty of the accident. The First Officer sought treatments at authorized medical centers and was permitted from a break, yet the pilot did not approach the aviation authorities. It is essential for the aviation industry that passengers' safety is heavily dependent on the pilots, and therefore stricter laws and regulations have been amended for decades.

Description of the Problem

The correlation between the pilot and the mental depression has been a growing concern for the aviation industry, yet the majority has not been identified legally. The anonymous survey

in 2016 found out that more than 1,800 pilots have been suffering from significant mental issues such as depression, anxiety, sexual and verbal harassment, and many more on the list (Center for Professional Recovery, 2018). Despite such issues among the aviation network, pilots are not comfortable seeking treatment at authorized treatment centers as it could negatively affect their careers, which is also partly due to the medical licensing requirements for pilots. The 14 CFR Part 67 states that any First-Class airmen should not be established any medical history relating to mental illness such as “personality disorder, bipolar disorder, depression, and the manifestation of withdrawal symptoms (Office of the Federal Register, 2021)” which allow pilots to refrain from performing a standard duty until the case has been solved.

The mental illness, to some extent, should not be seen as a disease; instead, it is treatable, and aviators should be able to fly as long as they receive proper treatments periodically. However, there is no cure for mental illness, and because of that, it could jeopardize the pilot’s career. Moreover, as more younger generations have been identified with depression and severe anxiety issues due to college, peer pressure, the rough transition into the work environment, this also could have been affected cadet pilots, especially those with high loans, debts of the training cost, and college flight training as well.

Methodology

The paper will be conducted through a qualitative study based on previous research and findings. These are dedicated to exploring the suitable outcome for the research, whereby allocating the former research areas are needed to fulfill. The outcome will also be supported by the cross-sectional survey from the previous research and able to identify the problem statement to focus on recertification of medical certificate by Federal Aviation Administration (FAA) for future pilots with mental illness.

Laws and Regulations

The Code of Federal Regulations (CFR) Title 14, Part 67 mandates that in order to issue any types of medical certificates: Class I, Class II, or Class III, the airmen would not be diagnosed with mental disorder including, but not limited to, a bipolar disorder, a psychosis, usage of substance such as alcohol, drugs, and other forms of both consumable and non-consumable matter (Office of the Federal Register, 2021). The Aviation Medical Examiners (AME) have the right to deny the authorization of proceeding with the certification if the pilot has been identified with or has past medical records regarding the mental diagnosis or treatment. The regulation remains the same across three class types: Class I, Class II, and Class III. During the examination process, the applicants are required to fill out any medical diagnosis on the certification application, and if the section has been left intentionally, pilots could face serious charges and be jailed according to the criminal penalties. In 2016, former Administrator Michael Huerta admitted that the certification policies specifically on mental issues must be changed with the current shows a lot of exposes and damages to the pilot (Goyer, 2021). However, it does not mean that pilots must be suspended for the rest of their lives when identified with a single mental issue.

However, the strict medical regulation goes back to the beginning of aviation. Right after the Kitty Hawk flight, the United States Department of Defense (former War Department) became enthusiastic about the subject matter, and therefore, the instructions and proper guidelines of medical procedures had been made for the aircrew, most of which were guided by Brig Gen Theodore Lyster between 1912-1916 (Go Flight Medicine, n.d.). Germany led developing aeromedical standards in 1910, as the soldiers in many European militaries quickly transformed into aviation pilots, although the guidelines were minimal and the significant step

towards aviation medicine (Go Flight Medicine, n.d.). The pilots were stated that they had to be "fit to fly" for the flight as the industry mainly involves the military. As the commercial aviation industry rose through the Airline Deregulation Act of 1978, there had been a massive demand for pilots, and being a pilot does not seem as glamorous as it was before deregulation (Lawrence, 2015).

