



**AFRL-SA-WP-SR-2011-0004**

**ANALYSIS OF THE U.S. AIR FORCE  
FLYING CLASS WAIVER OUTCOMES OF  
THE AEROMEDICAL CONSULTATION  
SERVICE AND MAJOR COMMAND  
UNITS IN NEUROPSYCHIATRY**



**John E. Heaton, M.A.**

**Jennifer N. Heaton, B.S.**

MedPro Technologies LLC, San Antonio, TX

**Tonya V. Merriweather, TSgt, USAF**

**Kent D. McDonald, Col, USAF, MC, FS**

U.S. Air Force School of Aerospace Medicine, Wright-Patterson AFB, OH



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**Air Force Research Laboratory  
711<sup>th</sup> Human Performance Wing  
School of Aerospace Medicine  
Aerospace Medicine Consultation Div  
2510 Fifth St.  
Wright-Patterson AFB, OH 45433-7913**

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LEE BEYER, COL, USAF, MC

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ROBERT E. CARROLL, COL, USAF, MC, CFS

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| <b>14. ABSTRACT</b><br>Flight surgeons often refer disqualified aircrew and special duty personnel to the Aeromedical Consultation Service (ACS) at the U.S. Air Force School of Aerospace Medicine for an in-depth specialty evaluation and recommendation regarding an aviator's readiness to return to fly. Airmen (officer and enlisted) disqualified from flying due to a neurological or psychiatric condition are assessed at the Neuropsychiatry Branch of the ACS with aeromedical experts in the fields of psychology, neuropsychology, neurology, and psychiatry. Anecdotal evidence suggests there is a great deal of speculation regarding the low likelihood an airman will receive an aeromedical waiver to return to his or her aircrew or special duty position if referred to the ACS. This may cause flight surgeons and airmen to be unnecessarily apprehensive in requesting support for an ACS consultation. The purpose of this study is to assess the likelihood an airman will return to flying when flight surgeons consult with ACS specialists in the Department of Neuropsychiatry. The Aeromedical Information Management Waiver Tracking System and Patient Status Worksheet were used to analyze records of 390 aircrew and special duty personnel referred for an evaluation at the ACS (2005-2010) due to a disqualifying neurological or psychiatric condition. Overall, 73% of evaluated aviators/aircrew were recommended to return to their aviation- related duties, and only 27% were recommended not to return to their duties. Major command authorities concurred with 98% of ACS staff recommendations. The results indicate that three out of every four aircrew or special duty personnel referred to the ACS due to a history of a psychiatric illness/injury receive a recommendation to return to their duties. Such information removes ambiguity regarding the likelihood of obtaining a waiver and helps reduce the level of apprehension for flight surgeons and aviators who are being referred to the ACS. |                         |                                         |                                              |                                                                                |                                                       |
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## 1.0 SUMMARY

Flight surgeons often refer disqualified aircrew and special duty personnel to the Aeromedical Consultation Service (ACS) at the U.S. Air Force School of Aerospace Medicine for an in-depth specialty evaluation and recommendation regarding an aviator's readiness to return to fly. Airmen (officer and enlisted) disqualified from flying due to a neurological or psychiatric condition are assessed at the Neuropsychiatry Branch of the ACS with aeromedical experts in the fields of psychology, neuropsychology, neurology, and psychiatry. Anecdotal evidence suggests there is a great deal of speculation regarding the low likelihood an airman will receive an aeromedical waiver to return to his or her aircrew or special duty position if referred to the ACS. This may cause flight surgeons and airmen to be unnecessarily apprehensive in requesting support for an ACS consultation. The purpose of this study is to assess the likelihood an airman will return to flying when flight surgeons consult with ACS specialists in the Department of Neuropsychiatry. The Aeromedical Information Management Waiver Tracking System and Patient Status Worksheet (PSW) were used to analyze records of 390 aircrew and special duty personnel referred for an evaluation at the ACS (2005-2010) due to a disqualifying neurological or psychiatric condition. Overall, 73% of evaluated aviators/aircrew were recommended to return to their aviation-related duties, and only 27% were recommended not to return to their duties. Major command authorities concurred with 98% of ACS staff recommendations. The results indicate that three out of every four aircrew or special duty personnel referred to the ACS due to a history of a psychiatric illness/injury receive a recommendation to return to their duties. Such information removes ambiguity regarding the likelihood of obtaining a waiver and helps reduce the level of apprehension for flight surgeons and aviators who are being referred to the ACS.

