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Guidance material to ATC Licence and Student ATC Holders on the use of medical and psychoactive substances

1. Applicability

This AIC is issued on behalf of the National Aeromedical Supervisory Authority and it comprises of guidance material which shall apply to the Air Traffic Controllers and Student Air Traffic Controllers.

2. Introduction

Alcohol, medication and drugs are among the most common medical causes of worldwide fatal commercial air transport aircraft accidents.

Alcohol impairs performance at any level and the impairment increases exponentially with the amount taken. Many substances, whether prescribed or obtained over the counter or by other means (e.g. over the internet) may also impair performance. In the short term (minutes to hour) judgment and decision making maybe affected, there might be an increase in errors and risk taking behaviour, mood changes, poor co-ordination, tracking and concentration and slow reaction times. Some effects can persist for several days, particularly poor balance and slow cognition. High or persistent intake over a prolonged period can result in a range of chronic and debilitating illness.

It is important to note that the effects of alcohol or drugs may be very difficult to recognize, even in close colleagues or friends.

3. Regulation

The need for the development and implementation of Psychoactive Substances Management Program stems from:

- COMMISSION REGULATION (EC) No 2017/373
- ICAO Doc. 9654, Manual for prevention of Psychoactive substances
- ICAO D OC.8984, Manual of Civil Aviation Medicine
- Republic of Cyprus AIC no01/21
- Ο περί Πολιτικής Αεροπορίας (άδεια Ε.Ε.Κ) ΚΔΠ 376/2020
- COMMISSION REGULATION (EU) no 2015/340
- Nicosia ACC UTCP

4. Drug and alcohol policy

The Department of Civil Aviation has a strict non-substance abuse policy. All aviation personnel should not be under the influence of drugs or alcohol while on duty.

The licence holders of ATC or Student ATC shall:

- a. not exercise the privileges of their licence at any time when they are aware of any decrease in their medical fitness which may render them unable to safely exercise the privileges of the licence; and
- b. notify the relevant air navigation service that they are becoming aware of any decrease in medical fitness or are under the influence of any psychoactive substance or medicines which might render them unable to safely exercise the privileges of the licence.

The Department of Civil Aviation supports the early recognition and rehabilitation of individuals with an alcohol or drug problem or peer intervention programmes. Self-referral for help with an alcohol or drug problem is encouraged, together with monitoring and support to return to work after rehabilitation for an alcohol or drug problem.

Compulsory drug and alcohol; screening test is part of European Class 3 Initial Medical Examination.

Psychoactive substances according to regulation (EU) 2017/373 are alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents (refer to Table 1.). Caffeine and tobacco are excluded.

Table 1: List of all prohibited psychoactive substances

Cannabinoids	The word cannabinoid refers to every chemical substance, regardless of structure or origin, that joins the cannabinoid receptors of the body and brain and that have similar effects to those produced by the Cannabis Sativa plant
Cannabis	Cannabis, also known as marijuana among is a psychoactive drug from the <i>Cannabis</i> plant used for medical or recreational purposes.
Cocaine	An addictive drug derived from coca or prepared synthetically, used as an illegal stimulant and sometimes medicinally as a local anaesthetic.
Hallucinogens	Are a diverse group of drugs that alter perception, thoughts and feelings. They cause hallucinations, or sensations and images that seem real, but they are not. (LSD, PCP (phencyclidine), magic mushrooms (psilocybin), ketamine, mescaline (peyote cactus), morning glory seeds, datura).
Opioids	Are a class of drugs that include the illegal drug heroin, synthetic opioids such as fentanyl, and pain relievers available legally by prescription, such as oxycodone (OxyContin [®]), hydrocodone (Vicodin [®]), codeine, morphine, and many others.
Sedatives and hypnotics	Drugs taken for their calming or sleep-inducing effect.