Based on the survey from 2016 Harvard (Bayern, 2021), several pilots (both men and women) require help regarding their mental illness. Nevertheless, this does not affect the aviation industry only. With the rise of the number of depressed Americans, including more than 40 million, who were affected by mental anxiety, 16 million were suffering from major depressive disorder, and many other millions had been diagnosed with associated mental health illness (Goyer, 2021). On the contrary, many new treatments have been researched and developed year by year; yet, airline pilots are still reluctant to diagnose, let alone be treated with proper treatment (DeHoff & Cusick, 2018). It has been identified that no matter how many new treatment and diagnosis procedures are introduced, the medical requirements on aviation pilots remain the same as it has been over the past decades.

Case Study on Carl Eisen

Carl Eisen was one of the retired pilots who suffered from severe mental illness due to the aftermath of 9/11 attack. In the interview conducted by Goyer (2021), Mr. Eisen mentioned that was the first time he had suffered from panic anxiety over his flying career. He then sought treatment with professional consultants, and fortunately he was cured from the illness and regained his medical certificate. However, this was not a short timeline from the point the diagnosed had been confirmed to the complete treatment and cure. Carl also stated that he was quite lucky to reinstate his medical license after going through series of medications to over his

anxiety, because not all pilots who treated properly under the regulation, most of the time they were likely to lose the license completely and not being able to fly again for the rest of their lives.

Pilots' and Passengers' Safety Aspects

When a person boards a vehicle, they become a passenger, and a common carrier has to protect the legally classified person as a passenger for all the foreseeable harm. Similarly, passengers and pilots have a relationship of trust where the pilot must put into effect extreme caution because the passenger, on the grounds of their trust, reasonably assume to act their duty for the safety of all, including passengers and crew members (Deepak, 2019). They always communicate with the passengers to create a sense of belongingness if they face any difficulty while flying, be it a natural disaster or a deliberate hazardous act of commission that reflects passengers' safety and security as their first and most significant responsibility. In various research undertaken to understand relation passengers and pilots better, it has been identified that anger, fear, and happiness are the powerful emotions that have a direct impact on a play which not only affect each other perception but also impact willingness to fly based upon pilot configuration (Pirie, 2017).

As pilot configuration impacts the aviation consumer perceptions about trust, comfort, and willingness to fly, mental well-being and the absence of mental illness are essential to ensure safe performance of their safety-sensitive duty. Within the cockpit, the pilot's cognitive, behavioral, and emotional well-being plays a critical role as it directly impacts their decision-making capability and affects relationships with crew members and even passengers. The pilot's concerns, such as risks related to their job, financial security, etc., affect their mental health,

affecting their competencies in the cockpit (David & et al., 2018). Adverse effects of poor mental health within the cockpit can be understood from the following example:

- In November 2013, the captain of Embraer 190 had been through some adverse life experiences that affected his state of mind, and due to this, he intentionally kicked off high-speed descent from the previously established FL380 cruise in the absence of the first officer further prevented him from re-entering. The accident had a considerable adverse impact on the client base of the airlines, their stakeholders, and most importantly, on the passengers.
- EgyptAir 990 was a Boeing 767 consisting of 217 passengers and crew crashed into the depths of the Atlantic Ocean, killing all 217 passengers and crew on board and later in the investigation, it was identified to be an intentional act as the pilot suffered from a tragedy and was not in a good mental condition (Hu & King, 2017).
- Incidents such as the crash of Germanwings Flight 9525 on March 24, 2015, into the French Alps ignited the discussion in the context of internal safety within aviation, and this had an unfavorable impact on the mental health of the pilot.

Such incidents reflect how mental health adversely affects Common Carrier-Passenger Relationship between passengers and pilots on trust and well-being. This increases the need for mental health screening of the pilots to ensure the safety and security of on-boarded passengers and crew members (Hubbard, 2016). With good mental health within the cockpit following positive effects can be generated:

- The ability to resist passenger pressure is ensured by ensuring compliance with all the safety rules and measures.