## 2.0 INTRODUCTION

When enlisted and officer aircrew for manned and unmanned airframes (e.g., pilots, navigators, loadmasters, gunners, sensor operators, battlefield managers) and special duty personnel (e.g., special tactics officers, combat controllers, air traffic controllers, combat rescue officers, etc.) experience a history of a complicated medical or psychiatric illness or injury that disqualifies them from performing their duties, major command (MAJCOM) flight surgeons often refer these airmen to the Aeromedical Consultation Service (ACS) at the U.S. Air Force (USAF) School of Aerospace Medicine. These referrals are for consultation purposes and are often required according to USAF aeromedical policy and Air Force Instruction (AFI) 48-123, *Medical Examinations and Standards* (Ref 1).

The ACS is made up of several specialty providers in a wide range of disciplines (e.g., internal medicine, cardiology, neurology, ophthalmology, psychiatry, neuropsychology, and clinical psychology) who perform consultations and evaluations related to their respective fields to ensure a comprehensive, in-depth, specialty evaluation is performed, as needed, on each airman. There is a multidisciplinary team of aeromedical experts to review each case, assess and evaluate each patient, and make waiver recommendations regarding the patient's readiness to return to aviator duties.

Despite the specialty nature of the consultations and the goal of expeditiously returning airmen to their aircrew or special duty position, anecdotal evidence based upon the authors' discussions with flight surgeons suggests airmen are concerned that an ACS evaluation will have

a negative impact on their career or family. There is a general reluctance to self-disclose emotional or behavioral problems due to the general stigma of mental health difficulties, fear or embarrassment among peers and leadership, as well as general discomfort in having to discuss unpleasant emotional-behavioral conditions. The stigma of mental health difficulties often increases the concerns held by aviators or special duty personnel that their career will be permanently harmed. This concern is sometimes shared by flight surgeons. As a result, there is a great deal of apprehension among flight surgeons and airmen regarding the likelihood of receiving a favorable outcome if they are referred to the ACS for an in-depth, multidisciplinary specialty consultation due to a complicated history of psychiatric illness (Ref 2).

Although a history of a psychiatric illness may be temporarily disqualifying, in many situations it does not negatively impact an airman's career or prevent him or her from returning to duty. Rather, research has found that most aircrew or special duty personnel receive an aeromedical waiver to return to duties, whether they were hospitalized or not due to a psychiatric illness (Ref 3). However, it has been over 15 years since such research was conducted on the return to duty rates of airmen referred to the ACS and, specifically, for the neurological and psychological conditions seen by the Neuropsychiatry Branch. Furthermore, the issue of receiving a waiver is growing due to the perceived increased risk of mental health difficulties stemming from the operational and combat-related stressors associated with decade long conflict of Operations Enduring and Iraqi Freedom.

When aircrew and special duty personnel are evaluated by ACS staff, a recommendation to return to fly is predicated on aeromedical policy waiver criteria. According to AFI 48-123, *Medical Examinations and Standards*, to be considered for a waiver the following criteria must be met (Ref 1):

- not pose a risk of sudden incapacitation
- pose minimal potential for subtle performance decrement, particularly with regard to the higher senses
- be resolved, or be stable, and be expected to remain so under the stresses of the aviation environment
- if the possibility of progression or recurrence exists, the first symptoms or signs must be easily detectable and not pose a risk to the individual or the safety of others
- cannot require exotic tests, regular invasive procedures, or frequent absences to monitor for stability or progression
- must be compatible with the performance of sustained flying operations

As can be surmised, aeromedical criteria are much higher than the general medical fitness-for-duty standards.

