

Staff Instruction

Subject: Depression and Antidepressant Medications

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1.0 Introduction

1.1 Purpose

(1) The purpose of this document is to provide direction for the assessment of depression and the use of antidepressant medications in aviation Medical Certificate (MC) applicants.

1.2 Applicability

(1) This Staff Instruction (SI) is applicable to Transport Canada (TC) Civil Aviation Medicine (CAM) Branch personnel, contractors, Civil Aviation Medical Examiners (CAMEs), and other personnel appointed by the Director Civil Aviation Medicine (DCAM) to be involved in the assessment of MC applicants.

1.3 Description of changes

(1) Not applicable.

2.0 References and requirements

2.1 Reference documents

- (1) The following reference materials may be used in conjunction with this document:
 - (a) Aeronautics Act (R.S.C., 1985, c. A-2)
 - (b) Canadian Aviation Regulations (CARs), Part IV, subpart 4
 - (c) Staff Instruction (SI) 404-001 Issue 01 Aeromedical Risk Assessment and Risk Management (RDIMS 14833813)
 - (d) SI 424-001 Issue 01 Aviation Medical Review Board Terms of Reference (RDIMS 14918090)
 - (e) ICAO Document 8984 AN895 Manual of Civil Aviation Medicine
 - (f) ICAO Document 8984 Guidance material to support the proposed changes to the medical provisions contained in Annex 1 Personnel Licensing [re: Depression]
 - (g) Uptodate.com, "Unipolar depression in adults: Epidemiology"
 - (h) Diagnostic and Statistical Manual of Mental Disorders, 5th Edition.

2.2 Cancelled documents

(1) Civil Aviation Medicine – Guidelines for non-psychotic psychiatric conditions (2010)

2.3 Definitions and abbreviations

Note: additional abbreviations will be described in the Appendices)

- (1) The following **abbreviations** are used in this document:
 - (a) **AD:** Antidepressant
 - (b) **AE:** Adverse Effects
 - (c) AMRB: Aviation Medical Review Board

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(d) CAM: Civil Aviation Medicine

(e) CAME: Civil Aviation Medical Examiner

(f) CARs: Canadian Aviation Regulations

(g) **DSM:** Diagnostic and Statistical Manual of Mental Disorders

(h) ICAO: International Civil Aviation Organization

(i) MC: Medical Certificate

(j) MDD: Major Depressive Disorder

(k) **MER:** Medical Examination Report

(I) RAMO: Regional Aviation Medical Officer

(m) SI: Staff Instruction(n) TC: Transport Canada

3.0 Background

- (1) For the purposes of this SI, depression refers to any manifestation of a depressed mood. This includes depressed mood states or syndromes that are associated with:
 - (a) Normal life events (situational stressors, bereavement, etc);
 - (b) General medical conditions (e.g. Severe illness);
 - (c) Psychiatric diagnoses characterized by depressed mood, including MDD, persistent depressive disorder (dysthymia), adjustment disorder with depressed mood, and bipolar affective disorder; and
 - (d) Other psychiatric diagnoses where depression is often a presenting or comorbid feature, including anxiety disorders, trauma and stress disorders, substance use disorders, and schizophrenia.
- (2) Depressive disorders are relatively common, with a high point prevalence and high lifetime prevalence amongst all populations. Surveys from 21 countries estimate that the 12-month prevalence of unipolar major depression is 5 percent. Surveys from 14 countries estimate that the lifetime prevalence of unipolar major depression plus persistent depressive disorder is 12 percent (Ref 2.1(1)(g)).
- (3) While the manifestation of depression is varied, symptoms of depression (Ref 2.1(1)(h)) may include:
 - (a) Depressed mood or sadness (Note: this is considered an essential diagnostic feature, but can sometimes manifest as anxiety, irritability, hostility or anger);
 - (b) Loss of interest or pleasure (anhedonia) in previously pleasurable activities;
 - (c) Change in appetite or weight;
 - (d) Sleep disturbance;
 - (e) Fatigue or loss of energy;
 - (f) Neurocognitive dysfunction, including decreased attention, concentration, cognitive flexibility, executive function, information processing speed, memory, verbal fluency, and social cognition;
 - (g) Psychomotor agitation or retardation;