- With pleasant flying experiences, consumer perception for the pilot configurations can be improved significantly, and thus it can benefit the airline in terms of trust among customers and profitability.
- The healthy mental of pilots within the cockpit positively impacts their convincing capabilities for difficult passengers and company executives that often require assertiveness, and by just being positive and firm overall flight management can be made sure (Lamb & et al., 2020).

Information about the prevalence of mental health conditions in airline pilots can be efficiently identified from various in air accident investigations, aeromedical examinations, and airline or regulatory body records. When passenger boards in flight, an inherent trust in the pilot, crew members, and the entire aviation system is demonstrated but even then, in some cases, passengers have trust issues on a pilot based on an incident of the airline company or similar pilot configuration in the context of their ability to deal with turbulences, the mental health of the pilot as overtime this is becoming one of the significant concerns and their behavior. This increases the threat for passengers' lives and leads the airlines to face severe consequences for the claims, responsibility of incidents, and majorly the trust of the passengers.

Along with this, the trust of passengers is equipped against the ability of pilot that has been designed or trained to integrate and maintain all the standards that have been approved by a diligent and engaged regulator working in cooperation with other authorities for safe and secure travel (Bor & et al., 2016). After being exposed to some of these trust issues, trust cannot be improved overnight, and for these efforts from pilots, and entire aviation system is demanded in the context of sharing of the correct information, along with significant efforts from organizations to ensure safety is maintained and no stone is left unturned to ascertain undesirable

risks. Breaking down a safe and highly reliable system leads to loss of trust of the traveling public and managing this with a safe and highly reliable system becomes crucial for aviation companies with the help of their pilots and crew members.

Organizational Trust and Safety Evaluation

Any safety management system is incomplete without maintaining a check and balance with the mental health and other crew members. The particular emphasis on the mental health of a pilot and other crew members is essential because defining a shortcoming in the arena of mental health demands an exhaustive survey of the facts. The diagnostic of any significant or minor mental ailment demands a robust framework where the activities of a pilot can be observed while practicing an acceptable precision. This process of the diagnostic of the mental health of a pilot or crew member can be achieved with the help of some tools where the culture of self-reporting can be established within an organization (Morrison, 2021).

Agencies taking care of the welfare of such employees are ready to walk that extra mile to promote mental wellbeing or sound mental health as a necessary and transparent precondition for safe aviation operations by any given airline (White, 2021). Prominent Agencies like Federal Aviation Administration (FAA) of the USA and European Aviation Safety Agency (EASA) follows a strict guideline for capturing this data and frame out some policies to ensure wellbeing ahead of the pangs of "Work-Related Stress" and "Stress caused by the factors influencing the life of a pilot outside the work (Williams, 2021)."

Keeping a check on the mental health of a pilot is much more difficult when we compare it with the practices that help agencies and airlines authorities keep a check on the physical health of the pilots. Agencies like FAA and EASA recommend that Airline companies manage to

test the physical health of an employee at least twice a year; keeping a check on the employees' mental health is an important aspect that was neglected in the past.

However, under the current theories now, the same agency also recommends that random surveys of the performance during the operations should be conducted (Read, 2020). It can be seen in the case of British Airways while designing the implementation-related flow, and this company introduces many peer-to-peer reviews where co-pilots and other crew members answer critical questions about the behavior of a particular person during the work hour. British Airways also comes up with some reflective surveys to understand the psychological makeup of pilots after regular intervals (Carroll, 2021).

Like British Airways, most other airlines are also committed to introducing new practices that can be considered the "practices for the standardization of safety norms." Quite often, these airlines study the black box data of flights with a random selection and figure out the efficiency of a pilot in terms of adherence with the standardized protocols maintained in favor of security (Webber, 2021). In the case of British Airways, another critical factor can be taken into account. This company has developed some protocols and intelligence systems where any strange behavior of a pilot can be detected for further assistance or necessary preventive actions (Cahill, 2020).