In addition to above waiver guidelines, there are several factors that are considered by the ACS staff when rendering a recommendation regarding an airman's readiness to return to his/her aircrew or special duty position. Such factors include, but are not limited to, the following:

- the airman's completion of empirically supported health care
- the length of time for the illness and corresponding symptoms to be resolved and/or fully controlled
- the time in which the member has shown no duty impairments including reports from leadership in the airman's chain-of-command

- the level of gained insight and behavioral adaptation in response to the contributing factors and stressors that precipitated the history of illness/injury
- the presence of contributing environmental factors/circumstances and their likelihood of recurrence
- corroborating reports from others (i.e., command, family members, co-workers)

The above issues highlight the in-depth nature of the evaluation to ensure an accurate recommendation is rendered. Although the evaluation process may be time consuming (e.g., 30 to 40 h over the course of 1 to 2 wk), the goal is to delicately balance efficiency with accuracy to sustain the safety of airmen and the integrity of military operations. However, as mentioned previously, anecdotal evidence based upon the authors' discussions with flight surgeons AF-wide suggests that many perceive that due to the stigma of mental health problems in particular; the multiple criteria that must be met for consideration of a waiver; and the in-depth, exhaustive nature of ACS evaluations; the likelihood aircrew or special duty personnel will receive a recommendation to return to fly is low.

### **3.0 PURPOSE**

The purpose of this study was to (a) analyze ACS waiver recommendations for common psychiatric/psychological and neuropsychological illnesses/injuries and (b) assess final MAJCOM disposition and highlight return to flying status (RTFS) rates by diagnosis (i.e., head injury, mood disorder, anxiety disorder, adjustment disorder, etc.) made by the ACS staff. This information provides objective evidence regarding the likelihood that referrals to the ACS will result in a positive outcome regarding an aviator or special duty operator's return to aviation-related duties. The results of this study may also facilitate future consultations with MAJCOM flight surgeons, improving education and training of new flight surgeons and Residents of Aerospace Medicine as well as mental health professionals at local AF installations.

### **4.0 METHODS**

#### **4.1 Subjects**

Included in this study were 390 enlisted and officer aircrew and special duty personnel seeking aeromedical waivers to return to their operational duties. There were 27 (6.91%) females and 363 (93.09%) males, with an average age of 34 (standard deviation of 8.15). There were 334 (86%) Caucasians, 21 (5%) African Americans, 10 (3%) Asians, 1 (.3%) Hispanic, 1 (.3%) Native American Indian, and 23 (6%) other. Military grades were as follows: 15 (4%) E2-E4, 56 (14%) E5-E6, 23 (6%) E7-E9, 136 (35%) O1-O3, 135 (35%) O4-O6, 2 (1%) O7-O10, 5 (1%) civilians, and 18 (5%) Reserve Officer Training Corps. There were 39 (10%) Flying Class (FC) I (e.g., student pilot trainee, navigator trainee), 244 (63%) FC II (e.g., rated pilots, navigators, flight surgeon duties), 95 (24%) FC III (e.g., airborne, pararescue, combat control), 2 (1%) space and missile operations duty, and 10 (3%) ground base controller (air traffic controller, weapons controller/directors).

## **4.2 Procedure**

The target population for this analysis was pulled from the schedule of neuropsychiatry patients per month. During the 6-year period from 2005-2010, 390 patients were evaluated by the Neuropsychiatry Branch. Within the Neuropsychiatry Branch, complicated and comprehensive evaluations can be performed by multiple providers (e.g., psychologists, psychiatrists, neurologists, and neuropsychologists); therefore, duplicate entries were removed from this analysis.

Two databases were used to analyze records of the population. The Patient Status Worksheet (PSW) was used to gather patient information (e.g., provider, incoming MAJCOM diagnosis, outgoing Neuropsychiatry Branch diagnosis, and outgoing ACS diagnosis). The Aeromedical Information Management Waiver Tracking System was used to collect and confirm outgoing diagnoses (Neuropsychiatry and ACS) as well as to collect the final MAJCOM disposition (medically acceptable or disqualified) and whether a waiver was granted. All patient data were compiled within an Excel spreadsheet and sorted by the year the patients were evaluated. MAJCOM disposition, ACS recommendation, and the patient's outgoing diagnoses were sorted and analyzed. Phone consultations took place with the MAJCOM in one case where the disposition was in question or pending; the results were included in the analysis.