- (h) Feelings of guilt or worthlessness; and/or
- (i) Suicidal ideation or behaviour
- (4) From an aviation safety standpoint, the symptoms of depression are concerning as they can severely compromise the ability of an individual to function safely in the aviation environment. Individuals exhibiting the symptoms of depression can represent a risk to themselves, to others, and to the safe operation of aircraft.
- (5) Individuals who are experiencing persistent or severe depressive symptoms are encouraged to seek medical assessment and appropriate treatment as early as possible to optimize their health outcomes.
- (6) The use of ADs has traditionally been disqualifying for aviation medical certification due to the underlying medical condition and the potential safety-relevant side-effects of the older medications used to treat depression. However, newer generations of ADs are better tolerated with improved side-effect profiles allowing long-term treatment of depression while reducing the risk of relapse.
- (7) To encourage honest self-disclosure, minimize concerns about aviation medical certification, and encourage timely medical assessment and treatment, TC CAM has become a world leader in certifying MC applicants in the context of successfully treated depression. Since 2001, TC CAM has been successfully applying flexibility for the certification of carefully selected and monitored applicants who are being treated with ADs.
- (8) TC CAM's approach is consistent with ICAO's position (Ref 2.1(1)(e)) that it is a "more effective safety strategy" to identify persons in need of psychiatric intervention and identify specific acceptable treatments rather than automatically exclude all persons with depression from flying duties.
- (9) The purpose of this SI is to provide direction for consistency in assessing MC applicants with depression and the safe use of ADs in the aerospace environment. However, a case-by-case approach is required, due to the complexity of interacting factors in each individual treatment scenario; thus, variations in managing any individual case may be necessary. This SI complements, but does not replace, the requirement for physicians to apply sound clinical judgement, experience, and discretion.

4.0 Assessment and disposition

4.1 Initial self-grounding

- (1) All current holders of valid MCs are subject to the provisions of section 404.06(1)(a) of the CARs. Thus, they shall not exercise the privileges of their permit, rating, or license if they are experiencing illness that could impair their ability to exercise those privileges safely. Even self-limiting, short-duration conditions (such as normal grief reactions) could present with symptoms significant enough to impair safe functioning in the aviation environment for a period of time.
- (2) "Self-grounding" is not only acceptable, but it is expected and encouraged for MC holders who are experiencing symptoms of depression. MC holders should consult with their primary care providers for assessment and management of their condition, and their CAME regarding fitness for aviation duties.

4.2 Initial clinical report

(1) Any **current holder** of a valid MC of any Category who has symptoms of depression and/or requires treatment with an AD will be **initially** assessed as **unfit** until sufficient information for

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- assessment has been provided to CAM through an **Initial Clinical Report** (using format for Comprehensive Mental Health Assessment at Appendix A).
- (2) Any **new applicant** for an MC of any Category with a history of depression or treatment with an AD will have their application **deferred for assessment by CAM** until sufficient information for assessment has been provided to CAM through an **Initial Clinical Report** (see Appendix A).

4.3 Comprehensive mental health assessment

- (1) Any Category 1 or Category 2 MC holder or applicant will require a Comprehensive Mental Health Assessment (see Appendix A) with confirmation of the diagnosis by a **psychiatrist** or psychologist before being considered for certification.
- (2) A comprehensive Mental Health Assessment may be provided in place of the **Initial Clinical Report**. However, the Initial Clinical Report should not be delayed while awaiting a consultation with a psychiatrist or psychologist, if the physician who initiated treatment is not a psychiatrist. CAM may require assessment by a psychiatrist at any time, particularly in cases of uncertainty regarding diagnosis and/or level of risk.

4.4 Hospital reports

(1) If an applicant or MC holder has a history of hospitalization for psychiatric reasons, then a copy of the hospital admission and discharge summary report must be forward to CAM along with the Initial Clinical Report or the comprehensive Mental Health Assessment.