One can understand it with the help of a study published by John Cachil; according to this study, the root cause of strange behavior by a pilot and assisting crew can be attributed to work-related fatigue (Gracia, 2021). Sometimes, to bring down operational costs, airlines tend to exert additional pressure on the employees. Although they try to compensate it with the help of perks, these perks fail to win over human limitations on most occasions (Gracia, 2021).

Companies like British Airways are designing a targeted intervention to detect the stress caused by fatigue. To achieve it, these companies are taking a resort in "Peer to peer counseling" sessions. The content of these sessions is motivational; the mentorship of senior employees, their tacit knowledge, and experience in handling the pressures situations help inexperienced pilots cope with the stress. Guidance to produce some self-management strategies is another important area that can make a huge difference. Companies like British Airways are regularly conducting workshops to build up a self-management knowledge pool where an individual can develop some guidelines to regulate the affairs of his life and times while delivering excellent and resilient performance at the work front. The absence of punitive action in the case of self-reporting also can increase the mental health ratio of pilots because more and more pilots will come up with a self-diagnostic. Experts can further take care of these self-reporting subjects and address them with scientific precision.

Removal of policies like "Fire and Rehire" is another step taken to develop a confidence-building measure between the airlines and the employees. In the recent past, British Airways has signed a treaty with its employees' union where authorities promised to revoke the "Fire and Rehire" policy to favor existing employees (Topham, 2020). This exercise should be treated to strengthen workplace hygiene and an essential factor that can bring down the work-related stress for the pilots and other fraternity members. It is essential to understand the fact that the presence of a policy like "Fire and Rehire" may lead to a degradation of the skills where the focus of an employee will be more on delivering the existing set of duties rather than the development of a skill set that can become beneficial for the organization during business expansion or rough weather in the economy.

Medical Diagnosis

Mental illness refers to health conditions that include variations in emotions and or behavior. The diagnosis of mental illnesses follows several procedures for it to be determined, and one may use;

- A physical exam: The doctor rules out the physical problems that could cause the symptoms.
- Lab tests: These may include checking the thyroid functioning of the screening for alcohol and drugs (Chandrasekaran, Gomez, Mittal, & Smith, 2017)
- A psychological evaluation: The doctor or the professional talks about the client's symptoms: thoughts, feelings, and behavioral patterns.

At times, it is not easy to find out which mental illness a patient is suffering. Taking time and effort to come up with the correct diagnosis assists in the determination of the proper treatment. The more information one has, the more they are equipped to work on their psychological problems, leading to the main classes of mental illnesses, their medical diagnosis procedure, and their treatment. Mental health is the basis of emotions, feelings, thinking, communication, resilience, and self-esteem. Mental health is also fundamental to affiliations, personal and emotional fitness, and contributes to community or society.

There are many classes of mental illnesses, including Neurodevelopmental Disorders, Schizophrenia spectrum, and other psychotic disorders (Schurman, Kramer, & Mitchell, 2018), Bipolar related disorders, Depressive Disorders, Anxiety disorders, Dissociative disorders, etc. Many people suffer from mental illnesses and do not like to talk about their problems. The illness does not discriminate, and it can affect anyone regardless of gender, age, income, geography, social status, race, and sexual orientation; most of the common mental illnesses start

at the age of 24, although it is common knowledge that mental illnesses occur at old age (Bailey, Wirtalla, & Sharoky, 2017).

Various Medical Diagnosis Procedures and Treatment

The following medical tests and procedures are performed to obtain health information and diagnose pathological and non-pathological conditions of the human body. Treatment of mental illness is highly dependent on the type of mental illness. In most cases, a combination of treatments works best for most patients. If a person has a mental illness with controlled symptoms, treatment from the primary care provider is at times enough (Peris, Teachman, & Nosek, 2018). However, most people prefer to approach a psychiatrist, who is expected to solve all the medical and social needs. The treatment team for mental illness mainly includes Family members, Nurse practitioners, Physician assistant, Family members, Psychiatrists, Primary care doctors, and Medications.