## **5.0 RESULTS**

There were 390 Neuropsychiatry Branch evaluations conducted with subsequent waiver recommendations from 2005 through 2010; 282 (73%) were given an RTFS recommendation and 102 (27%) did not receive such a recommendation. MAJCOM flight surgeons accepted 384 (98%) of the ACS recommendations and rejected 6 (1.54%). Of these cases, the ACS recommended "no waiver" (disqualified) for five cases, and the MAJCOM granted waivers (medically acceptable). There was only one case in which the ACS recommended a waiver and the MAJCOM did not grant a waiver; according to the MAJCOM flight surgeon, additional problems developed that influenced his decision. See Table 1 for rates regarding recommendations for returning to operational duties per diagnostic category.

## **6.0 DISCUSSION**

The results of this analysis indicate the majority (approximately 75%) of aircrew or special duty personnel who are referred to the ACS Neuropsychiatry Branch receive a recommendation to return to their aviation or operational duties. It is also important to note that not everyone referred to the ACS for a neurological or psychiatric evaluation is diagnosed with categorical disorder. In many instances (mostly psychiatric referrals), an aircrew member or special duty operator was reported to have some sort of cognitive, behavioral, or emotional difficulty (e.g., depression, anxiety, somatization) as identified by a local provider or flight surgeon, but after review of clinical records, objective testing, and multi-disciplinary interviews, there was no substantiating evidence to support such a psychiatric/psychological diagnosis. Although 3 of the 22 who received "no diagnosis" were subsequently disqualified, it was for a separate, unrelated medical condition (e.g., cardiac or ophthalmological problems).

**Table 1. Ratings by Diagnostic Categories (RTFS)**

| Diagnosis                                                                                                                  | Total | % Waiver Granted |
|----------------------------------------------------------------------------------------------------------------------------|-------|------------------|
| No Diagnosis (ACS evaluation found no disqualifying diagnosis)                                                             | 22    | 86               |
| Head Injury                                                                                                                | 83    | 81               |
| Central Nervous System Infection/Pathology (e.g., bacterial meningitis, multiple sclerosis, cerebral stroke)               | 42    | 77               |
| Obstructive Sleep Apnea                                                                                                    | 104   | 72               |
| Headaches                                                                                                                  | 15    | 67               |
| Decompression Sickness                                                                                                     | 9     | 56               |
| Adjustment Disorders                                                                                                       | 49    | 67               |
| Mood Disorder (e.g., major depression, depression not otherwise specified, bipolar disorder)                               | 63    | 67               |
| Alcohol Abuse/Dependence                                                                                                   | 11    | 64               |
| Eating Disorders                                                                                                           | 3     | 67               |
| "V" Code (partner-relational problem, behavioral habits and traits affecting general medical condition, bereavement, etc.) | 72    | 59               |
| Anxiety Disorders (e.g., post-traumatic stress, panic disorder)                                                            | 24    | 46               |
| Fear of Flying/Manifestation of Apprehension                                                                               | 7     | 43               |
| Developmental Disorders (e.g., attention deficit hyperactivity disorders, learning disabilities)                           | 4     | 50               |
| Psychotic Disorders                                                                                                        | 3     | 33               |
| Somatoform/Factitious Disorders                                                                                            | 4     | 25               |
| ARMA (Unsatisfactory) <sup>a</sup>                                                                                         | 3     | 0                |

<sup>a</sup>ARMA = Adaptability Rating for Military Aeronautics. Although the USAF Waiver Guide focuses specifically on the condition of a suicide attempt, this condition was found as part of the history of disqualifying conditions for approximately eight cases and was a result of an underlying depression or an adjustment disorder.

As can be surmised from Table 1, the largest number of referrals to the Neuropsychiatry Branch encompasses neurological and neuropsychological illnesses and/or injuries. In many cases, such conditions are referred due to the complexity and severity of the illness and/or injury and concerns regarding lingering deficits in intellectual and cognitive functioning. However, approximately 51% to 86% of those evaluated for a history of closed head injury, headaches, obstructive sleep apnea, central nervous system illness/injury (e.g., bacterial meningitis, stroke), and decompression sickness received a recommendation to return to their operational duties. For those conditions that did not receive a waiver, it was often due to an unclear etiology, ongoing treatment, incomplete resolution of symptoms, and/or complications from medication use. Under such circumstances, it was often recommended a waiver be reconsidered after the specific issue was resolved.