Stimulants	Methylphenidate and or amphetamine derivatives are the most used psychotropic substances over the world. A “psychostimulant” can be defined as a psychotropic substance with the capacity to stimulate the central nervous system. It causes excitation and elevated mood, as well as increased alertness and arousal.
Depressants	A depressant, or central depressant, is a drug that lowers neurotransmission levels, which is to depress or reduce arousal or stimulation, in various areas of the brain. Depressants are also occasionally referred to as "downers" as they lower the level of arousal when taken.
Synthetic drugs	Are created using man-made chemicals rather than natural ingredients. Although these drugs can sometimes be found saturating other, naturally-occurring or better-known ingredients via a chemical preparation treatment. They frequently appear on the market under misleading names such as ‘Spice’, ‘Mr Nice Guy’ etc.
Volatile solvents	Liquids that vaporize at room temperature. These organic solvents can be inhaled for psychoactive effects and are present in many domestic and industrial products such as glue, aerosol, paints, industrial solvents, lacquer thinners, gasoline, and cleaning fluids.
Alcohol	A psychoactive drug that is the active ingredient in drinks such as beer, wine, and distilled spirits It is one of the oldest and most common recreational substances, causing the characteristic effects of alcohol intoxication. Among other effects, alcohol produces happiness and euphoria, decreased anxiety, increased sociability, sedation, impairment of cognitive, memory, motor, and sensory function, and generalized depression of central nervous system function. Ethanol is only one of several types of alcohol, but it is the only type of alcohol that is found in alcoholic beverages or commonly used for recreational purposes.

The Cyprus Air Navigation Services management is committed to prevent and mitigate the risk that air traffic control service is provided by air traffic controllers with problematic use of psychoactive substances by:

- a. Establishing detection procedures in collaboration with staff.
- b. Providing training or educational material to ATCOs relating to:
 - i. The effects of psychoactive substances on individual and subsequently on air traffic controllers;
 - ii. Established procedures within the organization regarding this issue;
 - iii. Their individual responsibilities with regard to legislation and policies on psychoactive substances.
- c. Making available appropriate support for air traffic controllers who are dependent on psychoactive substances;
- d. Encouraging air traffic controllers who think that they may have such problem to seek and accept help;
- e. Ensuring that ATCOs are treated in a consistent, just and equitable manner as regards the problematic use of psychoactive substances; and

- f. Establishing and implementing principles and procedures for occurrence and analysis to consider the problematic use of psychoactive substances as a contributing factor.

5. Relationship between ATCO, AME and Medical Assessor

The professional relationship of respect, confidence and trust between the AME, the Medical Assessor and the ATC licence holders is strongly encouraged. Openness is essential, as any abnormality found (by either part), should be discussed, even if such abnormality may not apparently affect certification.

The holder of a student air traffic controller or air traffic controller licence is responsible to ensure that they do not take any medication or psychoactive substance that could have a detrimental effect on him/her operational performance.

It is the responsibility of the Air Traffic Controller or student to seek the professional opinion of their AME, should they require advice regarding any medication given by any physician. When an air Traffic Controller visits a physician requesting his professional opinion, he should inform that physician that he/she is an Air Traffic Controller. Any medications initiated by this physician shall be declared by the Air Traffic Controller or student to his AME.

However, the Air Traffic Controller or student should not be deprived of an efficient treatment because of their professional occupation. The decision as to whether an Air Traffic Controller is fit to work whilst taking medication should be taken in collaboration with the Air Traffic Controller's personal physician, AME and if needed, by the Medical Assessor.

The AMEs and Medical Assessor should ensure that Air Traffic personnel is aware of the problems caused by treatment so that they refrain from taking unreported medication whose side effects may not have been assessed.

Any ATC Licence holder, who is suspected of being under the influence of psychoactive substances, shall be reported to the Medical Assessor for further assessment and management.

6. Medication — Guidance for Air Traffic Controllers

- a. Any medication can cause side effects, some of which may impair the safe exercise of the privileges of the licence. Equally, symptoms of colds, sore throats, diarrhea and other abdominal upsets may cause little or no problem whilst not exercising the privileges of the licence, but may distract the air traffic controller and degrade their performance whilst on duty. Therefore, one issue with medication and the safe exercise of the privileges of the licence is the underlying condition and, in addition, the symptoms may be compounded by the side effects of the medication prescribed or bought over the counter for treatment. This guidance material provides some help to air traffic controllers in deciding whether expert aero-medical advice by an AME, AeMC or Medical Assessor is needed.
- b. Before taking any medication and exercising the privileges of the licence, the following three basic questions should be satisfactorily answered:
 - i. Do I feel fit to control?