Although medications do not cure a mental infection, they progress the symptoms, and Psychiatric medicines also assist in making other treatments like psychoanalysis have more impact. The best medication for a person depends on particular mental conditions and how the situation reacts to that particular medication.

The most common classes of prescription include;

1. Anti-depressants: These are used to treat downheartedness, nervousness, and at times, other conditions. They assist in improving symptoms like sadness, lack of energy, little or lack of concentration, and lack of interest in activities. (Bailey, Wirtalla, & Sharoky, 2017).
2. Anti-anxiety medication: These are utilized in the treatment of anxiety disorders. They also assist in the reduction of agitation and insomnia, the long-term anti-anxiety drugs are

anti-depressants that also work for anxiety, and they assist in short term relief, but also cause dependency and hence it is advisable to use them on a short-term basis (Chandrasekaran, Gomez, Mittal, & Smith, 2017).

Technology in Mental Illness Treatment

The existing technology has assisted in the treatment of mental illness in various ways. The existence of telehealth technology makes it possible for individuals to consult with the healthcare provider via phone or video call. Telehealth is highly beneficial for mental treatment because it reduces the cost of services and improves access to healthcare services for those who cannot see a mental health professional in person (Bailey, Wirtalla, & Sharoky, 2017). Another option would be applying virtual reality in the treatment process. This is new, but it is vital, especially in mental health. The tech can assist in desensitizing patients from suffering from post-traumatic stress disorder by recreating personal triggers. It is essential for patients suffering from depression and anxiety (Bailey, Wirtalla, & Sharoky, 2017). There are various medical diagnoses and procedures used to treat patients, especially patients who have mental problems. The utilization of technology has made it easier for psychiatrists to treat their patients at a low price and treat many clients quickly.

Beyond Millennials and Generation Z

Depression is a severe mental illness that has become the most challenging life issue for many young people. Depression is a state whereby one is possessed with the feeling of being low or sad; a feeling that lasts for a long time affects the daily activities of the affected person. Depression is accompanied by other mental problems such as anxiety and conduct disorder. Again, when a person feels miserable most of the time and finds it difficult to get motivated may also lead one to be depressed.

Many young adults have found themselves in this state of life, which becomes exceedingly difficult to deal with. When a young person comes across a situation whereby, he/she is faced with the loss of someone close to them, he might face this situation which becomes very hard to control. Another factor that can lead the young generation to face this challenge of life is a long-term physical illness when they experience mental health problems or have long-lasting difficulties in school (Francis, 2019).

When young people face these difficulties, it becomes tough to deal with the situation. It becomes very typical to know if one is facing difficulties in life. The state of depression affects the mind-body, and it changes the behavior of the affected person. The affected person will have the feeling of being sad, upset, or tearful. The feeling of guilt will also be accompanied by restlessness and hopelessness. The affected person's behavior will also change, and one starts showing a state of anxiety which can lead to suicide or a state where one wants to hurt oneself. The state of depression will be indicated when one shows these symptoms and looks so tired and lacking energy, leading to speaking or moving slowly. There are also observable changes in weight and lack of appetite. The behavioral changes which might be observed when one is facing this state of depression are avoiding other people, even close people; they are also faced with a problem of finding it hard to work, complex in decision making, and also unable to concentrate or remember things (Martínez-Hidalgo, 2018).

The treatment of depression is by first sharing a feeling with the closest friend. This makes one be relieved with the thoughts and feelings which make him /her have such feelings. The young generation is encouraged to make regular visits to the therapies and share with them when they face such challenges in life. The affected person can also use an antidepressant to treat this state of depression (Misra, 2019). Educating the young generation on the importance of

living a life of sharing one's thoughts and feelings will play a significant role in controlling depression, a mental disorder that leads to suicide.