The second largest clustering of referrals to the Neuropsychiatry Branch encompassed emotional difficulties (e.g., depression) or problems with adapting or adjusting to significant life stressors. Approximately 67% of those found to have a history of a mood (e.g., depressive disorder) or adjustment-related disorder received an aeromedical RTFS recommendation. Even though aircrew and special duty personnel are considered to be a relatively healthy group, a series of clustering life events and/or organic vulnerabilities (e.g., first-degree biological relatives with depression) may result in a temporary, highly treatable, mood-related decline. Some conditions, however, such as bipolar disorder and recurrent major depression, did not receive an RTFS recommendation despite adequate treatment due to the high risk of recurrence of those two specific illnesses.

Another large clustering of referrals to the Neuropsychiatry Branch encompassed phase of life issues and conditions of clinical attention but not diagnostic of a categorical disorder. Such conditions are listed in the DSM-IV as a “V code” and represent issues like complicated bereavement, partner-relational (marital problems), and behavioral habits and traits (e.g., poor eating and exercise habits) complicating recovery from a disqualifying medical condition (e.g., obesity). These conditions can represent an individual’s difficulty with adaption to everyday problems or present in very resilient individuals overwhelmed with multiple extreme stressors. The end result is a negative impact on duty performance or safety of flight. For those who did not receive a recommendation to return to their operational duties, it was found that mental health care was needed to prevent such conditions from recurring or their underlying stressor was not mitigated, leading to a high likelihood of recurrent anxiety, depression, or adjustment-related difficulties.

Approximately 43% to 46% of those diagnosed with a fear or flying, manifestations of apprehension, or an anxiety disorder (e.g., panic disorder, generalized anxiety) received a recommendation to return to their operational duties. Other more prominent categorical anxiety-based disorders (e.g., panic disorder, post-traumatic stress, generalized anxiety) were also assessed. Anxiety disorders are more difficult to treat to complete resolution than mood disorders or conditions stemming from adverse life circumstances. As a result, the majority of aircrew or special duty personnel did not receive a recommendation to return to their operational duties but to continue with treatment.

Although the cases are few (substance use waivers are usually decided without ACS consult), 64% of those diagnosed with alcohol abuse/dependence and 67% with an eating disorder received an aeromedical RTFS recommendation. These two diagnostic categories combine behavioral, emotional, as well as physical symptoms that all impair aviation performance. As a result, these types of diagnoses are disqualifying for all flying classes and require specific treatment or an AFI-driven treatment program at the local level to RTFS. Aviators and special duty personnel with either condition are at risk of relapse; therefore, it is necessary that a strict treatment regimen is followed and is successful to be eligible for waiver.

The Neuropsychiatry Branch does not receive consult requests for developmental disorders (e.g., attention deficit hyperactivity disorder and learning disorders) very frequently, but when the branch does receive them, they involve training applicants who are requesting a waiver and stating they have either “outgrown” the disorder or were incorrectly diagnosed. These conditions are problematic to timely acquisition of skills or reliability of performance in rigorous conditions. The two cases that received a waiver were due to the relatively “mild” or unsubstantiated evidence for the presence of a learning disorder.

Approximately 25% to 33% of those diagnosed with a somatoform/factitious disorder or psychotic disorder received a recommendation to return to operational duties. A review of the cases of somatoform disorder showed the members had limited insight into the nature of their difficulties and a tendency to recur under stress. Psychotic disorders are almost always disqualifying from aviation duty as well as military service due to the chronic and severe decline in functioning inherent with the disorder, but there can be exceptions. An aeromedical RTFS waiver was granted to a psychotic disorder case due to clearly marked and extreme stress that precipitated the event, a sustained full resolution of symptoms, and lack of evidence of a comorbid psychiatric condition.