- ii. Do I really need to take medication at all?
 - iii. Have I given this particular medication a personal trial whilst not exercising the privileges of my licence to ensure that it will not have any adverse effects on my ability to exercise the privileges of my licence?
- c. Confirming the absence of adverse effects may well need expert aero-medical advice.
- d. The following are some widely used medicines with a description of their compatibility with the safe exercise of the privileges of the licence:
- 1) Antibiotics. Antibiotics may have short-term or delayed side effects which can affect the performance of the air traffic controller. More significantly, however, their use usually indicates that an infection is present and, thus, the effects of this infection may mean that an air traffic controller is not fit to control and should obtain expert aero-medical advice.
 - 2) Anti-malaria drugs. The decision on the need for anti-malaria drugs depends on the geographical areas to be visited, and the risk that the air traffic controller has of being exposed to mosquitoes and of developing malaria. An expert medical opinion should be obtained to establish whether anti-malaria drugs are needed and what kind of drugs should be used. Most of the anti-malaria drugs (atovaquone plus proguanil, chloroquine, doxycycline) are compatible with the safe exercise of the privileges of the licence. However, adverse effects associated with mefloquine include insomnia, strange dreams, mood changes, nausea, diarrhea and headaches. In addition, mefloquine may cause spatial disorientation and lack of fine coordination and is, therefore, not compatible with the safe exercise of the privileges of the licence.
 - 3) Antihistamines. Antihistamines can cause drowsiness. They are widely used in 'cold cures' and in treatment of hay fever, asthma and allergic rashes. They may be in tablet form or a constituent of nose drops or sprays. In many cases, the condition itself may preclude the safe exercise of the privileges of the licence, so that, if treatment is necessary, expert aeromedical advice should be sought so that so-called non-sedative antihistamines, which do not degrade human performance, can be prescribed.
 - 4) Cough medicines. Antitussives often contain codeine, dextromethorfan or pseudoephedrine which is not compatible with the safe exercise of the privileges of the licence. However, mucolytic agents (e.g. carbocysteine) are well tolerated and are compatible with the safe exercise of the privileges of the licence.
 - 5) Decongestants. Nasal decongestants with no effect on alertness may be compatible with the safe exercise of the privileges of the licence. ATCO rules, AMC and GM
 - 6) Nasal corticosteroids are commonly used to treat hay fever, and are compatible with the safe exercise of the privileges of the licence.
 - 7) (i) Common pain killers and antifebrile drugs. Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) and paracetamol, commonly used to treat pain, fever or headaches, may be compatible with the safe exercise of the privileges of the licence. However, the air traffic controller should give affirmative answers to the three basic questions in

paragraph (b) before using the medication and exercising the privileges of the licence.

(ii) Strong analgesics. The more potent analgesics including codeine are opiate derivatives, and may produce a significant decrement in human performance and, therefore, are not compatible with the safe exercise of the privileges of the licence.