4.5 Certification and monitoring

- (1) Medications:
 - (a) Only non-sedating ADs are considered compatible with aviation medical certification.
 - (b) For guidance, see Appendix B "Medications."

(2) Diagnoses:

- (a) Diagnoses and presentations which must be excluded for certification include bipolar disorder, a history of psychosis, a history of suicide attempt or recurrent suicidal behaviour, and any symptoms consistent with panic/anxiety attacks or similar events (regardless of the diagnosis in the past 12 months
- (b) Certification may be considered for applicants or MC holders with a history of successfully treated MDD, persistent depressive disorder (dysthymia), and/or adjustment disorder with depressed mood.

(3) Restrictions:

- (a) Applicants with depression successfully treated with an AD must have at least **four (4) months** on a stable dosage (without significant Adverse side effects (ASE)) once full remission is achieved before certification can be considered.
- (b) Once an applicant is certified, the validity period of medical certification will be limited to **twelve (12) months** for all privileges.
- (c) **Cat 1 MCs** will be *restricted* to only exercise privileges with an accompanying pilot during the **first twelve (12) months.** After the initial restricted period, the applicant may request an unrestricted MC from CAM through their CAME.
- (d) **Cat 2 MCs** will be *restricted* to only exercise privileges with an accompanying controller during the **first twelve (12) months.** After the initial restricted period, the applicant may request an unrestricted MC from CAM through their CAME.

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- (4) Monitoring and updates:
 - (a) **Once certified**, applicants should have **regular monitoring** for side effects or onset of significant symptoms by their treating physician.
 - (b) **During the first two (2) years of certification,** updates from the treating physician confirming the lack of significant symptoms and adverse side-effects of medication are required every **six (6) months**.
 - (c) After the first two (2) years of certification, updates will be required with each MC renewal, but may be adjusted on a case-by-case basis at RAMO discretion.
 - (d) Update reports from the treating physician should be submitted through the applicant's CAME.

(5) Discontinuation of ADs:

- (a) **Applicants planning to discontinue AD medication** should consult with their CAME before doing so.
- (b) After discontinuation of ADs, applicants of all categories will be restricted to only exercise their privileges with an accompanying pilot or controller for a minimum of six (6) months. After the initial restricted period, the applicant may request an unrestricted MC from CAM through their CAME.
- (c) **During the twelve (12) months following discontinuation** of medication, regular monitoring is required by the applicant's treating physician. The applicant's CAME will be required to provide CAM with a current update report from the treating physician:
 - (i) When seeking authorization for the applicant to return to unrestricted duties (e.g. After six (6) months of restriction); and
 - (ii) At the end of the twelve (12) month monitoring period.
- (6) Self-grounding during or after treatment.
 - (a) Applicants must refrain from exercising the privileges of any licence until CAM has reassessed their case (as per CARs 404.06) when:
 - (i) Experiencing any relapse of symptoms of depression, either during AD treatment or after discontinuation of AD treatment;
 - (ii) Experiencing any AEs related to AD treatment that could affect aviation safety;
 - (iii) Re-starting treatment after discontinuation of an AD;
 - (iv) Augmenting treatment with another AD; or,
 - (v) Switching to a different AD.
 - (b) Applicants should consult with their CAME if any of the circumstances above arise. Once on a stable treatment and asymptomatic, applicants will be required to consult with their CAMEs to seek authorization from CAM to return to duties.

4.6 Renewal by CAME

- (1) **CAMEs shall not renew and shall defer for assessment by CAM** any MC applicants who have not already been individually assessed and certified by CAM for the following:
 - (a) Symptoms or new diagnoses of depression; or
 - (b) Any course of treatment with ADs (previous or current).