Some aviators were not diagnosed with a categorical psychiatric disorder but were considered to have an unsatisfactory ARMA. Such individuals are generally referred to the

Neuropsychiatry Branch to clarify the presence of behavioral habits, personality traits, or aspects of a person's emotional-interpersonal disposition (to include occupational motivation) perceived to be ill-suited to safety and/or operational demands of their aircrew or special duty position. These conditions, when discovered or confirmed on evaluation, generally do not receive an RTFS recommendation (or return for further treatment) due to the deeply ingrained aspects of their disposition that are considered unresponsive to change. Furthermore, aeromedical policy does not outline any sort of eligibility criteria to receive a waiver for a history of an unsatisfactory ARMA.

Although the results show a high percentage of airmen received recommendations to return to aviation-related duties, nearly 25% were disqualified. It is important to interpret this percentage with caution, as there are several factors involved in the process that determine the disposition. Many times, disqualification may have been specifically related to a permanently disqualifying diagnosis (i.e., major depressive disorder-recurrent, ARMA-unsatisfactory, or unidentified somatic complaints, etc.). Other times, factors such as waiver timeline criteria or the need for additional treatment to control or improve the condition impact the recommendation and subsequent disposition. For example, in conditions such as major depressive disorder or obstructive sleep apnea, airmen were required to complete additional treatment and be compliant within aeromedical standards (timing) prior to being eligible for a waiver. In these types of cases, a reevaluation at the ACS is often requested.

## **6.1 Factors Common to Return to Duty Recommendations**

A review of those who received RTFS recommendations revealed several common factors that include, but are not limited to, the following: (a) symptoms fully resolved; (b) empirically based treatment and care were followed; (c) medical records and summaries clearly documented the diagnosis, etiology, course of the illness/injury, and recovery progress; and (d) an adequate or required period of observation following full resolution of symptoms as outlined in the USAF aeromedical waiver guide was followed. Although many additional factors may influence a person's return to duty (e.g., access to care, availability of local resources, person's participation in treatment, occurrence of major life stressors), in general, factors a-d significantly increase the likelihood of receiving a recommendation to return to fly or special duty position.

## **6.2 Limitations to the Study**

First, and as previously mentioned, much attention is given to each case when evaluated at the ACS (between 30-40 hours). This in and of itself is difficult to quantify. Aviators with these disqualifying conditions can present with different symptoms and levels of manifestations, while others are more resilient; therefore, each case is carefully assessed, and the ACS recommendation will be accurate for the individual. This analysis only evaluated results of in-person ACS evaluations. It does not include those that were disqualified by the MAJCOM and were never referred to the ACS, nor does it reflect cases that the ACS reviewed but made a recommendation through a record review only.

In regards to the biographical information regarding these aviators, marital status was not available or included in this data analysis. Ethnicity was obtained and accounted for in this analysis. However, because of conflicting data in one database (PSW), the ethnicity noted in the personal history record was utilized when this conflict occurred.

## 7.0 CONCLUSION

Aviators and special duty personnel are each unique, and no condition presents the same way or has the same operational impact in every individual. Individual assessments are critical to avoid a “one size fits all” type of waiver policy. Yet the flight surgeon can be assured that there is a common theme to all successful submissions for waiver. In each case, the six general criteria for waived conditions were met. In each of the diagnostic categories listed in Table 1, waivers were granted for the majority of personnel in each category. To maintain that high level of waiver approval, it is vital that flight surgeons assess, consult, diagnose, and treat each case as necessary according to medical standards for each condition. Identifying the condition early, consulting and following the waiver guide, and completing the Aeromedical Summary appropriately are essential for aviators or special duty personnel to return to fly or return to their operational positions.

## 8.0 REFERENCES

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

|        |                                              |
|--------|----------------------------------------------|
| ACS    | Aeromedical Consultation Service             |
| AFI    | Air Force Instruction                        |
| ARMA   | Adaptability Rating for Military Aeronautics |
| FC     | Flying Class                                 |
| MAJCOM | major command                                |
| PSW    | Patient Status Worksheet                     |
| RTFS   | return to flying status                      |
| USAF   | United States Air Force                      |