- 8) Anti-ulcer medicines. Gastric secretion inhibitors such as H₂ antagonists (e.g. ranitidine, cimetidine) or proton pump inhibitors (e.g. omeprazole) may be acceptable after diagnosis of the pathological condition. It is important to seek for the medical diagnosis and not to only treat the dyspeptic symptoms.
- 9) Anti-diarrheal drugs. Loperamide is one of the more common anti-diarrheal drugs and is usually safe to take whilst exercising the privileges of the licence. However, the diarrhea itself often makes the air traffic controller unable to exercise the privileges of the licence.
- 10) Hormonal contraceptives and hormone replacement therapy usually have no adverse effects and are compatible with the safe exercise of the privileges of the licence.
- 11) Erectile dysfunction medication. This medication may cause disturbances in colour vision and dizziness. There should be at least six hours between taking sildenafil and exercising the privileges of the licence; and 36 hours between taking vardenafil or tadalafil and exercising the privileges of the licence.
- 12) Smoking cessation. Nicotine replacement therapy may be acceptable. However, other medication affecting the central nervous system (bupropion, varenicline) is not acceptable for air traffic controllers.
- 13) High blood pressure medication. Most anti-hypertensive drugs are compatible with the safe exercise of the privileges of the licence. However, if the level of blood pressure is such that drug therapy is required, the air traffic controller should be monitored for any side effects before exercising the privileges of the licence. Therefore, consultation with the AME, AeMC or Medical Assessor as applicable is needed.
- 14) Asthma medication. Asthma has to be clinically stable before an air traffic controller can return to exercising the privileges of the licence. The use of respiratory aerosols or powders, such as corticosteroids, beta-2-agonists or chromoglycic acid may be compatible with the safe exercise of the privileges of the licence. However, the use of oral steroids or theophylline derivatives is usually incompatible with the safe exercise of the privileges of the licence. Air traffic controllers using medication for asthma should consult an AME, AeMC, or Medical Assessor, as applicable.
- 15) Tranquillisers, anti-depressants and sedatives. The inability to react, due to the use of this group of medicines, together with the underlying condition for which these medications have been prescribed, will almost certainly mean that the mental state of an air traffic controller is not compatible with the safe exercise of the privileges of the licence. Air traffic controllers using tranquillisers, anti-depressants and sedatives should consult an AME, AeMC, or Medical Assessor, as applicable.
- 16) Sleeping tablets. Sleeping tablets dull the senses, may cause confusion and slow reaction times. The duration of effect may vary from individual to individual and may

be unduly prolonged. Air traffic controllers using sleeping tablets should consult an AME, AeMC, or Medical Assessor, as applicable.

- 17) Melatonin. Melatonin is a hormone that is involved with the regulation of the circadian rhythm. In some countries it is a prescription medicine, whereas in most other countries it is regarded as a 'dietary supplement' and can be bought without any prescription. The results from the efficiency of melatonin in treatment of jet lag or sleep disorders have been contradictory. Air traffic controllers using melatonin should consult an AME, AeMC, or Medical Assessor, as applicable.
 - 18) Coffee and other caffeinated drinks may be acceptable, but excessive coffee drinking may have harmful effects, including disturbance of the heart's rhythm. Other stimulants including caffeine pills, amphetamines, etc. (often known as 'pep' pills) used to maintain wakefulness or suppress appetite can be habit forming. Susceptibility to different stimulants varies from one individual to another, and all may cause dangerous overconfidence. Over dosage causes headaches, dizziness and mental disturbance. These other stimulants should not be used.
 - 19) Anaesthetics. Following local, general, dental and other anaesthetics, a period of time should elapse before returning to exercising the privileges of the licence. The period will vary considerably from individual to individual, but an air traffic controller should not exercise the privileges of the licence for at least 12 hours after a local anaesthetic, and for at least 48 hours after a general, spinal or epidural anaesthetic.
- e. Many preparations on the market nowadays contain a combination of medicines. It is, therefore, essential that if there is any new medication or dosage, however slight, the effect should be observed by the air traffic controller whilst not exercising the privileges of the licence. It should be noted that medication which would not normally affect air traffic controller performance may do so in individuals who are 'oversensitive' to a particular preparation. Individuals are, therefore, advised not to take any medicines before or whilst exercising the privileges of their licence unless they are completely familiar with their effects on their own bodies. In cases of doubt, air traffic controllers should consult an AME, AeMC, or Medical Assessor, as applicable.
- f. Other treatments Alternative or complementary medicine, such as acupuncture, homeopathy, hypnotherapy and several other disciplines, is developing and gaining greater credibility. Such treatments are more acceptable in some States than others. There is a need to ensure that 'other treatments', as well as the underlying condition, are declared and considered by the AME, AeMC, or Medical Assessor, as applicable, for assessing fitness.

AIC N004/09 is hereby cancelled