- (2) **CAMEs may renew**, at their discretion, an MC applicant previously assessed and approved by CAM for their AD treatment. In the MER, the CAME must document the following:
 - (a) The applicant remains in stable remission on treatment;
 - (b) There have been **no significant changes the AD treatment** (e.g. minor dosing adjustments are acceptable, but these must be documented by the CAME) unless the applicant is currently discontinuing the AD treatment and being monitored by their treating physician;
 - (c) The **absence of any problematic factors** associated with the AD treatment, including primary effects, side-effects, or interactions with other medications that could affect aviation safety; and
 - (d) The absence of any other concerns related to aviation safety.

4.7 AD for conditions other than depression

- (1) Certification may be possible for other minor, non-depression-related conditions treated with ADs that would not in themselves be disqualifying (e.g. vasomotor symptoms associated with menopause, premature ejaculation, non-disabling chronic pain.)
- (2) CAM will assess such conditions on a case-by-case basis and manage in a manner consistent with this SI.

4.8 Assessment and approval by CAM

- (1) CAM will assess applicants using ADs on a case-by-case basis. The risk assessment must consider the interaction of multiple factors.
- (2) If CAM has doubt about whether an applicant may be certified, the preservation of aviation and public safety will prevail as the overriding consideration, and a conservative approach will generally be taken.

5.0 Information management

(1) Management of aviation medical information shall be in accordance with TC departmental and CAM Branch practices.

6.0 Document history

(1) Not applicable.

7.0 Contact us

(1) For more information contact: <u>NCRCivAvMedicineInquiries-</u> EnquetesMedecineAeroCivRCN@tc.gc.ca

Document approved by

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Appendix A — Comprehensive Mental Health Assessment: Depression

- (1) A Comprehensive Mental Health Assessment must include:
 - (a) History of presenting problem;
 - (b) Psychiatric review of symptoms (including any features of depression, anxiety, mania/hypomania, panic attacks, trauma, obsessions/compulsions, suicidal or homicidal thoughts, and psychosis);
 - (c) Past mental health history (including hospitalizations, prior diagnoses, treatments, previous suicidal/homicidal ideation or attempts);
 - (d) Medications (type, dose, frequency, anticipated course of treatment, adverse/side-effects, effectiveness);
 - (e) Substance use history (including alcohol, cannabis, other substances);
 - (f) Contributory family psychiatric history;
 - (g) Contributory social and developmental history;
 - (h) Contributory medical or surgical history;
 - (i) Diagnoses (in accordance with DSM 5). It is essential to comment on the following possible diagnoses:
 - (i) Bipolar disorder;
 - (ii) Panic disorder (and any panic attacks in the past 12 months);,
 - (iii) Psychotic disorder or episodes;
 - (iv) Other diagnoses (including Post Traumatic Stress Disorder and Attention Deficit Hyperactivity Disorder).
 - (j) Management plan (including pharmacological and non-pharmacological treatments, follow-up, work limitations);
 - (k) Prognosis. It is essential to comment on whether the applicant is currently in stable remission: and.
 - (I) Any other information of relevance and clinician concerns about aviation safety.

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Appendix B — Medications

- (1) Applicants with depression must be assessed by Civil Aviation Medicine as being **in stable remission** to be considered for aviation medical certification.
- (2) Applicants have been successfully recertified on the following AD medications:
 - (a) Fluoxetine
 - (b) Sertraline
 - (c) Buproprion*(see para 4(b) below)
 - (d) Citalopram
 - (e) Escitalopram
 - (f) Venlafaxine
 - (g) Desvenlafaxine
 - (h) Vortioxetine
- (3) AD medications that are not generally considered compatible with aviation medical certification include:
 - (a) Mirtazapine,
 - (b) Paroxetine,
 - (c) Trazodone,
 - (d) Doxepin
 - (e) Fluvoxamine
- (4) Recertification is not possible for applicants:
 - (a) When experiencing adverse effects or medication interactions that could affect aviation safety (e.g. sedation);
 - (b) When using more than one antidepressant (AD) medication (*except for the addition of Buproprion specifically for the management of sexual side effects resulting from treatment with a Selective Serotonin Reuptake Inhibitor); or,
 - (c) When taking other psychoactive substances or medications, including antipsychotic medications, psychostimulants, or ADs not listed in para 2 above.

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