Conclusion

The Federal Aviation Administration must be reevaluated their mental requirement in medical certification. Different adults face several types of depression (Chi, 2018). Some face mild depressions, which makes one feel low as though everything is harder to do, while others may face severe depression, which can lead to feeling hopeless and might go to the extent of committing suicide. This state of mental illness in young people who can be future pilots is triggered by some life events which are very risky to control or avoid. Airline pilots are responsible not only for the safety of the passenger and crew but also for themselves. In commercial aviation, as the primary responsibility of pilots is to ensure the safe carriage of thousands of people, the need for physical and mental fitness is just as their job is demanding and quite stressful. When the pilots are not well trained or qualified, then their mental health deteriorates, and this can be seen in the recent example of the crash of Germanwings Flight 9525 on March 24, 2015, into the French Alps as it was a deliberate act caused due to psychosomatic illness, depression and suicidal tendencies of the co-pilot (Schminder & et al., 2018).

Recommendations

The confluence of factors and effects on a pilot's mental wellbeing is determined based on working conditions such as regulatory framework, unique work-life, nature of the job, and employment opportunity. Furthermore, with the current pandemic, the positive outcome for pilots to get back flying is not near to be seen. It is essential to consider the aftermath of Covid and recession on the procurement and implementation of various policies. According to a press release made by International Air Transport Association (IATA), during the pandemic, the self-

reporting of mental shortcomings became more frequent where pilots complained about the degradation of their skills and social patterns.

A survey from the American Psychological Association (2020) stated that the United States of America is in mental health crisis which is now drastically affected by COVID-19. Airlines like British Airways and many others took serious note of this occurrence and gave rise to a healthy interface where the company and pilots can come together and address these psychological problems in a congenial and supportive environment. It can be stated that the development of the 'Mental Health Working group' is emerging as a norm, and in the coming future, the construction of a positive and sensitive environment for mental wellbeing and mental health is always on the cards. This will also apply the same to pilots and possibly the younger generation. Among them, Generation Z has reported the highest stress level with an average of 6.1 out of 10 (American Psychological Association, 2020), and the Federal Aviation Administration needs to implement new strategies for younger pilots for a chance to continue flying with the new mental illness treatment and procedures. The mental requirements in the medical certificate must be changed once and for all to promote mental awareness among pilots and ensure that the pilots are not hiding anymore to be adequately treated.

Proposed Mental Requirement in Medical Certification

The proposed change in mental requirement in Medical Certificate by FAA following 14 CFR Part 67 are as follow, and this applies to all three classes of medical certificate for pilots:

- (a) The person shall not have been diagnosed with any mental-related medical history.
- (b) If the person has any records of past and current mental related medical history, the person shall be certified based on the following requirements:

(i) The person must be clinically diagnosed with the authorized Aviation Medical Examiner (AME), and AME must provide the evaluation to the designed airline company or any fixed-based operator (FBO).

(ii) The person must be treated appropriately to the illness until the AME evaluates the person is stable, and the risk of having threats to the passengers and crews is low.

(iii) After the treatment process has been done, the person must periodically appoint the AME for further evaluation.

Safety Promotion following the System Safety Management must be implemented by educating and promoting mental health awareness. Changes to the designated airline companies or FBOs must be done as well. Punitive actions such as revoking the license or deducting the base salary must not be taken for those pilots with diagnosed mental illness unless the AME decides that person's condition is critical and suicidal. The organization must make pilots have an open mindset and feel motivated and passionate even if the pilot is treated. Human mindset is critical in building trusted and warm relationships within the organization so that pilots may not feel neglected or be seen as a failure. Additionally, the nature of mindset can either bring people down or make them motivated and if the person's mentality is destroyed, it is hard to regain the normal living behavior again. The organization must access and evaluate pilots' behaviors periodically, and if the pilot is a survivor of mental illness, the pilot deserves a second chance to fly again.

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